Miranda House
UNIVERSITY OF DELHI

Departmental Annual Report - 3

Departmental Activities: Curriculum and Beyond

Department: Computer Science

Academic Year: 2023 - 2024

Part A.1

Students undertaking project work/field work/internship as part of experiential learning component of coursework with Programme, Semester, Course Name, Course Code

S.No	Name of the Student	Project Title	Supervised by
1	(90 students) 30 AASTHA PANDA 272 BHAVYA GOEL 273 BHAVYA JORWAL 285 BHUMIKA RAWAT 351 DISHA GURJAR 402 GARIMA KUMARI 443 HARSHITA SAINI 450 HIMANI MALHOTRA 500 JASVEEN KAUR 548 KARTIKA 572 KHUSHAALI GROVER 584 KHUSHI AGGARWAL 644 KUMARI LUCKY 659 LAVANYA BHADANA 1662 LEHAR SINGH TOMAR 673 M AHINTARA 719 MANVI GUPTA 868 NOORPAL KAUR SIDHU 1682 PARNIKA SRIVASTAVA 1546 PRAPTI MUKHERJEE 983 PRIYADARSHINI MEENA 992 PRIYANKA KUMARI 1011 RAGHAVI BHANDARI 1642 SAKSHI SINGH 1133 SANIKA VILAS SEVATKAR 1143 SANSHITA SUMAN 1200 SHRADHA JAIN 1236 SHTAAKSHI SARASWAT 1377 TAMANNA GUPTA 1573 TANYA RAJESH 1577 VANSHIKA VENKATRAMAN	NEP-GE 1: B.Sc.(H)/ BA(H)/ BSc Prog UGCF: Programming with Python - Semester 1 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 This program may be done using functions 3. WAP to create a pyramid of the character ‘*’ and a reverse pyramid * *** ***** ******* ********* ********* ******* ***** *** * 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.	Ms Priti Rai Jain

	1670 VANSHITA GUPTA 1475 VIDHI AGGARWAL 1478 VIDITA BAJAJ 1496 YANA GUNWANT 1524 JAYA GAYATHRI CHINTHAPALLY 49 ADITI SINGH 1356 SUSAMA KHAN 363 DIVYA SHARMA 349 DISHA BANERJEE 523 KAJAL 1671 SHUCHI PANWAR 104 ANCHAL PANDEY 682 MAHAK GUPTA 1351 SUPRIYA SAURAV 225 ASHVEEN KAUR 742 MINAL GAUTAM 1614 AASHI SHARMA 143 ANKITA KUMARI 256 AYUSHI SINGH 278 BHOOMI BAJAJ 1607 DEEPIKA 446 HEMA 492 JANIKA SHANKER 526 KAJAL VERMA 545 KARAM THOIBITHOI 593 KHUSHI KUMARI 662 LAXMI 757 MONIKA 785 NAINA SANJEEV TIBREWAL 831 NIHARIKA SINGH 1664 OJASWANI 982 PRIYADARSHANI 1002 PRIYANSHI 1026 RASHMI KUSHWAHA 1033 REEDIM GANGWAR 1089 RUCHIKA 1719 SAKSHI KUMARI 1718 SHALINI RAWAT 1261 SIYA SRIVASTAVA 1571 SNEHA 1293 SONAM SHARMA 1300 SOORYANSHI 1409 TEJASVI 1444 VAIDEHI KUMAR 1589 VITANSHI YADAV 1497 YASHASHWINI SHEKHAWAT 1503 YASHIKA 1599 PURVANSHI SHARMA 1570 KUMARI ALKA 1759 Sapana Kumari 209 ARUSHI	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 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.	

