



# Miranda House UNIVERSITY OF DELHI

## Departmental Annual Report - 3

### Departmental Activities: Curriculum and Beyond

Department: Computer Science

Academic Year: 2022-2023

#### Part A.1

Students undertaking project work as part of coursework

#### Semester I

Paper Name: Programming Fundamentals using C++(DSC)

UPC: 2342571101

#### Practical List

1. Write a program to compute the sum of the first  $n$  terms of the following series:

$$S = 1 - 2^n + 3^n - 4^n + \dots$$

The number of terms  $n$  is to be taken from the user.

2. Write a program to display the following pattern:

A  
BA  
CBA  
DCBA

The number of rows  $n$ , is to be taken from the user.

3. Write a program to compute the factors of a given number using the default argument.
4. Write a menu driven program to perform the following operations on an array:
  - a) Find the minimum, maximum and average of the array elements
  - b) Search an element in the array using linear search
  - c) Display the address of every element of the array
5. Write a menu driven program to perform the following operations on a string:
  - a) Check whether the first character of every word in the string is in uppercase or not
  - b) Reverse the string
6. Create a class Triangle. Include overloaded functions for calculating the area of a triangle.
7. Create a template class ~~TwoDim~~ which contains  $x$  and  $y$  coordinates. Define default constructor, parameterized constructor and void print() function to print the coordinates. Now reuse this class in ~~ThreeDim~~, adding a new dimension as  $z$ . Define the constructors and void print() in the subclass. Implement main() to show the working of the classes.
8. Accept a name and marks from the user and write them to a text file. For example, if the name is 'Rajesh' and marks are 95 then the contents of the file should be:

Rajesh has scored 95 marks.



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### Students List

Roll Number	Name
1	Agrima Singh
2	AKSHITA GUPTA
3	Anjali
4	ANSHIKA GANJOO
5	Anshita Saxena
6	DEVSHRI DHANGAR
7	Esheeta Sharma
8	Harshita Chaudhary
9	HARSHITA YADAV
10	ISHA
11	Jahnvi
12	Janhvi
13	Jaya
14	KHUSHI UPADHYAY
15	LAVANYA AMIT
16	MANISHKA PANDEY
17	Meenakshi Tiwari
18	MEENU SEVDA
19	MEHAK
20	NANDINI KUTTIYAL
21	Nandini Yadav
22	NEETU RANI
23	Neha Bisht
24	Nidhi kumari
25	NIKITA
26	palak
27	PRATIBHA KANWAR RATHORE
28	Pratiksha thakur
29	PRERNA BHARTI
30	PRIYA RANI
31	PRIZMA
32	PURVA VARSHNEY
33	SANJANA CHIMWAL
34	SEJAL

35	Sezal garg
36	SHANVI
37	Sheetal Yadav
38	Shiksha Mall
39	SHIVANSHI YOGI
40	SNEHA GUPTA
41	Twisha Khatri
42	UNNATI SHARMA
43	Vanchita Sharma
44	VARTIKA MOHAN
45	Yashasvi Goswami



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Semester I  
Paper Name: Essentials of Python (SEC)  
UPC: 2346001007  
Students List

SEC 1 Essentials of Python Award			
S.No	Name	Roll No.	Course
1	Aditi Rawat	2022/44	B.Sc (Hons) Physics
2	Aditi Sharma	2022/46	B.Sc (Hons) Chemistry
3	Akanksha	2022/61	B.Sc (Hons) Mathematics
4	Akanksha Dubey	2022/64	B.Sc (Hons) Mathematics
5	Anamika	2022/101	B.Sc (Hons) Botany
6	Ananya Gupta	2022/105	B.Sc (Hons) Mathematics
7	Anjali	2022/126	B.Sc (Hons) Mathematics
8	Ann Maria Joseph	2022/148	B.Sc (Hons) Chemistry
9	Anshika Jindal	2022/159	B.Sc (Hons) Mathematics
10	Arpima Verma	2022/192	B.Sc (Hons) Chemistry
11	Damnit	2022/269	B.A (Hons) Philosophy
12	Deepshikha Singh	2022/283	B.Sc (Hons) Chemistry
13	Dhanvi Sardana	2022/300	B.Sc (Hons) Mathematics
14	Divya Srasthi	2022/318	B.A (Multidisciplinary)
15	Harshita Yadav	2022/394	B.Sc (Physical Science) with CS
16	Iqra Ansari	2022/419	
17	Kanishkaa Sambyal	2022/488	B.Sc (Hons) Chemistry
18	Khushboo	2022/506	B.Sc (Hons) Chemistry
19	Manasvi Sharma	2022/606	B.A (Hons) Philosophy
20	Mohini	2022/648	B.A (Hons) Political Science
21	Muskan	2022/665	B.Sc (Hons) Mathematics
22	Muskan Meena	2022/676	B.A (Multidisciplinary)
23	Namrata Kumari	2022/688	B.Sc (Hons) Physics
24	Nandini Ajay Choubey	2022/697	B.A (Hons) Philosophy
25	Nandini kutiyal	2022/700	B.Sc (Physical Science) with CS
26	Nandini Rana	2022/702	B.Sc Life Science
27	NANDINI YADAV	2022/705	B.Sc (Physical Science) with CS
28	NAZRANA KHATOON	2022/1391	B.Sc (Hons) Botany
29	Nidhi kumari	2022/724	B.Sc (Physical Science) with CS
30	PALLAVI VARATHE	2022/771	B.Sc (Hons) Mathematics
31	Rishika Kanthali	2022/1471	B.A (Multidisciplinary)
32	Sarika Baswal	2022/1020	B.A (Multidisciplinary)
33	Shatabdi Dey	2022/1050	B.A (Multidisciplinary)
34	Shiksha Mall	2022/1061	B.Sc (Physical Science) with CS
35	Shivanshi yogi	1076	B.Sc (Physical Science) with CS
36	TITHI HALDER	2022/1246	B.A (Hons) Bengali
37	Umang	2022/1260	B.Sc (Hons) Physics
38	Unnati Sharma	2022/1261	B.Sc (Physical Science) with CS
39	Vanchita Sharma	2022/1422	B.Sc (Physical Science) with CS
40	Vartika Mohan	2022/1291	B.Sc (Physical Science) with CS
41	Yakshika	2022/1311	B.A (Hons) Sociology
42	Yashasvi Goswami	2022/1315	B.Sc (Physical Science) with CS



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Semester I  
Paper Name: Basic IT Tools (SEC)  
UPC:

**Practical List**  
**Students List**

S.No.	Name	Exam Roll Number	Programme Name
1	BHAGVATI KANWAR	22047501056	Bachelor of Arts
2	ISHA RAJPOOT	22047501080	Bachelor of Arts
3	SUHANI	22047501092	Bachelor of Arts
4	PRIYANSHI BARANWAL	22047501098	Bachelor of Arts
5	PRATISTHA NANDA	22047501123	Bachelor of Arts
6	Anjali Roy	22047501124	Bachelor of Arts
7	Yanu Bhadani	22047501134	Bachelor of Arts
8	JYOTI	22047501140	Bachelor of Arts
9	Riya Saini	22047501154	Bachelor of Arts
10	VANDANA GUPTA	22047501162	Bachelor of Arts
11	SAKSHI KANWAR	22047501184	Bachelor of Arts
12	RIGZIN YANGDOL	22047501228	Bachelor of Arts
13	KAJAL	22047501231	Bachelor of Arts
14	Devanshi Kutchalapati	22047510005	Bachelor of Arts (Honours Course) Economics
15	Tanika Pangley	22047510011	Bachelor of Arts (Honours Course) Economics
16	Sameeksha Agarwal	22047510016	Bachelor of Arts (Honours Course) Economics
17	MEHAK	22047510017	Bachelor of Arts (Honours Course) Economics
18	ANSHITA VERMA	22047510022	Bachelor of Arts (Honours Course) Economics
19	KHUSHI JAIN	22047510032	Bachelor of Arts (Honours Course) Economics
20	KANCHUKATLA HARSHITH	22047510036	Bachelor of Arts (Honours Course) Economics
21	Isha	22047510037	Bachelor of Arts (Honours Course) Economics
22	Kritika Simli	22047510044	Bachelor of Arts (Honours Course) Economics
23	RADHIKA BAJAJ	22047510049	Bachelor of Arts (Honours Course) Economics
24	Kritika Bhattacharya	22047510060	Bachelor of Arts (Honours Course) Economics
25	SIYA SHARMA	22047510063	Bachelor of Arts (Honours Course) Economics
26	Jhalak Kaila	22047510064	Bachelor of Arts (Honours Course) Economics
27	RACHNA RANJITH	22047510073	Bachelor of Arts (Honours Course) Economics
28	ESHIKA GOYAL	22047510078	Bachelor of Arts (Honours Course) Economics



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29	GAURAVI VATS	22047510079	Bachelor of Arts (Honours Course) Economics
30	HIRANYA RAHEJA	22047510088	Bachelor of Arts (Honours Course) Economics
31	ALEENA BANERJEE	22047510095	Bachelor of Arts (Honours Course) Economics
32	KUNGA WANGMO	22047510109	Bachelor of Arts (Honours Course) Economics
33	NABAM AKHIMA	22047511011	Bachelor of Arts (Honours Course) English
34	Rashi	22047511014	Bachelor of Arts (Honours Course) English
35	GUNN	22047511026	Bachelor of Arts (Honours Course) English
36	V Sree Yamini Nainar	22047511028	Bachelor of Arts (Honours Course) English
37	Garvita Agarwal	22047511068	Bachelor of Arts (Honours Course) English
38	KHUSHI GUPTA	22047511069	Bachelor of Arts (Honours Course) English
39	KHUSHBOO	22047511085	Bachelor of Arts (Honours Course) English
40	KHUSHI	22047511087	Bachelor of Arts (Honours Course) English
41	Sejal Kumari	22047516008	Bachelor of Arts (Honours Course) Hindi
42	Parmeet kaur	22047516030	Bachelor of Arts (Honours Course) Hindi
43	AMRITA KUMARI	22047516046	Bachelor of Arts (Honours Course) Hindi
44	MONIKA SHARMA	22047516052	Bachelor of Arts (Honours Course) Hindi
45	TANISHA	22047516054	Bachelor of Arts (Honours Course) Hindi
46	PUSHPA KUMARI	22047516070	Bachelor of Arts (Honours Course) Hindi
47	Neelam	22047518066	Bachelor of Arts (Honours Course) History
48	PAYAL	22047518074	Bachelor of Arts (Honours Course) History
49	AKRITI GAUTAM	22047527045	Bachelor of Arts (Honours Course) (Political Science)
50	Dixha Gautam	22047527102	Bachelor of Arts (Honours Course) (Political Science)
51	SHANKY	22047529029	Bachelor of Arts (Honours Course) (Sanskrit)
52	EVURU SNIGDHA	22047530022	Bachelor of Arts (Honours Course) (Sociology)
53	Panchali Apurba Chaudhury	22047530046	Bachelor of Arts (Honours Course) (Sociology)
54	KAVYA BANSAL	22047569034	Bachelor of Science (Honours Course) Zoology