	233 ASVEER KAUR KALHA 562 KAVITA 630 KOMAL YADAV 847 NIRJAL JHA 1593 REET PAHUJA 1431 UNNATI GOYAL 22047510101 Dipanshi Sharma		
2	(33 Students) 1610 AGRIMA SINGH 1618 ANSHIKA GANJOO 1574 ANSHITA SAXENA 341 ESHEETA SHARMA 1598 HARSHITA CHAUDHARY 394 HARSHITA YADAV 437 JAHNAVI 440 JANHVI 535 KHUSHI UPADHYAY 583 LAVANYA AMIT 612 MANISHKA PANDEY 1602 MEENAKSHI 1385 MEENU SEVDA 700 NANDINI KUTIYAL 705 NANDINI YADAV 724 NIDHI KUMARI 1393 NIKITA 1452 PRATIBHA KANWAR RATHORE 1397 PRATIKSHA THAKUR 1639 PRERNA BHARTI 872 PURVA VARSHNEY 1005 SANJANA CHIMWAL 1519 SEJAL 1034 SEZAL GARG 1053 SHEETAL YADAV 1061 SHIKSHA MALL 1076 SHIVANSHI YOGI 1132 SNEHA GUPTA 1253 TVISHA KHATRI 1261 UNNATI SHARMA 1422 VANCHITA SHARMA 1291 VARTIKA MOHAN 1315 YASHASVI GOSWAMI	NEP-DSE 1A: B.Sc.(H)/ BA(H)/ BSc Prog UGCF: Python Programming for Data Handling - Semester 3 Installing and setting up Python and relevant libraries; Python development environments (e.g., Anaconda, Jupyter Notebook) 1. Write a Python program to calculate the factorial of a number. 2. Write a Python program to generate prime numbers between 1 to n, where n is provided as input by the user. 3. Write a Python program to find the sum and average of numbers of a given list. 4. Given two sets, set1 and set2, write a Python program to find their union, intersection, and difference. 5. Given a list of numbers, write a Python program to count the number of times an element occurs in a list and create a dictionary with element:count as key:value pairs. 6. Write a Python program to swap the first two and last two characters of a given string. 7. Write a Python program to create a text file having names of ten Indian cities. 8. Write a Python program to create a text file having atleast five lines about your college using writelines() function. 9. Write a Python program which reads the data from three input files having Employee Names and merges them into one output file. 10. Write a Python program to count the number of vowels in a file and write the vowel: count in a dictionary. 11. Write a Python program to create a CSV file having student data: Roll_No, Enrollment No, Name, Course, Semester. 12. Write a Python program library to read the CSV file created in the above program and filter out records of II semester students. 13. Write a Python program using tkinter library to create a GUI to enter registration details for an event. 14. Write a Python program using tkinter library to create a calculator to perform addition, subtraction,	Ms Priti Rai Jain

		multiplication, and division of two numbers entered by the user. 15. Write a Python program using tkinter library to create an age calculator to calculate age when DOB is entered. 16. Write a Python program using tkinter library to read and write student details namely Roll_No, Enrollment_No, Name, course, Semester through a form and write the entered details to a CSV file.	
3	(106 Students) 45 ADITI KUMARI SINGH 149 ANSHIKA 302 CHINTA SRAVANI 479 ISHITA PATIDAR 615 KIRTI 655 LAKSHMI KAMAL 726 MAYA DEVPAL 758 MONIKA JAJORIYA 778 MUSKAN TIWARI 819 NEHA SISODIA 1023 RASHA GAREWAL 1501 YASHICA SANGHVI 402 GARIMA KUMARI 441 HARSHITA ARORA 500 JASVEEN KAUR 572 KHUSHAALI GROVER 967 PRISHA CHHIKARA 1084 ROSHANI YADAV 1143 SANSHITA SUMAN 1185 SHIKHA SAKSHI 1213 SHREYA PURI 1475 VIDHI AGGARWAL 279 BHOOMI VERMA 478 ISHITA 1078 RIYA KUMARI 1096 SADHNA SINGH 1115 SALONI MEENA 1163 SHAGUN NEHLIA 240 AVNI 440 HARSHITA 677 MADHU SHARMA 1210 SHREYA KUMARI 1356 SUSAMA KHAN 204 ARPITA SINGH RAJAWAT 820 NEHA TIRKEY 1576 SIMRAN 1003 PRIYANSHI 1364 SWEETY SHARMA 943 PRAPTI DAS 1035 REEMA SINGH 1046 RIDHIMA RAJ 1090 RUPAL SANKHLA	NEP-SEC 1A: B.Sc.(H)/ BA(H)/ BSc Prog – Basic IT Tools - Semester 1	Ms Priti Rai Jain