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SEC BASIC IT TOOLS GROUP 1				Priti Rai Jain : T047104
S.NO.	Name	Examination Roll Number	College Roll No	Core Course
1	Pakhi Goel	22047510013	763	B.A (Hons) Economics
2	SNEHA SHARMA	22047510105	1566	B.A (Hons) Economics
3	Riya Yadav	22047513010	950	B.A (Hons) Geography
4	Aamna Jalal	22047513020	7	B.A (Hons) Geography
5	Deskyong Tsomo	22047513046	288	B.A (Hons) Geography
6	Rinky Yadav	22047513050	923	B.A (Hons) Geography
7	Nishika	22047556029	1450	B.Sc (Hons) Botany
8	Mansi Kushwaha	22047557003	620	B.Sc (Hons) Chemistry
9	Anushka sahu	22047557019	175	B.Sc (Hons) Chemistry
10	Nisha kumari	22047557031	743	B.Sc (Hons) Chemistry
11	Anasab Atiq	22047557043	112	B.Sc (Hons) Chemistry
12	Nikita Joshi	22047557049	737	B.Sc (Hons) Chemistry
13	Anjali kumari	22047557066	1361	B.Sc (Hons) Chemistry
14	Kavya Gupta	22047557067	1443	B.Sc (Hons) Chemistry
15	Kanika Panwar	22047563017	483	B.Sc (Hons) Mathematics
16	Tanya Yadav	22047563022	1231	B.Sc (Hons) Mathematics
17	Tejal Pancholi	22047563024	1237	B.Sc (Hons) Mathematics
18	Jasbina Quadri	22047563030	442	B.Sc (Hons) Mathematics
19	Navya Dabas	22047563032	709	B.Sc (Hons) Mathematics
20	Raniya Kumari	22047563037	890	B.Sc (Hons) Mathematics
21	Neha Maurya	22047563055	718	B.Sc (Hons) Mathematics
22	Kiran	22047563091	1596	B.Sc (Hons) Mathematics
23	AISWARYA S SEKH	22047567006	58	B.Sc (Hons) Physics
24	Reeta Pal	22047567014	903	B.Sc (Hons) Physics
25	Grace Lamneihat Kips	22047567035	369	B.Sc (Hons) Physics
26	Anshi Yadav	22047567036	154	B.Sc (Hons) Physics
27	Tanya	22047567037	1228	B.Sc (Hons) Physics
28	Manshi Nehra	22047567038	617	B.Sc (Hons) Physics
29	Geetanjali	22047567041	364	B.Sc (Hons) Physics
30	Shruti Prashad	22047567048	1098	B.Sc (Hons) Physics
31	JAYATI RAJPUT	22047567051	446	B.Sc (Hons) Physics
32	Priya Burdak	22047567058	851	B.Sc (Hons) Physics
33	Tejaswita	22047567060	1239	B.Sc (Hons) Physics
34	Srishti Nishad	22047567073	1454	B.Sc (Hons) Physics
35	Rupanshi Pal	22047567079	1570	B.Sc (Hons) Physics
36	PRIYA KUMARI	22047567081	1576	B.Sc (Hons) Physics
37	Mansi Deswal	22047567084	1583	B.Sc (Hons) Physics
38	SANJANA CHIMWA	22047582002	1005	B.Sc (Physical Science) with CS
39	Palak	22047582006	764	B.Sc (Physical Science) with CS
40	Khushi Upadhyay	22047582009	535	B.Sc (Physical Science) with CS
41	Manishka Pandey	22047582014	612	B.Sc (Physical Science) with CS
42	Tvisha Khatri	22047582018	1253	B.Sc (Physical Science) with CS
43	Janhvi	22047582020	440	B.Sc (Physical Science) with CS
44	Sezal garg	22047582024	1034	B.Sc (Physical Science) with CS



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SEC BASIC IT TOOLS GROUP 1				Priti Rai Jain : T0471047
S.NO.	Name	Examination Roll Number	College Roll No	Core Course
45	Sheetal Yadav	22047582026	1053	B.Sc (Physical Science) with CS
46	Meenu Sevda	22047582028	1385	B.Sc (Physical Science) with CS
47	Nikita	22047582031	1393	B.Sc (Physical Science) with CS
48	Meenakshi Tiwari	22047582038	1602	B.Sc (Physical Science) with CS
49	Agrima Singh	22047582039	1610	B.Sc (Physical Science) with CS
50	Anshita Saxena	22047582040	1574	B.Sc (Physical Science) with CS
51	Harshita Chaudhary	22047582041	1598	B.Sc (Physical Science) with CS
52	Vartika Rawat	22047583007	1292	B.Sc Life Science
53	Adeeba Ahmed	22047583012	31	B.Sc Life Science
54	Yashna vats	22047583022	1320	B.Sc Life Science
55	Somya Sinha	22047583026	1147	B.Sc Life Science
56	Jyotsana	22047583033	1445	B.Sc Life Science



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Semester I  
Paper Name: Programming with Python (GE)  
UPC: 2344001102

### Practical List

1. WAP to find the roots of a quadratic equation.
2. WAP to accept a number 'n' and
  - a. Check if 'n' is prime
  - b. Generate all prime numbers till 'n'
  - c. Generate first 'n' prime numbers
  - d. This program may be done using functions.
3. WAP to create a pyramid of the character '\*' and a reverse pyramid

```
*  
***  
*****  
*****  
*****
```

```
*****  
*****  
*****  
***  
*
```





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4. WAP that accepts a character and performs the following:
  - a. print whether the character is a letter or numeric digit or a special character
  - b. if the character is a letter, print whether the letter is uppercase or lowercase
  - c. if the character is a numeric digit, prints its name in text (e.g., if input is 9, output is NINE)
5. WAP to perform the following operations on a string
  - a. Find the frequency of a character in a string.
  - b. Replace a character by another character in a string.
  - c. Remove the first occurrence of a character from a string.
  - d. Remove all occurrences of a character from a string.
6. WAP to swap the first n characters of two strings.
7. Write a function that accepts two strings and returns the indices of all the occurrences of the second string in the first string as a list. If the second string is not present in the first string then it should return -1.
8. WAP to create a list of the cubes of only the even integers appearing in the input list (may have elements of other types also) using the following:
  - a. 'for' loop
  - b. list comprehension



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9. WAP to read a file and
  - a. Print the total number of characters, words and lines in the file.
  - b. Calculate the frequency of each character in the file. Use a variable of dictionary type to maintain the count.
  - c. Print the words in reverse order.
  - d. Copy even lines of the file to a file named 'File1' and odd lines to another file named 'File2'.
10. Write a function that prints a dictionary where the keys are numbers between 1 and 5 and the values are cubes of the keys.
11. Consider a tuple t1=(1, 2, 5, 7, 9, 2, 4, 6, 8, 10). WAP to perform following operations:
  - a. Print half the values of the tuple in one line and the other half in the next line.
  - b. Print another tuple whose values are even numbers in the given tuple.
  - c. Concatenate a tuple t2=(11,13,15) with t1.
  - d. Return maximum and minimum value from this tuple
12. WAP to accept a name from a user. Raise and handle appropriate exception(s) if the text entered by the user contains digits and/or special characters.



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GE 1, Programming with Python - (UPC 2344001102), Semester I			
S No	Name	Examination Roll Number	Course Name
1	Tithi Halder	22047507002	B.A (Hons) Bengali
2	Ekanshi Makheja	22047510002	B.A (Hons) Economics
3	Sakshi Kotwar	22047510008	B.A (Hons) Economics
4	Pakhi Goel	22047510013	B.A (Hons) Economics
5	Vaishnavi Vohra	22047510019	B.A (Hons) Economics
6	Jiya Chahar	22047510023	B.A (Hons) Economics
7	Dhanshri Narendra Thakre	22047510028	B.A (Hons) Economics
8	Amina Anush	22047510029	B.A (Hons) Economics
9	Mansi Maurya	22047510030	B.A (Hons) Economics
10	Khushi Jain	22047510032	B.A (Hons) Economics
11	Surabhi Chadha	22047510035	B.A (Hons) Economics
12	FIDHA B USMAN	22047510038	B.A (Hons) Economics
13	Aanchal	22047510040	B.A (Hons) Economics
14	Apurva Narayan	22047510048	B.A (Hons) Economics
15	RADHIKA BAJAJ	22047510049	B.A (Hons) Economics
16	Nishita Singh	22047510051	B.A (Hons) Economics
17	Amirthavarshini Kannan	22047510053	B.A (Hons) Economics
18	Kritika Bhattacharya	22047510060	B.A (Hons) Economics
19	Indira Roy	22047510065	B.A (Hons) Economics
20	Trisha Singhal	22047510068	B.A (Hons) Economics
21	Sakshi Yadav	22047510069	B.A (Hons) Economics
22	Annika Gwalani	22047510072	B.A (Hons) Economics
23	Nandini Kalantri	22047510074	B.A (Hons) Economics
24	SIMARJEET KAUR	22047510077	B.A (Hons) Economics
25	Eshika Goyal	22047510078	B.A (Hons) Economics
26	RISHITA JAIN	22047510082	B.A (Hons) Economics
27	Hiranya Raheja	22047510088	B.A (Hons) Economics
28	Tanirika Ghosh	22047510089	B.A (Hons) Economics
29	Janvi Sharma	22047510092	B.A (Hons) Economics
30	Aleena Banerjee	22047510095	B.A (Hons) Economics
31	Paavni Tandon	22047510096	B.A (Hons) Economics
32	Advaita Razdan	22047510098	B.A (Hons) Economics
33	Palak Gadroo	22047510099	B.A (Hons) Economics
34	Ashali Saxena	22047510100	B.A (Hons) Economics
35	Dipanshi Sharma	22047510101	B.A (Hons) Economics
36	SHAGUN MISHRA	22047510103	B.A (Hons) Economics
37	Pavya Singh	22047510106	B.A (Hons) Economics
38	Tanvi	22047510108	B.A (Hons) Economics
39	Khushi sharma	22047511022	B.A (Hons) English
40	Lakshmi Harikumar	22047511034	B.A (Hons) English
41	PRIYA MISHRA	22047511079	B.A (Hons) English
42	Pragya Ranjan	22047511080	B.A (Hons) English
43	Saheli Garai	22047511101	B.A (Hons) English
44	Arzoo okas	22047513041	B.A (Hons) Geography
45	Naima Najeed	22047516061	B.A (Hons) Hindi