	1671	SHUCHI PANWAR		
	1426	UDITA DAS		
	524	KAJAL KUMARI		
	603	KHUSHI SINGH		
	956	PREETI		
	180	ANUSHKA SINGH		
	641	KULSUM ZAHRA		
	873	P MONIKA		
	1058	RITIKA CHOUDHARY		
	1233	SHRUTI TIWARI		
	1495	YAKSHI NAKWAL		
	1688	JIYA MANN		
	929	PRAGATI KUMARI		
	143	ANKITA KUMARI		
	153	ANSHIKA MITTAL		
	278	BHOOMI BAJAJ		
	290	BOMRIK		
	526	KAJAL VERMA		
	545	KARAM THOIBITHOI		
	593	KHUSHI KUMARI		
	614	KIRAN SINGH		
	724	MARY LALHRUAIZELI		
	1089	RUCHIKA		
	1571	SNEHA		
	1293	SONAM SHARMA		
	1589	VITANSHI YADAV		
	4	AACHAL RANI		
	28	AASTHA		
	347	DIMPLE PAREEK		
	379	E METNA SUBBA		
	449	HIMANI		
	760	MONIKA MEENA		
	763	MS BHUMIKA		
	810	NEETU KUMARI		
	916	POOJA MEENA		
	1157	SAUMYA PAL		
	1188	SHIVANGI		
	1197	SHIVI CHAUHAN		
	1199	SHOWNA SHARMA		
	1297	SONIA DAS		
	1697	SOUMYA SINGH		
	1306	SRASHTI YADAV		
	1445	VAIDUSHI PANDEY		
	1447	VAISHNAVI		
	1479	VIDUSHI PANDEY		
	455	HRITIKA ARYA		
	824	NICE SHARMA		
	1243	SHYAMLI RAI		
	6	AADVIKA PATEL		
	74	AKSHITA MEENA		
	405	GAURI JASWAL		
	470	ISHA SINGH		

	920 POORVA SHAKTAWAT 1036 REENA 1762 Ritika 1043 RICHA YADAV 1585 SHREYA ANAND 1542 TANNISHA GUPTA 147 ANNSA BHAT 1307 SREEJA DUTTA 1288 SONAKSHI 251 AYUSHI GUPTA 1616 AASTHA SUPRIYA TOPPO 1125 SANCHI BINDLISH		
4	(75 Students) 1614 AASHI SHARMA 30 AASTHA PANDA 143 ANKITA KUMARI 233 ASVEER KAUR KALHA 256 AYUSHI SINGH 272 BHAVYA GOEL 273 BHAVYA JORWAL 278 BHOOMI BAJAJ 285 BHUMIKA RAWAT 1607 DEEPIKA 349 DISHA BANERJEE 351 DISHA GURJAR 402 GARIMA KUMARI 450 HIMANI MALHOTRA 492 JANIKA SHANKER 500 JASVEEN KAUR 1524 JAYA GAYATHRI CHINTHAPALLY 523 KAJAL 526 KAJAL VERMA 548 KARTIKA 562 KAVITA 572 KHUSHAALI GROVER 584 KHUSHI AGGARWAL 593 KHUSHI KUMARI 659 LAVANYA BHADANA 1662 LEHAR SINGH TOMAR 673 M AHINTARA 719 MANVI GUPTA 757 MONIKA 785 NAINA SANJEEV TIBREWAL 831 NIHARIKA SINGH 847 NIRJAL JHA 868 NOORPAL KAUR SIDHU 1682 PARNIKA SRIVASTAVA 1546 PRAPTI MUKHERJEE 982 PRIYADARSHANI 983 PRIYADARSHINI MEENA	NEP-GE 2: B.Sc.(H)/ BA(H): Data Analysis and Visualization using Python – Semester 2 Suggested Practical List For Data Analysis and Visualization GE Sem II Note: ● Any platform for Python can be used for lab exercises ● Use a data set of your choice from Open Data Portal (https:// data.gov.in/, UCI repository) or load from scikit, seaborn library for the following exercises to practice the concepts learnt. 1. Write programs in Python using NumPy library to do the following: a. Compute the mean, standard deviation, and variance of a two dimensional random integer array along the second axis. b. Create a 2-dimensional array of size m x n integer elements, also print the shape, type and data type of the array and then reshape it into an n x m array, where n and m are user inputs given at the run time. c. 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. d. 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. e. 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. 2. Do the following using PANDAS Series: a. Create a series with 5 elements. Display the series sorted on index and also sorted on values seperately	Ms Priti Rai Jain