### Students List



GE 1, Programming with Python - (UPC 2344001102), Semester I			
S No	Name	Examination Roll Number	Course Name
46	Soumya Mehta	22047526006	B.A (Hons) Philosophy
47	Vartika Yadav	22047526028	B.A (Hons) Philosophy
48	Deepmalika	22047529020	B.A (Hons) Sanskrit
49	SHANKY	22047529029	B.A (Hons) Sanskrit
50	Shivanki Prasad	22047530017	B.A (Hons) Sociology
51	Shivani Sinha	22047530071	B.A (Hons) Sociology
52	Nishika	22047556029	B.Sc (Hons) Botany
53	Prerna Singh	22047557001	B.Sc (Hons) Chemistry
54	Bishakha Bhattacharjee	22047557006	B.Sc (Hons) Chemistry
55	Mahi Chaudhary	22047557016	B.Sc (Hons) Chemistry
56	Molishree Mittal	22047557030	B.Sc (Hons) Chemistry
57	SHEIKH RIFA	22047557041	B.Sc (Hons) Chemistry
58	Harshita	22047557071	B.Sc (Hons) Chemistry
59	SHRUTI	22047557073	B.Sc (Hons) Chemistry
60	Tinu	22047557075	B.Sc (Hons) Chemistry
61	Vaishnavi Shukla	22047557076	B.Sc (Hons) Chemistry
62	Manju	22047563002	B.Sc (Hons) Mathematics
63	SHIVANI	22047563004	B.Sc (Hons) Mathematics
64	KIRAN MEENA	22047563005	B.Sc (Hons) Mathematics
65	Khushi jain	22047563009	B.Sc (Hons) Mathematics
66	Navdeep Kaur	22047563011	B.Sc (Hons) Mathematics
67	srishti tiwari	22047563015	B.Sc (Hons) Mathematics
68	Kanika Panwar	22047563017	B.Sc (Hons) Mathematics
69	Nidhi Yadav	22047563018	B.Sc (Hons) Mathematics
70	Pungbale Rangkau	22047563020	B.Sc (Hons) Mathematics
71	Tanya Yadav	22047563022	B.Sc (Hons) Mathematics
72	POOJA	22047563025	B.Sc (Hons) Mathematics
73	Arpita	22047563028	B.Sc (Hons) Mathematics
74	Jasbina Quadri	22047563030	B.Sc (Hons) Mathematics
75	Kalpna Choudhary	22047563031	B.Sc (Hons) Mathematics
76	NIDHI LOHIA	22047563035	B.Sc (Hons) Mathematics
77	Manshi Gupta	22047563036	B.Sc (Hons) Mathematics
78	Ramya Kumari	22047563037	B.Sc (Hons) Mathematics
79	Anmigha Nair	22047563040	B.Sc (Hons) Mathematics
80	STUTI SINGH	22047563042	B.Sc (Hons) Mathematics
81	Anisha	22047563048	B.Sc (Hons) Mathematics
82	Himani	22047563051	B.Sc (Hons) Mathematics
83	Gargi Gangan	22047563052	B.Sc (Hons) Mathematics
84	Neha Maurya	22047563055	B.Sc (Hons) Mathematics
85	Alka Rani	22047563061	B.Sc (Hons) Mathematics
86	Vrinda Rastogi	22047563063	B.Sc (Hons) Mathematics
87	Nakshata Agarwal	22047563076	B.Sc (Hons) Mathematics
88	Karishma Sehgal	22047563085	B.Sc (Hons) Mathematics
89	Manshi	22047563088	B.Sc (Hons) Mathematics
90	SHEJAL	22047563089	B.Sc (Hons) Mathematics



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GE 1 , Programming with Python - (UPC 2344001102) , Semester 1			
S No	Name	Examination Roll Number	Course Name
91	KIRAN	22047563091	B.Sc (Hons) Mathematics
92	Akansha	22047569011	B.Sc (Hons) Zoology
93	Reeni Chopra	22047569013	B.Sc (Hons) Zoology
94	Anukrati Singh	22047569016	B.Sc (Hons) Zoology
95	Mudrika Sharma	22047569021	B.Sc (Hons) Zoology
96	Nitigya	22047569032	B.Sc (Hons) Zoology
97	Reshu Pamnani	22047583021	B.Sc Life Science



## **Miranda House**

### **UNIVERSITY OF DELHI**

**Semester III**  
**Paper Name: Operating System (DSC)**  
**UPC: 42344304**

#### **Practical List**

1. Usage of following commands: ls, pwd, tty, cat, who, who am I, rm, mkdir, rmdir, touch, cd.
2. Usage of following commands: cal, cat(append), cat(concatenate), mv, cp, man, date.
3. Usage of following commands: chmod, grep, tput (clear, highlight), bc.
4. Write a shell script to check if the number entered at the command line is prime or not.
5. Write a shell script to modify "cal" command to display calendars of the specified months.
6. Write a shell script to modify "cal" command to display calendars of the specified range of months.
7. Write a shell script to accept a login name. If not a valid login name display message – "Entered login name is invalid".
8. Write a shell script to display date in the mm/dd/yy format.
9. Write a shell script to display on the screen sorted output of "who" command along with the total number of users .
10. Write a shell script to display the multiplication table of any number.
11. Write a shell script to compare two files and if found equal asks the user to delete the duplicate file.
12. Write a shell script to find the sum of digits of a given number.
13. Write a shell script to merge the contents of three files, sort the contents and then display them page by page.
14. Write a shell script to find the LCD(least common divisor) of two numbers.
15. Write a shell script to perform the tasks of basic calculator.
16. Write a shell script to find the power of a given number.
17. Write a shell script to find the factorial of a given number.
18. Write a shell script to check whether the number is Armstrong or not.
19. Write a shell script to check whether the file have all the permissions or not.
20. Program to show the pyramid of special character "\*\*\*".

#### **Students List**





## Miranda House UNIVERSITY OF DELHI

S.No.	Roll No	Student Name
1	267	Adithya Suresh
2	32	Anjali Tewari
3	1127	Ankita
4	1435	Anuradha
5	1121	Apeksha Vyas
6	1441	Archana
7	99	Banti
8	1057	Divya
9	1009	Divya Rao
10	1793	Fatima Basim Jasim
11	319	Gressy Rana
12	1369	Harsheen Kour
13	1228	Jalsha Lodhi
14	705	Joya Yadav
15	1699	Kanika Malik
16	1727	Khushi Chauhan
17	230	Kiran
18	485	Kiran Gaur
19	632	Kumari Vini
20	37	Lingampally Manisha
21	87	Mahima Momaliya
22	685	Mansi
23	827	Mansi
24	900	Muskan
25	581	Navami Vijayan

26	1159	Neha Punjlot
27	1071	Nisha
28	88	Palak Godara
29	1393	Pareena Saida
30	1840	Prachi
31	1034	Priyanka
32	336	Satakshi Meena
33	1324	Sheetal Kuldeep Sangwan
34	1212	Shivani
35	1230	Shivani
36	1665	Shraddha Dixit
37	261	Shubhi Sahu
38	1908	Shweta Gautam
39	1122	Simran Chugh
40	489	Soniya
41	1054	Sudha Yadav
42	927	Tanisha Chauhan
43	113	Tanuja Yadav
44	1238	Uditi Raina
45	1309	Vaibhvi
46	1667	Vidhi Agrawal
47	1750	Yashaswi Gupta
48	313	Yogita



## Miranda House UNIVERSITY OF DELHI

### Semester III

Paper Name: Data Analysis using Python Programming (SEC)

UPC: 42343307

#### Practical List

Use data set of your choice from Open Data Portal (<https://data.gov.in/>) for the following exercises.

1. Make visual representations of data using library Matplotlib and apply basic principles of data graphics to create rich analytic graphs for available datasets.
2. For the given data,
  - i. Generate box whisker plot
  - ii. Identify outliers, if any
  - iii. Display 5 point summary of data distribution
3. Create a CSV file having employee data records. Each employee record has three features viz. age, home city and salary. Import employee file and :
  - i. Draw scatter plot for age vs salary
  - ii. Plot histogram for features age and salary
  - iii. Plot Pie chart for the qualitative attribute city
4. Import iris data using sklearn library to:
  - i. Compute mean, mode, median, standard deviation, confidence interval and standard error for each feature
  - ii. Compute correlation between length and width of sepal feature
  - iii. Find covariance between length of sepal and petal
  - iv. Build contingency table for class feature
5. Download datasets Hepatitis and automobile from UCI repository
  - i. Find the number of records which are noise free
  - ii. Clean data after removing noise
  - iii. Normalize quantitative features in range of [0,1]
6. Practical based on data analysis functions from Pandas, NumPy, SciPy
7. Practical based on visualizing data as Scatter Plot, line graph, histogram, boxplot, line plots regression, word clouds, and exporting plots as images



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### Students List

S.No.	Roll No	Student Name
1	267	Adithya Suresh
2	32	Anjali Tewari
3	1127	Ankita
4	1435	Anuradha
5	1121	Apeksha Vyas
6	1441	Archana
7	99	Banti
8	1057	Divya
9	1009	Divya Rao
10	1793	Fatima Basim Jasim
11	319	Gressy Rana
12	1369	Harsheen Kour
13	1228	Jalsha Lodhi
14	705	Joya Yadav
15	1699	Kanika Malik
16	1727	Khushi Chauhan
17	230	Kiran
18	485	Kiran Gaur
19	632	Kumari Vini
20	37	Lingampally Manisha
21	87	Mahima Momaliya
22	685	Mansi
23	827	Mansi
24	900	Muskan
25	581	Navami Vijayan

26	1159	Neha Punjlot	
27	1071	Nisha	
28	88	Palak Godara	
29	1393	Pareena Saida	
30	1840	Prachi	
31	1034	Priyanka	
32	336	Satakshi Meena	
33	1324	Sheetal Kuldeep Sangwan	
34	1212	Shivani	
35	1230	Shivani	
36	1665	Shraddha Dixit	
37	261	Shubhi Sahu	
38	1908	Shweta Gautam	
39	1122	Simran Chugh	
40	489	Soniya	
41	1054	Sudha Yadav	
42	927	Tanisha Chauhan	
43	113	Tanuja Yadav	
44	1238	Uditi Raina	
45	1309	Vaibhvi	
46	1667	Vidhi Agrawal	
47	1750	Yashaswi Gupta	
48	313	Yogita	



## Miranda House UNIVERSITY OF DELHI

**Paper Name: Database Management System (GE)**  
**UPC:**

### Practical List

1. Create a database having two tables with the specified fields, to computerize a library system of a Delhi University College.

LibraryBooks (Accession number, Title, Author, Department, PurchaseDate, Price)

IssuedBooks (Accession number, Borrower)

- Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
- Delete the record of book titled "Database System Concepts".
- Change the Department of the book titled "Discrete Maths" to "CS".
- List all books that belong to "CS" department.
- List all books that belong to "CS" department and are written by author "Navathe".
- List all computer (Department = "CS") that have been issued.
- List all books which have a price less than 500 or purchased between "01/01/1999" and "01/01/2004".

2. Create a database having three tables to store the details of students of Computer Department in your college, as per the given schema.

Personal information about Student (College roll number, Name of student, Date of birth, Address, Marks(rounded off to whole number) in percentage at 10 + 2, Phone number)

Paper Details (Paper code, Name of the Paper)

Student's Academic and Attendance details (College roll number, Paper code, Attendance, Marks in home examination).



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- Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
- Design a query that will return the records (from the second table) along with the name of student from the first table, related to students who have more than 75% attendance and more than 60% marks in paper 2.
- List all students who live in "Delhi" and have marks greater than 60 in paper 1.
- Find the total attendance and total marks obtained by each student.
- List the name of student who has got the highest marks in paper 2.

3. Create the following tables and answer the queries given below:

Customer (CustID, email, Name, Phone, ReferrerID)

Bicycle (BicycleID, DatePurchased, Color, CustID, ModelNo)

BicycleModel (ModelNo, Manufacturer, Style)

Service (StartDate, BicycleID, EndDate)

- Identify primary and foreign keys. Create the tables and insert at least 5 records in each table.
- List all the customers who have the bicycles manufactured by manufacturer "Honda".
- List the bicycles purchased by the customers who have been referred by customer "C1".
- List the manufacturer of red colored bicycles.
- List the models of the bicycles given for service.

4. Create the following tables, enter at least 5 records in each table and answer the queries given below.

EMPLOYEE ( Person\_Name, Street, City )



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WORKS ( Person\_Name, Company\_Name, Salary )

COMPANY ( Company\_Name, City )

MANAGES ( Person\_Name, Manager\_Name )

- Identify primary and foreign keys.
- Alter table employee, add a column "email" of type varchar(20).
- Find the name of all managers who work for both Samba Bank and NCB Bank.
- Find the names, street address and cities of residence and salary of all employees who work for "Samba Bank" and earn more than \$10,000.
- Find the names of all employees who live in the same city as the company for which they work.
- Find the highest salary, lowest salary and average salary paid by each company.
- Find the sum of salary and number of employees in each company.
- Find the name of the company that pays highest salary.

5. Create the following tables, enter at least 5 records in each table and answer the queries given below.

Suppliers (SNo, Sname, Status, SCity)

Parts (PNo, Pname, Colour, Weight, City)

Project (JNo, Jname, Jcity)

Shipment (Sno, Pno, Jno, Qunatity)

- Identify primary and foreign keys.
- Get supplier numbers for suppliers in Paris with status>20.
- Get suppliers details for suppliers who supply part P2. Display the supplier list in increasing order of supplier numbers.
- Get suppliers names for suppliers who do not supply part P2.
- For each shipment get full shipment details, including total shipment weights.
- Get all the shipments where the quantity is in the range 300 to 750 inclusive.
- Get part nos. for parts that either weigh more than 16 pounds or are supplied by suppliers S2, or both.
- Get the names of cities that store more than five red parts.
- Get full details of parts supplied by a supplier in London.
- Get part numbers for part supplied by a supplier in London to a project in London.
- Get the total number of project supplied by a supplier (say, S1).
- Get the total quantity of a part (say, P1) supplied by a supplier (say, S1).

### Students List

Semester V  
Paper Name: Data Structures (DSE)  
UPC:





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#### **Practical List**

- a. Implement sorting algorithms using arrays.
- b. Implement searching algorithms using arrays and lists.
- c. Implement stack data structure and its operations.
- d. Convert Prefix expression to Infix and Postfix expressions, and evaluate.
- e. Implementing queue using array, circular queues, priority queues.
- f. Implementing stack and queue using arrays and linked lists.
- g. Implementing recursive solutions to simple problems.
- h. Creating and traversing Binary Trees and Binary Search Tree.



## Miranda House UNIVERSITY OF DELHI

### Students List

Sr No	Year	Roll No	Student Name
1	2020	124	Buchammagari Bhavani
2	2020	302	Shailvi Gavli
3	2020	305	Sanju Kumari
4	2020	330	Kavya Singh
5	2020	396	Vandana Bamniya
6	2020	459	Vaasvi Agarwal
7	2020	603	Kavita
8	2020	613	Neha
9	2020	622	Jyoti Choudhary
10	2020	657	Charu
11	2020	660	Shreya Shekhar Singh
12	2020	661	Shweta
13	2020	702	Shrishti Choudhary
14	2020	731	Varsha
15	2020	736	Jagriti Luthra
16	2020	766	Vashu
17	2020	770	Astha Singh
18	2020	804	Shakshi
19	2020	893	Aastha Dodeja
20	2020	932	Priya Singh
21	2020	1002	Vaishnavi Dwivedi
22	2020	1060	Garima
23	2020	1091	Aarti
24	2020	1244	Nivedita Solanki
25	2020	1356	Kirti
26	2020	1368	Sanskriti Bansal
27	2020	1403	Mahika Choudhary
28	2020	1464	Archi
29	2020	1512	Himanshi
30	2020	1611	Adhisha Kanouje
31	2020	1667	Tanu
32	2020	1692	Karuna Kushwaha
33	2020	1707	Ishika
34	2020	1732	Tanishka
35	2020	1743	Anisha Yadav
36	2020	1748	Chetna
37	2020	1773	Deeksha
38	2020	1789	Ifra Moin
39	2020	1827	Kirti
40	2020	1843	Princy Yadav

Paper Name:  
in Java (SEC)  
UPC: 42343502  
Practical List

- 1) Implement A
- 2) Implement n
- 3) Create user c
- 4) Create user c
- 5) Implement f
- 6) Create Appl

Semester V  
Advanced Programming



**Paper Name: Data**  
**UPC: 2342571201**

1. Implement matrix addition
2. Implement Insertion sort.
3. Implement following recu
  - a. Factorial of a number
  - b. N<sup>th</sup> fibonacci number
4. Implement singly linked li
5. Implement stack data stru
6. Implement stack data stru
7. Implement queue data stru

**Semester II**  
**Structures (DSC)**

35	Sezal garg	
36	SHANVI	
37	Sheetal Yadav	
38	Shiksha Mall	
39	SHIVANSHI YOGI	
40	SNEHA GUPTA	
41	Twisha Khatri	
42	UNNATI SHARMA	
43	Vanchita Sharma	
44	VARTIKA MOHAN	
45	Yashasvi Goswami	



# Miranda House UNIVERSITY OF DELHI

Semester II  
Paper Name: Basic IT Tools (SEC)  
UPC: 2346000005

## Students List

SEM 2			
BASIC IT TOOLS			
Reporting Time - 08:45			
SR	NAME	ROLL NO	UPC: 2346000005
PROG NAME			
1	DEVANGINI CHOUDHARY	22047501005	Bachelor of Arts
2	ANUSHKA CHAUDHARY	22047501012	Bachelor of Arts
3	KHUSHBU MEHRA	22047501047	Bachelor of Arts
4	TARANA UPADHYAY	22047501052	Bachelor of Arts
5	HIMANSHI RAJOURA	22047501060	Bachelor of Arts
6	SHRUTI TANWAR	22047501084	Bachelor of Arts
7	ADEPU HARSHINI	22047501095	Bachelor of Arts
8	ALVIA NAUSHAD	22047501199	Bachelor of Arts
9	MANVI BHATIA	22047501153	Bachelor of Arts
10	KHUSHI YADAV	22047501155	Bachelor of Arts
11	ANSHITA MAHAJAN	22047501190	Bachelor of Arts
12	MARIA TERESA GEORGE	22047501200	Bachelor of Arts
13	CHEWANG CHODEN BHUTIA	22047501247	Bachelor of Arts
14	ARPITA LUHA	22047501251	Bachelor of Arts
15	EKANSHI MAKHEJA	22047510002	Bachelor of Arts (Honours Course) Economics
16	SAKSHI KOTAWR	22047510008	Bachelor of Arts (Honours Course) Economics
17	YASHASVI AGGARWAL	22047510026	Bachelor of Arts (Honours Course) Economics
18	FIDHA B USMAN	22047510038	Bachelor of Arts (Honours Course) Economics
19	NISHITA SINGH	22047510051	Bachelor of Arts (Honours Course) Economics
20	OJASWINI RAO AYDE	22047510061	Bachelor of Arts (Honours Course) Economics
21	TRISHA SINGHAL	22047510068	Bachelor of Arts (Honours Course) Economics
22	NANDINI KALANTRI	22047510074	Bachelor of Arts (Honours Course) Economics
23	SIMARJEET KAUR	22047510077	Bachelor of Arts (Honours Course) Economics
24	PALAK GADROO	22047510099	Bachelor of Arts (Honours Course) Economics
25	PAVYA SINGH	22047510106	Bachelor of Arts (Honours Course) Economics
26	NIHARIKA YADAV	22047511006	Bachelor of Arts (Honours Course) English
27	NAMRUTHA T AJAY	22047511013	Bachelor of Arts (Honours Course) English
28	NIHARIKA	22047511024	Bachelor of Arts (Honours Course) English
29	SUHAN SINGH	22047511078	Bachelor of Arts (Honours Course) English
30	JASLEEN KOUR	22047511090	Bachelor of Arts (Honours Course) English
31	TSETAN DOLKAR	22047511102	Bachelor of Arts (Honours Course) English
32	ERAM NOOR	22047516021	Bachelor of Arts (Honours Course) Hindi
33	AARTI	22047516026	Bachelor of Arts (Honours Course) Hindi