	992	PRIYANKA KUMARI	b. 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 c. Display the index value of the minimum and maximum element of a Series 3. 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: a. Identify and count missing values in a data frame. b. Drop the column having more than 5 null values. c. Identify the row label having maximum of the sum of all values in a row and drop that row. d. Sort the data frame on the basis of the first column. e. Remove all duplicates from the first column. f. Find the correlation between first and second column and covariance between second and third column. g. Discretize the second column and create 5 bins. 4. Consider two excel files having attendance of two workshop. 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: a. Perform merging of the two data frames to find the names of students who had attended both workshops. b. Find names of all students who have attended a single workshop only. c. Merge two data frames row-wise and find the total number of records in the data frame. d. 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. 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) a. Plot bar chart to show the frequency of each class label in the data. b. Draw a scatter plot for Petal width vs sepal width and fit a regression line c. Plot density distribution for feature petal length. d. Use a pair plot to show pairwise bivariate distribution in the Iris Dataset. e. Draw heatmap for the four numeric attributes f. Compute mean, mode, median, standard deviation, confidence interval and standard error for each feature g. Compute correlation coefficients between each pair of features and plot heatmap	
	1002	PRIYANSHI		
	1011	RAGHAVI BHANDARI		
	1026	RASHMI KUSHWAHA		
	1033	REEDIM GANGWAR		
	1089	RUCHIKA		
	1719	"SAKSHI KUMARI "		
	1642	SAKSHI SINGH		
	1133	SANIKA VILAS SEVATKAR		
	1143	SANSHITA SUMAN		
	1718	SHALINI RAWAT		
	1200	SHRADHA JAIN		
	1236	SHTAAKSHI SARASWAT		
	1671	SHUCHI PANWAR		
	1261	SIYA SRIVASTAVA		
	1571	SNEHA		
	1293	SONAM SHARMA		
	1300	SOORYANSHI		
	1377	TAMANNA GUPTA		
	1573	TANYA RAJESH		
	1409	TEJASVI		
	1444	VAIDEHI KUMAR		
	1577	VANSHIKA VENKATRAMAN		
	1670	VANSHITA GUPTA		
	1475	VIDHI AGGARWAL		
	1478	VIDITA BAJAJ		
	1496	YANA GUNWANT		
	1503	YASHIKA		
	209	ARUSHI		
	225	ASHVEEN KAUR		
	443	HARSHITA SAINI		
	545	KARAM THOIBITHOI		
	662	LAXMI		
	682	MAHAK GUPTA		
	1084	ROSHANI YADAV		
	1759	Sapana Kumari		
	1351	SUPRIYA SAURAV		
	1497	YASHASHWINI SHEKHAWAT		

		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: a. Calculate and display familywise gross monthly income. b. Calculate and display the member with the highest monthly income. c. Calculate and display monthly income of all members with income greater than Rs. 60000.00. d. Calculate and display the average monthly income of the female members 7. Using Titanic dataset, to do the following: a. Find total number of passengers with age less than 30 b. Find total fare paid by passengers of first class c. Compare number of survivors of each passenger class d. Compute descriptive statistics for any numeric attribute genderwise Students are encouraged to work on a good dataset in consultation with their faculty and apply the concepts learned in the course	
5	(33 Students) 1610 AGRIMA SINGH 1618 ANSHIKA GANJOO 1574 ANSHITA SAXENA 341 ESHEETA SHARMA 1598 HARSHITA CHAUDHARY 394 HARSHITA YADAV 437 JAHNAVI 440 JANHVI 535 KHUSHI UPADHYAY 583 LAVANYA AMIT 612 MANISHKA PANDEY 1602 MEENAKSHI 1385 MEENU SEVDA 700 NANDINI KUTIYAL 705 NANDINI YADAV 724 NIDHI KUMARI	NEP-DSE 2A B.Sc. (PS) Data Exploration and Visualization - Semester 2 Use data set of your choice from Open Data Portal (https:// data.gov.in/, UCI repository) or load from scikit, seaborn library for the following exercises to practice the concepts learnt. 1. Write a program using the NumPy library to perform the following tasks: A. Generate a 5x2 integer array with values ranging from 50 to 100, where each element has a difference of 5. Reshape the resulting array to a size of 10x1. B. Create a 1D random array with values ranging from 1 to 100. Calculate various statistical measures such as minimum, maximum, mean, median, standard deviation, number of unique values, count of unique values, and the most frequent value in the array.	Ms Priti Rai Jain

	1393 NIKITA 1452 PRATIBHA KANWAR RATHORE 1397 PRATIKSHA THAKUR 1639 PRERNA BHARTI 872 PURVA VARSHNEY 1005 SANJANA CHIMWAL 1519 SEJAL 1034 SEZAL GARG 1053 SHEETAL YADAV 1061 SHIKSHA MALL 1076 SHIVANSHI YOGI 1132 SNEHA GUPTA 1253 TVISHA KHATRI 1261 UNNATI SHARMA 1422 VANCHITA SHARMA 1291 VARTIKA MOHAN 1315 YASHASVI GOSWAMI	C. Create a 5x5 identity matrix where all the diagonal elements are set to the value 5. D. Consider a dataset containing the heights (in centimeters) and weights (in kilograms) of 20 individuals. Your task is to perform various operations using the NumPy library to analyze the data. a. Create a NumPy array called "heights" with the following height values: [165, 170, 175, 168, 172, 180, 160, 169, 176, 171, 174, 182, 158, 167, 173, 179, 163, 166, 177, 181]. Create a NumPy array called "weights" with the following weight values: [60, 65, 70, 75, 80, 85, 55, 58, 63, 68, 72, 77, 50, 62, 67, 74, 52, 57, 69, 73]. b. Create a new NumPy array called "combined" by stacking the heights and weights arrays such that the shape of the resulting array is 20 x 2. c. Calculate and print the mean height and weight of the individuals in the dataset. d. Find and print the index of the shortest and tallest individuals in the dataset. e. Sort the array based on height on the individuals. f. Swap the positions of the two columns in the array. g. Retrieve records of individuals having weight below 70kg. 2. Write a program using the Pandas library to perform the following operations on the penguins dataset from the Seaborn library: A. Load the penguins dataset into a Pandas dataframe. B. Determine the number of observations/records and the number of attributes in the dataframe. C. Display the names of the attributes, row indexes, and data types of each attribute in the dataframe. D. Display the first 5 and last 5 records of the dataframe. E. Retrieve the values of the second column for the third and fourth records. F. Display a summary of the data distribution for all attributes in the dataframe. G. Compute the pairwise correlation between all attributes in the dataframe. 3. Consider the Titanic dataset, which contains information about passengers on board the Titanic, including their age, gender, passenger class, survival status, and other attributes. Write a program using the Pandas library to perform the following operations on the Titanic dataset: A. Load the Titanic dataset into a Pandas DataFrame. B. Check for any duplicate records and missing values in the dataset and handle them appropriately. C. Calculate and display the total number of passengers who survived and those who did not.	