# Miranda House

## UNIVERSITY OF DELHI

SR		NAME		BASIC IT TOOLS	UPC:2346000005
				ROLL NO	PROG NAME
34		KARISHMA DAHIYA		22047518037	Bachelor of Arts (Honours Course) History
35		ANUSHKA SINGH		22047526010	Bachelor of Arts (Honours Course) (Philosophy)
36		SNEHA PANDEY		22047526011	Bachelor of Arts (Honours Course) (Philosophy)
37		VIDHI SHARMA		22047526020	Bachelor of Arts (Honours Course) (Philosophy)
38		JUHI BANERJEE		22047526038	Bachelor of Arts (Honours Course) (Philosophy)
39		AISHA KUMARI		22047526048	Bachelor of Arts (Honours Course) (Philosophy)
40		MANSI		22047526063	Bachelor of Arts (Honours Course) (Philosophy)
41		RIMJHIM		22047526064	Bachelor of Arts (Honours Course) (Philosophy)
42		ANAMIKA REWAR		22047527005	Bachelor of Arts (Honours Course) (Political Science)
43		DEEPIKA SAINI		22047527008	Bachelor of Arts (Honours Course) (Political Science)
44		ROHA SIDHU		22047527018	Bachelor of Arts (Honours Course) (Political Science)
45		MOHU BHARTI		22047527019	Bachelor of Arts (Honours Course) (Political Science)
46		KASHISH SAH		22047527034	Bachelor of Arts (Honours Course) (Political Science)
47		MILHIKA JAIN (Exam Given)		22047527035	Bachelor of Arts (Honours Course) (Political Science)
48		KAJAL		22047527038	Bachelor of Arts (Honours Course) (Political Science)
49		DEEKSHA CHOUDHARY		22047527054	Bachelor of Arts (Honours Course) (Political Science)
50		PRABHNOOR KAUR		22047527060	Bachelor of Arts (Honours Course) (Political Science)
51		ANANYA JORWAL		22047527062	Bachelor of Arts (Honours Course) (Political Science)
52		SANYA PATNI		22047527092	Bachelor of Arts (Honours Course) (Political Science)
53		YAKSHIKA		22047530004	Bachelor of Arts (Honours Course) (Sociology)
54		VRINDA YADAV		22047530028	Bachelor of Arts (Honours Course) (Sociology)
55		SAKSHI		22047530032	Bachelor of Arts (Honours Course) (Sociology)
56		TANUSHIKHA CHAUDHARY		22047530034	Bachelor of Arts (Honours Course) (Sociology)
57		PALLAVI BANERJEE		22047530039	Bachelor of Arts (Honours Course) (Sociology)
58		ANSHIKA SAHU (Exam Given)		22047530049	Bachelor of Arts (Honours Course) (Sociology)
59		HIMANGI		22047530061	Bachelor of Arts (Honours Course) (Sociology)
60		SHREYA JAISWAL		22047556033	Bachelor of Science (Honours Course) Botany





## Miranda House UNIVERSITY OF DELHI

SEM 2		BASIC IT TOOLS		Reporting Time - 1
SR	NAME	ROLL NO	PROG NAME	UPC:234600000
61	MUSKAN	22047557002	Bachelor of Science (Honours Course) Chemistry	
62	ANJALI SINGH	22047557009	Bachelor of Science (Honours Course) Chemistry	
63	KEERTI	22047557012	Bachelor of Science (Honours Course) Chemistry	
64	PREETI	22047557014	Bachelor of Science (Honours Course) Chemistry	
65	ANN MARIA JOSEPH	22047557028	Bachelor of Science (Honours Course) Chemistry	
66	NEHA	22047557038	Bachelor of Science (Honours Course) Chemistry	
67	ANSHIKA SINGHAL	22047557046	Bachelor of Science (Honours Course) Chemistry	
68	ARPIMA VERMA	22047557055	Bachelor of Science (Honours Course) Chemistry	
69	DEVIKA	22047557059	Bachelor of Science (Honours Course) Chemistry	
70	JYOTI	22047557063	Bachelor of Science (Honours Course) Chemistry	
71	SHRUTI	22047557073	Bachelor of Science (Honours Course) Chemistry	
72	ANANYA GUPTA	22047563041	Bachelor of Science (Honours Course) Mathematics	
73	VARUNIKA PATHAK	22047563045	Bachelor of Science (Honours Course) Mathematics	
74	HIMANI	22047563051	Bachelor of Science (Honours Course) Mathematics	
75	DHANVI SARDANA	22047563053	Bachelor of Science (Honours Course) Mathematics	
76	SHRUTI KAIRA (E 6)	22047567004	Bachelor of Science (Honours Course) Physics (E 6)	
77	AASTHA SHARMA	22047567022	Bachelor of Science (Honours Course) Physics	
78	NITIKA	22047567025	Bachelor of Science (Honours Course) Physics	
79	PRITI KUMARI	22047567029	Bachelor of Science (Honours Course) Physics	
80	NAMRATA KUMARI (E 4)	22047567031	Bachelor of Science (Honours Course) Physics (E 4)	
81	MEHAK RANI	22047567055	Bachelor of Science (Honours Course) Physics	
82	TINU	22047567067	Bachelor of Science (Honours Course) Physics	
83	YASHASVI GOSWAMI	22047582005	Bachelor of Science (Physical Sciences)	
84	UNNATI SHARMA	22047582008	Bachelor of Science (Physical Sciences)	
85	NANDINI YADAV	22047582010	Bachelor of Science (Physical Sciences)	
86	SHIKSHA MALL	22047582013	Bachelor of Science (Physical Sciences)	
87	NIDHI KUMARI	22047582022	Bachelor of Science (Physical Sciences)	
88	KRITIKA	22047583025	Bachelor of Science (Life Sciences)	
89	SWETA KUMARI	22047583029	Bachelor of Science (Life Sciences)	





# Miranda House

## UNIVERSITY OF DELHI

**Semester II**  
**Paper Name: Data Analysis and Visualization using Python (GE)**  
**UPC: 2344001201**

### Practical List

- Write programs in Python using NumPy library to do the following:
  - Compute the mean, standard deviation, and variance of a two dimensional random integer array along the second axis.
  - Create a 2-dimensional array of size  $m \times n$  integer elements, also print the shape, type and data type of the array and then reshape it into an  $n \times m$  array, where  $n$  and  $m$  are user inputs given at the run time.
  - Test whether the elements of a given 1D array are zero, non-zero and NaN. Record the indices of these elements in three separate arrays.
  - Create three random arrays of the same size: Array1, Array2 and Array3. Subtract Array 2 from Array3 and store in Array4. Create another array Array5 having two times the values in Array1. Find Co-variance and Correlation of Array1 with Array4 and Array5 respectively.
  - Create two random arrays of the same size 10: Array1, and Array2. Find the sum of the first half of both the arrays and product of the second half of both the arrays.
- Do the following using PANDAS Series:
  - Create a series with 5 elements. Display the series sorted on index and also sorted on values separately.
  - Create a series with N elements with some duplicate values. Find the minimum and maximum ranks assigned to the values using 'first' and 'max' methods.
  - Display the index value of the minimum and maximum element of a Series.
- Create a data frame having at least 3 columns and 50 rows to store numeric data generated using a random function. Replace 10% of the values by null values whose index positions are generated using random function. Do the following:
  - Identify and count missing values in a data frame.
  - Drop the column having more than 5 null values.
  - Identify the row label having maximum of the sum of all values in a row and drop that row.
  - Sort the data frame on the basis of the first column.
  - Remove all duplicates from the first column.
  - Find the correlation between first and second column and covariance between second and third column.
  - Discretize the second column and create 5 bins.
- Consider two excel files having attendance of two workshops. Each file has three fields 'Name', 'Date, duration (in minutes) where names are unique within a file. Note that duration may take one of three values (30, 40, 50) only. Import the data into two data frames and do the following:
  - Perform merging of the two data frames to find the names of students who had attended both workshops.
  - Find names of all students who have attended a single workshop only.
  - Merge two data frames row-wise and find the total number of records in the data frame.
  - Merge two data frames row-wise and use two columns viz. names and dates as multi-row indexes. Generate descriptive statistics for this hierarchical data frame.



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5. Using Iris data, plot the following with proper legend and axis labels: (Download IRIS data from: <https://archive.ics.uci.edu/ml/datasets/iris> or import it from sklearn datasets)
- Plot bar chart to show the frequency of each class label in the data.
  - Draw a scatter plot for Petal width vs sepal width and fit a regression line
  - Plot density distribution for feature petal length.
  - Use a pair plot to show pairwise bivariate distribution in the Iris Dataset.
  - Draw heatmap for the four numeric attributes
  - Compute mean, mode, median, standard deviation, confidence interval and standard error for each feature
  - Compute correlation coefficients between each pair of features and plot heatmap

6. Consider the following data frame containing a family name, gender of the family member and her/his monthly income in each record.

Name	Gender	MonthlyIncome (Rs.)
Shah	Male	114000.00
Vats	Male	65000.00
Vats	Female	43150.00
Kumar	Female	69500.00
Vats	Female	155000.00
Kumar	Male	103000.00
Shah	Male	55000.00
Shah	Female	112400.00
Kumar	Female	81030.00
Vats	Male	71900.00

Write a program in Python using Pandas to perform the following:

- Calculate and display familywise gross monthly income.
  - Calculate and display the member with the highest monthly income.
  - Calculate and display monthly income of all members with income greater than Rs. 60000.00.
  - Calculate and display the average monthly income of the female members
7. Using Titanic dataset, to do the following:
- Find total number of passengers with age less than 30
  - Find total fare paid by passengers of first class
  - Compare number of survivors of each passenger class
  - Compute descriptive statistics for any numeric attribute genderwise