		D. Filter the DataFrame to select only the records of passengers who were under the age of 18. E. Calculate the average age for passengers belonging to each of the passenger class. F. Create a new column in the DataFrame called "Family Size" that represents the total number of family members (including the passenger) on board. G. Calculate the correlation between age and fare attributes of the dataset. H. Create a contingency table that shows the count of passengers based on their survival status (survived or not) and passenger class (first, second, or third class). for titanic dataset 4. Utilize the iris dataset from the Sklearn library to generate various visual representations of the data using the Matplotlib and or Seaborn libraries with proper legends and labels. Perform the following tasks: A. Create a scatter plot to visualize the relationship between petal length and petal width for different instances of iris flowers. B. Generate histograms to display the data distribution of each of the four attributes in the iris dataset. C. Construct a pie chart to illustrate the frequency count of each flower type in the iris dataset. D. Create a pair plot that showcases the relationship between every pair of attributes in the iris dataset (only seaborn library). 5. Create the visualizations of question 4 (A and C part) using plotly library	
6	(42 Students) Roll Number Name 6 AADVIKA PATEL 66 AKANSHA KANDARI 74 AKSHITA MEENA 1740 AMISHA GUPTA 1617 ANJALI KUSHWAHA 154 ANSHIKA SHARMA 186 ANUSHREE PATEL 1764 ANVESHA GARG 189 APALA 1767 ARUSHI SINGH 271 BHAVNA SINGH 1635 BHAVYA RANA 360 DIVYA JYOTI SEMWAL 400 GARIMA 405 GAURI JASWAL 465 ISHA 470 ISHA SINGH 558 KASHVI SHARMA 688 MAHI CHOUDHARY 1609 MOHINI 817 NEHA MAWAI	NEP-DSC B.Sc.(PS) Programming Fundamentals Using C++, Semester I 1.Bridge course on Basic Ubuntu Commands 2.WAP to print your Bio-Data. (Use escape sequences) 3.WAP to print the datatype and size of various types of variables, integer, character, string, float, double etc. 4.Write a program that takes your first name and last name as input and print in the format shown below:My name is lastname, firstname. 5.WAP to print the sum of digits of a 5-digit number. 6.WAP to swap two numbers. 7.WAP to swap two numbers without using a third variable. 8.WAP to check if the year entered by the user is a leap year or not. 9.While purchasing certain items, a discount of 10% is offered if the quantity purchased is more than 1000. If quantity and price per item are taken from the user, WAP to calculate the total expense. 10.Take as input the current year and year of joining of an employee. If the employee has worked for more	Dr. Anuradha Khattar

	828 NIDHI SINHA 1700 POONAM YADAV 920 POORVA SHAKTAWAT 1765 PRACHI KUMARI 934 PRAGYA DESHWAL 939 PRANAVI RAWAT 957 PREETI 1027 RASHMI PRABHA 1036 REENA 1762 RITIKA 1065 RITIKA SINGH 1127 SANDHYA KUMARI 1768 SANYA CHAUDHARY 1216 SHREYA SHUKLA 1227 SHRUTI GUPTA 1702 SIDDHIKA 1257 SIMRAN CHAUDHARY 1610 SWARNIMA SINGH 1414 TINA NAGPURE 1470 VARTIKA BIJAY 1498 YASHASVI	than 3 yrs. then give Rs.5000 bonus otherwise give 2000 bonus to the employee and print it. 11.If the basic salary of an employee is less than Rs. 15,000, then HRA is 10% of the basic salary and DA=60% of the basic salary. If his basic salary is >= 15,000, then HRA=15% and DA is 65%. If the employee's basic salary is input through the keyboard WAP to find his gross salary. 12.WAP to find the greatest of the three numbers. 13.The marks obtained by a student in 5 different subjects are input through the keyboard. The students get a division as per the following rules: % Above or equal to 60: First Division % Between 50 and 59: Second Division % Between 40 and 49: Third Division % Less than 40: Fail 14.WAP to find the greatest of three numbers using ternary operator. 15.WAP to check if the characters entered by the user is lowercase or not. 16.WAP to check if the character entered through the keyboard is a special symbol or not. 17.WAP to find the sum of first n natural numbers. 18.WAP to find the sum of even numbers and sum of odd numbers till 100. 19.WAP to find the average marks of n number of students where n is taken from the user. 20.WAP to print a table of a number entered by the user. 21.Write a menu-driven program to perform the following operations: (use functions) 1. Factorial of a number 2. Check if a number is prime or not 3. Check if a number is Armstrong or not 4. Compute the HCF of two numbers 5. Exit Note: Armstrong number is a number that is equal to the sum of cubes of its digits. For example, 0, 1, 153, 370, 371 and 407 are the Armstrong numbers. 22.Write a menu-driven program to implement calculator for doing mathematical operations. (use functions) 23.WAP to print the following patterns where number of rows is taken from the user: (i) 1 12 123 1234 12345 (ii) (iv) A AB ABC ABCD ABCDE (v) A BA	