## Miranda House UNIVERSITY OF DELHI

### Students List

S. No.	Name	Examination Roll Number	College Roll No.	Course Name	Data Analysis and Visualization Using Python
1	Tithi Halder	22047507002	1246	B.A (Hons) Bengali	6/6/2023 (M)
2	Ekanshi Makheja	22047510002	335	B.A (Hons) Economics	6/6/2023 (M)
3	Sakshi Kotwar	22047510008	976	B.A (Hons) Economics	6/6/2023 (M)
4	Pakhi Goel	22047510013	763	B.A (Hons) Economics	6/6/2023 (M)
5	Vaishnavi Vohra	22047510019	1271	B.A (Hons) Economics	6/6/2023 (M)
6	Jiya Chahar	22047510023	457	B.A (Hons) Economics	6/6/2023 (M)
7	Dhanshri Narendra Thakre	22047510028	299	B.A (Hons) Economics	6/6/2023 (M)
8	Amina Anush	22047510029	91	B.A (Hons) Economics	6/6/2023 (M)
9	Khushi Jain	22047510032	526	B.A (Hons) Economics	6/6/2023 (M)
10	Surabhi Chadha	22047510035	1183	B.A (Hons) Economics	6/6/2023 (M)
11	FIDHA B USMAN	22047510038	347	B.A (Hons) Economics	6/6/2023 (M)
12	Aanchal	22047510040	8	B.A (Hons) Economics	6/6/2023 (M)
13	Apurva Narayan	22047510048	186	B.A (Hons) Economics	6/6/2023 (M)
14	RADHIKA BAJAJ	22047510049	881	B.A (Hons) Economics	6/6/2023 (M)
15	Nishita Singh	22047510051	745	B.A (Hons) Economics	6/6/2023 (M)
16	Amirthavarshini Kannan	22047510053	92	B.A (Hons) Economics	6/6/2023 (M)
17	Kritika Bhattacharya	22047510060	561	B.A (Hons) Economics	6/6/2023 (M)
18	Indira Roy	22047510065	416	B.A (Hons) Economics	6/6/2023 (M)
19	Trisha Singhal	22047510068	1251	B.A (Hons) Economics	6/6/2023 (M)
20	Sakshi Yadav	22047510069	979	B.A (Hons) Economics	6/6/2023 (M)
21	Annika Gwalani	22047510072	149	B.A (Hons) Economics	6/6/2023 (E)
22	Nandini Kalantri	22047510074	698	B.A (Hons) Economics	6/6/2023 (E)
23	SIMARJEET KAUR	22047510077	1109	B.A (Hons) Economics	6/6/2023 (E)
24	RISHITA JAIN	22047510082	931	B.A (Hons) Economics	6/6/2023 (E)
25	Tanirika Ghosh	22047510089	1499	B.A (Hons) Economics	6/6/2023 (E)
26	Aleena Banerjee	22047510095	1482	B.A (Hons) Economics	6/6/2023 (E)
27	Paavni Tandon	22047510096	1467	B.A (Hons) Economics	6/6/2023 (E)
28	Advaita Razdan	22047510098	1555	B.A (Hons) Economics	6/6/2023 (E)
29	Palak Gadroo	22047510099	1551	B.A (Hons) Economics	6/6/2023 (E)
30	Ashali Saxena	22047510100	1538	B.A (Hons) Economics	6/6/2023 (E)
31	Dipanshi Sharma	22047510101	1534	B.A (Hons) Economics	6/6/2023 (E)
32	SHAGUN MISHRA	22047510103	1513	B.A (Hons) Economics	6/6/2023 (E)
33	Pavya Singh	22047510106	1567	B.A (Hons) Economics	6/6/2023 (E)
34	Tanvi	22047510108	1628	B.A (Hons) Economics	6/6/2023 (E)
35	Soumya Mehta	22047526006	1157	B.A (Hons) Philosophy	6/6/2023 (E)
36	Vartika Yadav	22047526028	1293	B.A (Hons) Philosophy	6/6/2023 (E)
37	Deepmalika	22047529020	281	B.A (Hons) Sanskrit	6/6/2023 (E)



## Miranda House UNIVERSITY OF DELHI

38	SHANKY	22047529029	1572	B.A (Hons) Sanskrit	6/6/2023 (E)
39	Shivanki Prasad	22047530017	1075	B.A (Hons) Sociology	6/6/2023 (E)
40	Shivani Sinha	22047530071	1073	B.A (Hons) Sociology	6/6/2023 (E)
41	Reshu Pamnani	22047583021	909	B.Sc Life Science	6/6/2023 (E)
42	Khushi Sharma	22047511022	533	B.A (Hons) English	7/6/2023 (M)
43	Lakshmi Harikumar	22047511034	581	B.A (Hons) English	7/6/2023 (M)
44	PRIYA MISHRA	22047511079	853	B.A (Hons) English	7/6/2023 (M)
45	Pragya Ranjan	22047511080	817	B.A (Hons) English	7/6/2023 (M)
46	Saheli Garai	22047511101	1593	B.A (Hons) English	7/6/2023 (M)
47	Nishika	22047556029	1450	B.Sc (Hons) Botany	7/6/2023 (M)
48	Prerna Singh	22047557001	845	B.Sc (Hons) Chemistry	7/6/2023 (M)
49	Bishakha Bhattacharjee	22047557006	247	B.Sc (Hons) Chemistry	7/6/2023 (M)
50	Mahi Chaudhary	22047557016	599	B.Sc (Hons) Chemistry	7/6/2023 (M)
51	Molishree Mittal	22047557030	651	B.Sc (Hons) Chemistry	7/6/2023 (M)
52	SHEIKH RIFA	22047557041	1054	B.Sc (Hons) Chemistry	7/6/2023 (M)
53	Harshita	22047557071	1518	B.Sc (Hons) Chemistry	7/6/2023 (M)
54	SHRUTI	22047557073	1624	B.Sc (Hons) Chemistry	7/6/2023 (M)
55	Tinu	22047557075	1584	B.Sc (Hons) Chemistry	7/6/2023 (M)
56	Vaishnavi Shukla	22047557076	1587	B.Sc (Hons) Chemistry	7/6/2023 (M)
57	Manju	22047563002	613	B.Sc (Hons) Mathematics	7/6/2023 (M)
58	SHIVANI	22047563004	1070	B.Sc (Hons) Mathematics	7/6/2023 (M)
59	KIRAN MEENA	22047563005	541	B.Sc (Hons) Mathematics	7/6/2023 (M)
60	Khushi jain	22047563009	525	B.Sc (Hons) Mathematics	7/6/2023 (M)
61	Navdeep Kaur	22047563011	708	B.Sc (Hons) Mathematics	7/6/2023 (M)
62	srishti tiwari	22047563015	1162	B.Sc (Hons) Mathematics	7/6/2023 (E)
63	Kanika Panwar	22047563017	483	B.Sc (Hons) Mathematics	7/6/2023 (E)
64	Nidhi Yadav	22047563018	728	B.Sc (Hons) Mathematics	7/6/2023 (E)
65	Pungbale Rangkau	22047563020	868	B.Sc (Hons) Mathematics	7/6/2023 (E)
66	Tanya Yadav	22047563022	1231	B.Sc (Hons) Mathematics	7/6/2023 (E)
67	POOJA	22047563025	787	B.Sc (Hons) Mathematics	7/6/2023 (E)





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68	Arpita	22047563028	193	B.Sc (Hons) Mathematics	7/6/2023 (E)
69	Jasbina Quadri	22047563030	442	B.Sc (Hons) Mathematics	7/6/2023 (E)
70	Kalpana Choudhary	22047563031	469	B.Sc (Hons) Mathematics	7/6/2023 (E)
71	NIDHI LOHIA	22047563035	726	B.Sc (Hons) Mathematics	7/6/2023 (E)
72	Manshi Gupta	22047563036	616	B.Sc (Hons) Mathematics	7/6/2023 (E)
73	Anmigha Nair	22047563040	146	B.Sc (Hons) Mathematics	7/6/2023 (E)
74	STUTI SINGH	22047563042	1165	B.Sc (Hons) Mathematics	7/6/2023 (E)
75	Anisha	22047563048	119	B.Sc (Hons) Mathematics	7/6/2023 (E)
76	Himani	22047563051	400	B.Sc (Hons) Mathematics	7/6/2023 (E)
77	Gargi Gangan	22047563052	350	B.Sc (Hons) Mathematics	7/6/2023 (E)
78	Neha Maurya	22047563055	718	B.Sc (Hons) Mathematics	7/6/2023 (E)
79	Alka Rani	22047563061	87	B.Sc (Hons) Mathematics	7/6/2023 (E)
80	Vrinda Rastogi	22047563063	1308	B.Sc (Hons) Mathematics	7/6/2023 (E)
81	Nakshata Agarwal	22047563076	686	B.Sc (Hons) Mathematics	7/6/2023 (E)
82	Karishma Sehgal	22047563085	1380	B.Sc (Hons) Mathematics	7/6/2023 (E)
83	Manshi	22047563088	1524	B.Sc (Hons) Mathematics	7/6/2023 (E)
84	SHEJAL	22047563089	1521	B.Sc (Hons) Mathematics	7/6/2023 (E)
85	KIRAN	22047563091	1596	B.Sc (Hons) Mathematics	7/6/2023 (E)
86	Akansha	22047569011	71	B.Sc (Hons) Zoology	7/6/2023 (E)
87	Reeni Chopra	22047569013	902	B.Sc (Hons) Zoology	7/6/2023 (E)
88	Anukrati Singh	22047569016	169	B.Sc (Hons) Zoology	7/6/2023 (E)
89	Mudrika Sharma	22047569021	1389	B.Sc (Hons) Zoology	7/6/2023 (E)
90	Nitigya	22047569032	1449	B.Sc (Hons) Zoology	7/6/2023 (E)



## **Miranda House**

### **UNIVERSITY OF DELHI**

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**Semester IV**  
**Paper Name: Computer System Architecture (DSC)**  
**UPC: 42344403**  
**Practical List**

#### **Practical**

1. Write a program to convert a number in Radix 'R' to radix 10 and vice versa. Test the same by
  - a. Converting an unsigned number from binary, octal, hex to decimal.
  - b. Converting an unsigned number from decimal to binary, octal, hex.
2. Write a program that will prompt for the input of two integer values. Then using the bitwise shift operators show the result of
  - a. Left shifting the first number by the second
  - b. Right shifting the first number by the second
  - c. Exclusive OR of the first number by the second bitwise
  - d. OR of the first number by the second bitwise
  - e. AND of the first number by the second bitwise
3. Write a program that will prompt for the input of a binary value and print:
  - a. One's complement
  - b. Two's complement
4. Write a program to print the values of a 5 bit binary up-down counter. User should be able to specify the up or down nature of the counter.
5. Write a program to implement the following binary operations:
  - a. Addition
  - b. Subtraction using 2's complement.
6. Program related to concepts taught in theory





# Miranda House

## UNIVERSITY OF DELHI

### Students List

S.No.	Roll No	Student Name
1	267	Adithya Suresh
2	32	Anjali Tewari
3	1127	Ankita
4	1435	Anuradha
5	1121	Apeksha Vyas
6	1441	Archana
7	99	Banti
8	1057	Divya
9	1009	Divya Rao
10	1793	Fatima Basim Jasim
11	319	Gressy Rana
12	1369	Harsheen Kour
13	1228	Jalsha Lodhi
14	705	Joya Yadav
15	1699	Kanika Malik
16	1727	Khushi Chauhan
17	230	Kiran
18	485	Kiran Gaur
19	632	Kumari Vini
20	37	Lingampally Manisha
21	87	Mahima Momaliya
22	685	Mansi
23	827	Mansi
24	900	Muskan
25	581	Navami Vijayan