		1 CBA 22 DCBA 333 4444 55555 666666 (iii) A BB CCC DDDD 24.Write a menu driven program to perform the following operations on an array. Write functions for each operation. (i) Minimum Element of the array (ii) Maximum Element of the array (iii) Average of array elements (iv) Second Largest Element of the array (v) Reverse the array (vi) Exit 25.Write a menu driven program to perform the following operations on strings. Write functions for each operation. (i) Check if a String is Palindrome or not. (ii) Reverse a String. (iii) Convert uppercase character of a string to lowercase and vice versa. (iv) Check if the first character of every word of a string is uppercase or not. (v) Exit 26.Write a program to check if a substring is present in a string or not. 27.Write functions to swap two variables using call by value and call by reference. 28.Write a program to compute the sum of the first n terms of the following series: $S = 1 - 2n + 3n - 4n +$..... The number of terms n is to be taken from the user 29.Write a function that reverses the digits in its argument. For example, given the integer 378, the function returns 873. Test your program with a few integers with different numbers of digits. 30.Write a function to compute the roots of a quadratic equation. 31.Write a C++ program to create a new Box class. The class three attributes width, height and depth of type double. Write down two constructors. Default constructor will initialize the Box class objects with 0.0 value for all instance variables. A parameterized constructor will be used to initialize the object with different values. Write down a method called volume()	

		that will calculate and show the volume of the box. Create some objects of Box class and show the functionality. 32.Write a C++ program to create a class Complex to represent a complex number having real and imaginary members. Write functions to set the value of a complex number and also to print it in the form a+ib. Also write functions to add and multiply two complex numbers and print result. 33.Write a C++ program to create a class Student having attributes: Name, Roll_No, Marks in five subjects, Percentage and Grade. Write functions to read all the details of a student, compute the percentage marks of the student and also compute the grade based on the percentage. If percentage is >80 then grade is 'A', if between 70 to 80 then grade is 'B', if between 60 to 70 then grade is 'C' and if < 60 then grade is 'D'. Print the Student's Report at the end giving all the details of the student. 34.Write an overloaded function area() to compute the area of square, rectangle and circle. 35.Create a class Triangle. Include overloaded functions to compute the area of triangle using different methods.	
7	(42 Students) Roll Number Name 6 AADVIKA PATEL 66 AKANSHA KANDARI 74 AKSHITA MEENA 1740 AMISHA GUPTA 1617 ANJALI KUSHWAHA 154 ANSHIKA SHARMA 186 ANUSHREE PATEL 1764 ANVESHA GARG 189 APALA 1767 ARUSHI SINGH 271 BHAVNA SINGH 1635 BHAVYA RANA 360 DIVYA JYOTI SEMWAL 400 GARIMA 405 GAURI JASWAL 465 ISHA 470 ISHA SINGH 558 KASHVI SHARMA 688 MAHI CHOUDHARY 1609 MOHINI 817 NEHA MAWAI 828 NIDHI SINHA 1700 POONAM YADAV	NEP-DSC B.Sc.(PS) Data Structures, SemesterIII 1.Implement matrix addition and multiplication. 2.Implement Insertion sort. 3.Implement following recursive functions: a.Factorial of a number b.Nth fibonacci number 4.Implement singly linked lists. 5.Implement stack data structure and its operations using arrays. 6.Implement stack data structure and its operations using singly linked lists. 7.Implement queue data structure and its operations using arrays.	Dr. Anuradha Khattar