26	1159	Neha Punjlot
27	1071	Nisha
28	88	Palak Godara
29	1393	Pareena Saïda
30	1840	Prachi
31	1034	Priyanka
32	336	Satakshi Meena
33	1324	Sheetal Kuldeep Sangwan
34	1212	Shivani
35	1230	Shivani
36	1665	Shraddha Dixit
37	261	Shubhi Sahu
38	1908	Shweta Gautam
39	1122	Simran Chugh
40	489	Soniya
41	1054	Sudha Yadav
42	927	Tanisha Chauhan
43	113	Tanuja Yadav
44	1238	Uditi Raina
45	1309	Vaibhvi
46	1667	Vidhi Agrawal
47	1750	Yashaswi Gupta
48	313	Yogita



## Miranda House UNIVERSITY OF DELHI

Paper Name: Programming in Java (SEC)  
UPC: 42343410  
Practical List

### Practical

9. Write a program to find the largest of n natural numbers.
10. Write a program to find whether a given number is prime or not.
11. Write a menu driven program for following:
  - a) display a Fibonacci series
  - b) compute Factorial of a number
  - c) to check whether a given number is odd or even.
  - d) to check whether a given string is palindrome or not.
12. Write a program to print the sum and product of digits of an Integer and reverse the Integer.
13. Write a program to create an array of 10 integers. Accept values from the user in that array. Input another number from the user and find out how many numbers are equal to the number passed, how many are greater and how many are less than the number passed.
14. Write a program that will prompt the user for a list of 5 prices. Compute the average of the prices and find out all the prices that are higher than the calculated average.
15. Design a class named Car, having registration number, model and engine as its private members. Here engine is an object of a class called Engine with the private members: Chassis number and make. Define a suitable constructor of Car and override toString() Method to print the details of a car. Assume appropriate data types for the instance Members of the classes. Write a Java program to test the above class.
16. Write a program that computes the area of a circle, rectangle and a Cylinder using function overloading.

**Commented [ts1]:** In the syllabus the list was starting from no. 9only



## Miranda House UNIVERSITY OF DELHI

### Students List

S.No.	Roll No	Student Name	
1	267	Adithya Suresh	
2	32	Anjali Tewari	
3	1127	Ankita	
4	1435	Anuradha	
5	1121	Apeksha Vyas	
6	1441	Archana	
7	99	Banti	ngwan
8	1057	Divya	
9	1009	Divya Rao	
10	1793	Fatima Basim Jasim	
11	319	Gressy Rana	
12	1369	Harsheen Kour	
13	1228	Jalsha Lodhi	
14	705	Joya Yadav	
15	1699	Kanika Malik	
16	1727	Khushi Chauhan	
17	230	Kiran	
18	485	Kiran Gaur	
19	632	Kumari Vini	
20	37	Lingampally Manisha	
21	87	Mahima Momaliya	
22	685	Mansi	
23	827	Mansi	
24	900	Muskan	
25	581	Navami Vijayan	



## **Miranda House**

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**Paper Name: Information Security and Cyber Laws (GE)**  
**UPC: 32345402**  
**Practical List**

#### **Practical**

1. Demonstrate the use of Network tools: ping, ipconfig, ifconfig, tracert, arp, netstat, whois
2. Use of Password cracking tools : John the Ripper, Ophcrack. Verify the strength of passwords using these tools.
3. Perform encryption and decryption of Caesar cipher. Write a script for performing these operations.
4. Perform encryption and decryption of a Rail fence cipher. Write a script for performing these operations.
5. Use nmap/zenmap to analyse a remote machine.
6. Use Burp proxy to capture and modify the message.
7. Demonstrate sending of a protected word document.
8. Demonstrate sending of a digitally signed document.
9. Demonstrate sending of a protected worksheet.
10. Demonstrate use of steganography tools.
11. Demonstrate use of gpg utility for signing and encrypting purposes.



# Miranda House UNIVERSITY OF DELHI

## Students List

Computer Science Department								
Sr.	Name	Exam Roll Number	Prog Code	Programme Name	Paper Term	Paper Code	Paper Name	Paper
1	MAHIKA NUPUR	20047529042	529	Bachelor of Arts (Honours Course) (Sanskrit)	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
2	ANSHU PRIYA	21047510002	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
3	DEVANSHI MAHAJAN	21047510006	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
4	DHWANI KUMAR	21047510007	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
5	DIYA SUNDAR	21047510009	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
6	GAADHA S	21047510012	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
7	GOWRI S PRAHLAD	21047510019	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
8	HARSHA BHARTI	21047510022	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
9	KALYANIE SINGH	21047510034	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
10	KIRTI SINGH	21047510040	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
11	KRITIKA AGARWAL	21047510041	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
12	KUNJAL AGRAWAL	21047510044	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
13	NIDINA REMAN S	21047510061	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
14	NYSHA RANJAN	21047510065	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
15	RITHIKA VENUGOPAL	21047510076	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
16	SANJANA AGGARWAL	21047510083	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
17	SRUTHI SHANMUGAM	21047510090	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
18	AIMAN SUHAIL	21047510102	510	Bachelor of Arts (Honours Course) Economics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
19	ANKITA PAYAL	21047511011	511	Bachelor of Arts (Honours Course) English	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
20	FARIHA AFRIN OYSHI	21047511046	511	Bachelor of Arts (Honours Course) English	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
21	HARSHITA BANSAL	21047511049	511	Bachelor of Arts (Honours Course) English	4	32345402	INFORMATION SECURITY AND CYBER LAWS	
22	MUSKAN KATARIYA	21047511076	511	Bachelor of Arts (Honours Course) English	4	32345402	INFORMATION SECURITY AND CYBER LAWS	





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23	NIKITA KISHOR	21047511082	511	Bachelor of Arts (Honours Course) English	4	32345402	INFORMATION SECURITY AND CYBER LAWS
24	SANSKRITI JAIN	21047511099	511	Bachelor of Arts (Honours Course) English	4	32345402	INFORMATION SECURITY AND CYBER LAWS
25	AALIYA FATHIMA. MH	21047511125	511	Bachelor of Arts (Honours Course) English	4	32345402	INFORMATION SECURITY AND CYBER LAWS
26	ANAGHA B R	21047513006	513	Bachelor of Arts (Honours Course) Geography	4	32345402	INFORMATION SECURITY AND CYBER LAWS
27	CHAHAT CHOUDHARY	21047513018	513	Bachelor of Arts (Honours Course) Geography	4	32345402	INFORMATION SECURITY AND CYBER LAWS
28	GOPIKA V S	21047513028	513	Bachelor of Arts (Honours Course) Geography	4	32345402	INFORMATION SECURITY AND CYBER LAWS
29	MEHREEN ABID	21047513036	513	Bachelor of Arts (Honours Course) Geography	4	32345402	INFORMATION SECURITY AND CYBER LAWS
30	SUMNIMA SAH	21047513063	513	Bachelor of Arts (Honours Course) Geography	4	32345402	INFORMATION SECURITY AND CYBER LAWS
31	GEETA KUMARI	21047516029	516	Bachelor of Arts (Honours Course) Hindi	4	32345402	INFORMATION SECURITY AND CYBER LAWS
32	MANSI	21047516040	516	Bachelor of Arts (Honours Course) Hindi	4	32345402	INFORMATION SECURITY AND CYBER LAWS
33	AARTI	21047516090	516	Bachelor of Arts (Honours Course) Hindi	4	32345402	INFORMATION SECURITY AND CYBER LAWS
34	SHALINI RANJAN	21047518049	518	Bachelor of Arts (Honours Course) (History)	4	32345402	INFORMATION SECURITY AND CYBER LAWS
35	PRIYA	21047526048	526	Bachelor of Arts (Honours Course) (Philosophy)	4	32345402	INFORMATION SECURITY AND CYBER LAWS
36	RASHI TANEJA	21047527087	527	Bachelor of Arts (Honours Course) (Political Science)	4	32345402	INFORMATION SECURITY AND CYBER LAWS
37	ANSHIKA TYAGI	21047529003	529	Bachelor of Arts (Honours Course) (Sanskrit)	4	32345402	INFORMATION SECURITY AND CYBER LAWS
38	AASTHA BHASIN	21047557001	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS
39	ABHILASHA	21047557002	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS
40	ALIZA HAMEED	21047557006	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS
41	ANANDITA SHARMA	21047557011	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS
42	ANILA S	21047557012	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS
43	ANUMOL P	21047557019	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS
44	ARTI YADAV	21047557020	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS
45	BHAMA M	21047557026	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS
46	DEEPTI	21047557031	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS



# Miranda House UNIVERSITY OF DELHI

					Paper Name	Paper Type	MN
47	DEVIKA K S	21047557034	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
48	DIVYA	21047557039	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		GE
49	DOLIYA KARUN	21047557040	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		GI
50	ESHA DESWAL	21047557041	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		G
51	FIDHA LAMIYA HUSSAIN	21047557042	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		G
52	GARGI	21047557044	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		G
53	HANAN FATHIMA K	21047557048	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		G
54	HARSHITA RAJ	21047557049	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
55	HIMANSHI	21047557051	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
56	HIMANSHI	21047557052	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
57	HITHA S	21047557054	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
58	HUSNA JAN U	21047557055	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
59	ISHA	21047557056	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
60	ISHA SHARMA	21047557057	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
61	JAYA RAUTELA	21047557060	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
62	KAMINI YADAV	21047557067	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
63	LAYA V THOMAS	21047557076	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
64	MAMTA	21047557078	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
65	MEGHA ROY	21047557080	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
66	NANDANA P	21047557088	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
67	NEHA KATARIYA	21047557091	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
68	PALLAVI YADAV	21047557099	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
69	POOJA MEENA	21047557102	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		
70	PRACHI	21047557103	557	Bachelor of Science (Honours Course) Chemistry	INFORMATION SECURITY AND CYBER LAWS		



# Miranda House UNIVERSITY OF DELHI

71	PREETI	21047557104	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
72	PREETI	21047557106	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
73	PRİYANGSHREE MAKRARY	21047557108	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
74	RASHI	21047557112	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
75	RAVINA	21047557113	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
76	RENU	21047557115	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
77	ROHIT	21047557118	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
78	SADHANA	21047557119	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
79	SAJA K T	21047557121	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
80	SANJANA	21047557125	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
81	SHILPA SHINJINEE	21047557132	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
82	BHATTACHARYYA	21047557134	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
83	SHIVANGI THAKUR	21047557135	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
84	SIYA	21047557140	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
85	SNEHA BHAI LESH TIGALI	21047557142	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
86	SNEHA ELIZABETH	21047557143	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
87	SNEHA P V	21047557144	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
88	SONAM	21047557145	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
89	STUTI CHATURVEDI	21047557148	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
90	SUBARNA SETH	21047557149	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
91	SUBHANGI HAZUWARY	21047557150	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
92	SULEKHA	21047557151	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
93	UJWALA UDAYAKUMAR	21047557160	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
94	VANTIKA RAJ	21047557162	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE



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Computer Science Department									
95	VISHAKHA RANI	21047557164	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
96	ZAHRA BATOOL	21047557167	557	Bachelor of Science (Honours Course) Chemistry	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
97	AISWARYA P	21047563004	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
98	ANAMIKA KUMAWAT	21047563008	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
99	ANIKHA BOSE	21047563011	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
100	ANITA	21047563012	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
101	ANJALI	21047563014	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
102	ANUSHKA	21047563021	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
103	ANUSHKA SHUKLA	21047563022	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
104	CHHAYA KHATRI	21047563031	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
105	CHITRA RAMAWAT	21047563032	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
106	GUNJAN	21047563038	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
107	ISHIKA	21047563041	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
108	JASEEMA K T	21047563042	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
109	JOSMI KJ	21047563044	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
110	KAMNA	21047563049	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
111	KHUSHBU SHARMA	21047563052	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
112	KRITIKA	21047563054	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
113	KULWANT KAUR	21047563055	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
114	LAKSHITA	21047563056	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
115	LINTA MICHAEL	21047563058	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
116	MALAVIKA R NAIR	21047563059	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
117	MEDHALAKSHMI T M	21047563064	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	
118	MEERA NAZRIN	21047563065	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	





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119	MEGHA	21047563066	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
120	MERIN DARLIN	21047563067	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
121	MUSKAN TOOR	21047563072	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
122	NEETHA K P	21047563073	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
123	NIKITA	21047563074	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
124	NIRMALA	21047563077	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
125	PRIYA KUMARI	21047563087	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
126	RITU	21047563096	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
127	RITU MEENA	21047563097	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
128	SALONI	21047563099	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
129	SHRUTI	21047563106	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
130	SOMYA SINGHAL	21047563110	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
131	SREELAKSHMI R	21047563112	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
132	STANZIN CHUSNIT	21047563113	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
133	TANISHA KALRA	21047563117	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
134	THUMBURU SRIHITHA	21047563120	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
135	UNNATI	21047563121	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
136	VANDANA PAL	21047563124	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
137	VARSHA YADAV	21047563126	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
138	AAKSHI SACHDEVA	21047563127	563	Bachelor of Science (Honours Course) Mathematics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
139	ANAGHA AJITH	21047567006	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
140	ANJANA K ARJUNAN	21047567016	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
141	ARTI	21047567021	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE
142	BHAWNA	21047567034	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE





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144	DEEPIKA	21047567035	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
145	DEVIKA CHANDRAN	21047567042	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
146	DIYA SIWACH	21047567056	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
147	EKTA	21047567058	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
148	HELNA BENNY	21047567063	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
149	HRISHIKA P	21047567066	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
150	JYOTI	21047567070	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
151	KAJAL CHANDOLA	21047567071	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
152	KHUSHI	21047567079	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
153	KOMAL BHATT	21047567084	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
154	LEENA	21047567089	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
155	NEHA CHOUDHARY	21047567115	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
156	PALLAVI	21047567126	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
157	POOJA	21047567128	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
158	SEERAT FATIMA KHAN	21047567170	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
159	SHAGUN	21047567172	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
160	SHALINI MEENA	21047567173	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
161	SOUMYA SHREE S	21047567180	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
162	SUCHITA AGARWAL	21047567181	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
163	SWATHI SANTHOSH	21047567184	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
164	TANISHA	21047567185	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
165	TANUJA BORA	21047567187	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
166	TANVIR KAUR SARAN	21047567188	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50
167	VISHNUNANDA M	21047567192	567	Bachelor of Science (Honours Course) Physics	4	32345402	INFORMATION SECURITY AND CYBER LAWS	GE	50



# **Miranda House**

## **UNIVERSITY OF DELHI**

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**Semester VI**  
**Paper Name: Analysis of Algorithms (DSE)**  
**UPC: 42347606**  
**Practical List**

### **Practical**

1. Implement Insertion Sort and report the number of comparisons.
2. Implement Merge Sort and report the number of comparisons.
3. Implement Heap Sort and report the number of comparisons .
4. Implement Randomized Quick sort and report the number of comparisons.
5. Implement Radix Sort.
  
6. Implement Searching Techniques.
7. Implementation of Recursive function.
8. Array and Linked list implementation of Stack and Queue.
9. Implementation of Single, Double and circular Linked List.
10. Creation and traversal of Binary Search Tree.



## Miranda House UNIVERSITY OF DELHI

### Students List

Sr No	Year	Roll No	Student Name
1	2020	124	Buchammagari Bhavani
2	2020	302	Shailvi Gavli
3	2020	305	Sanju Kumari
4	2020	330	Kavya Singh
5	2020	396	Vandana Bamniya
6	2020	459	Vaasvi Agarwal
7	2020	603	Kavita
8	2020	613	Neha
9	2020	622	Jyoti Choudhary
10	2020	657	Charu
11	2020	660	Shreya Shekhar Singh
12	2020	661	Shweta
13	2020	702	Shrishti Choudhary
14	2020	731	Varsha
15	2020	736	Jagriti Luthra
16	2020	766	Vashu
17	2020	770	Astha Singh
18	2020	804	Shakshi
19	2020	893	Aastha Dodeja
20	2020	932	Priya Singh
21	2020	1002	Vaishnavi Dwivedi
22	2020	1060	Garima
23	2020	1091	Aarti
24	2020	1244	Nivedita Solanki
25	2020	1356	Kirti
26	2020	1368	Sanskriti Bansal
27	2020	1403	Mahika Choudhary
28	2020	1464	Archi
29	2020	1512	Himanshi
30	2020	1611	Adhisha Kanouje
31	2020	1667	Tanu
32	2020	1692	Karuna Kushwaha
33	2020	1707	Ishika
34	2020	1732	Tanishka
35	2020	1743	Anisha Yadav
36	2020	1748	Chetna
37	2020	1773	Deeksha
38	2020	1789	Ifra Moin
39	2020	1827	Kirti
40	2020	1843	Princy Yadav

Paper Name: Android Programming (SEC)



## **Miranda House**

### **UNIVERSITY OF DELHI**

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**UPC: 42343601**  
**Practical List**

#### **Practical**

1. Create "Hello World" application. That will display "Hello World" in the middle of the screen in the emulator. Also display "Hello World" in the middle of the screen in the Android Phone.
2. Create an application with login module. (Check username and password).
3. Create spinner with strings taken from resource folder (res >> value folder) and on changing the spinner value, Image will change.
4. Create a menu with 5 options and selected option should appear in text box.
5. Create a list of all courses in your college and on selecting a particular course teacher-in-charge of that course should appear at the bottom of the screen.
6. Create an application with three option buttons, on selecting a button colour of the screen will change.
7. Create and Login application as above. On successful login, pop up the message.
8. Create an application to Create, Insert, update, Delete and retrieve operation on the database.



## Miranda House UNIVERSITY OF DELHI

### Students List

Sr No	Year	Roll No	Student Name
1	2020	124	Buchammagari Bhavani
2	2020	302	Shailvi Gavli
3	2020	305	Sanju Kumari
4	2020	330	Kavya Singh
5	2020	396	Vandana Bamniya
6	2020	459	Vaasvi Agarwal
7	2020	603	Kavita
8	2020	613	Neha
9	2020	622	Jyoti Choudhary
10	2020	657	Charu
11	2020	660	Shreya Shekhar Singh
12	2020	661	Shweta
13	2020	702	Shrishti Choudhary
14	2020	731	Varsha
15	2020	736	Jagriti Luthra
16	2020	766	Vashu
17	2020	770	Astha Singh
18	2020	804	Shakshi
19	2020	893	Aastha Dodeja
20	2020	932	Priya Singh
21	2020	1002	Vaishnavi Dwivedi
22	2020	1060	Garima
23	2020	1091	Aarti
24	2020	1244	Nivedita Solanki
25	2020	1356	Kirti
26	2020	1368	Sanskriti Bansal
27	2020	1403	Mahika Choudhary
28	2020	1464	Archi
29	2020	1512	Himanshi
30	2020	1611	Adhisha Kanouje
31	2020	1667	Tanu
32	2020	1692	Karuna Kushwaha
33	2020	1707	Ishika
34	2020	1732	Tanishka
35	2020	1743	Anisha Yadav
36	2020	1748	Chetna
37	2020	1773	Deeksha
38	2020	1789	Ifra Moin
39	2020	1827	Kirti
40	2020	1843	Princy Yadav





## Miranda House UNIVERSITY OF DELHI

### Part A.2

**Students undertaking project work/field work/internship (beyond the requirements of coursework)**

Name	Roll No.	Name of organisation	Duration	Start Date	End Date	Paid/Free
Jalsha Lodhi	2021/1228	DS KOTHARI Summer Internship program	6 week	05-06-2023	18-07-2023	Free
Mahima Momaliya	2021/87	Defence research and development organisation (DRDO), DS Kothari centre	DRDO- 1 month and DSKC -2 months	06-06-2023	15-08-2023	Free
Shiksha Mall	2022/1061	Techanalogy (now myequation)	4 months	14-02-2023	21-06-2023	Paid
Shakshi	2020/804	Graphy by Unacademy	1 month	15-03-2023		Paid
Apeksha Vyas	2021/1121	Miranda house	4 weeks	07-06-2023	08-07-2023	Free
Sayyad Pareena Saida	2021/1393	prodigy infotech	1 month	01-08-2023	01-09-2023	Free
Kiran Gaur	2021/485	1. VCIS internship, Delhi University(January 2023 to june 2023) 2. DSKC , Miranda House (june 2023 to July 2023) 3.Defense Research and Development Organization (DRDO)(August 2023 to Sept 2023)	9 months	01-01-2023	30-09-2023	Paid
Shweta Gautam	2021/1908	HitBullseye, Delhi University Student's Union	2-3 months	31-01-2023	01-08-2023	Paid



## Miranda House UNIVERSITY OF DELHI

Name	Roll No.	Name of organisation	Duration	Start Date	End Date	Paid/Free
Navami Vijayan	2021/581	Tongmyong University, Busan, South Korea and Delhi University	1	01-07-2023	31-07-2023	Free
Yogita	2021/313	INMAS, DRDO	1.5 month	17-08-2023	29-09-2023	Free
Tanisha Chauhan	2021/927	DS Kothari Centre For Research and Innovation in Science Education	6 weeks	06-06-2023	18-07-2023	Free