	920 POORVA SHAKTAWAT 1765 PRACHI KUMARI 934 PRAGYA DESHWAL 939 PRANAVI RAWAT 957 PREETI 1027 RASHMI PRABHA 1036 REENA 1762 RITIKA 1065 RITIKA SINGH 1127 SANDHYA KUMARI 1768 SANYA CHAUDHARY 1216 SHREYA SHUKLA 1227 SHRUTI GUPTA 1702 SIDDHIKA 1257 SIMRAN CHAUDHARY 1610 SWARNIMA SINGH 1414 TINA NAGPURE 1470 VARTIKA BIJAY 1498 YASHASVI		
8	(43 Students) 1610 AGRIMA SINGH 1358 AKSHITA GUPTA 125 ANJALI 1618 ANSHIKA GANJOO 1574 ANSHITA SAXENA 341 ESHEETA SHARMA 1598 HARSHITA CHAUDHARY 394 HARSHITA YADAV 1558 ISHA 437 JAHNAVI 440 JANHVI 535 KHUSHI UPADHYAY 583 LAVANYA AMIT 612 MANISHKA PANDEY 1602 MEENAKSHI TIWARI 1385 MEENU SEVDA 637 MEHAK 700 NANDINI KUTIYAL 705 NANDINI YADAV 1621 NEETU RANI 1539 NEHA BISHT 724 NIDHI KUMARI 1393 NIKITA 764 PALAK 1452 PRATIBHA KANWAR RATHORE 1397 PRATIKSHA THAKUR 1639 PRERNA BHARTI 1623 PRIYA RANI 867 PRIZMA 872 PURVA VARSHNEY 1005 SANJANA CHIMWAL	NEP-DSC 03: B.Sc. Prog UGCF:Computer System Architecture - Semester 3 (Use Simulator – CPU Sim 3.6.9 or any higher version for the implementation) Create a machine based on the following architecture: Registers IR DR AC AR PC I E 16 bits 16 bits 16 bits 12 bits 12 bits 1 bit 1 bit Opcode Address Basic Computer Instructions Memory Reference Register Reference Symbol Hex Symbol Hex AND 0xxx Direct Addressing CLA 7800 ADD 1xxx CLE 7400 LDA 2xxx CMA 7200 STA 3xxx CME 7100 HLT 7001 Refer to Chapter-5 for description of instructions. Design the register set, memory and the instruction set. Use this machine for the assignments of this section. 1. Implement fetch sequence 2. Add two numbers when one number is stored in memory and another is entered by the user. 3. Add two numbers when both numbers are taken as inputs from user. 4. Subtract two numbers when one number is stored in memory and another is entered by the user. 5. Subtract two numbers when both numbers are taken as inputs from user	Dr Seema Aggarwal

	1519 SEJAL 1034 SEZAL GARG 1559 SHANVI 1053 SHEETAL YADAV 1061 SHIKSHA MALL 1076 SHIVANSHI YOGI 1132 SNEHA GUPTA 1253 TVISHA KHATRI 1261 UNNATI SHARMA 1422 VANCHITA SHARMA 1291 VARTIKA MOHAN 1315 YASHASVI GOSWAMI	6. Write an assembly program to simulate the following logical operations on two user- entered numbers. i.AND ii.OR iii.NOT 7. Write an assembly language program to simulate the machine for following register reference instructions and determine the contents of AC, E, PC, AR, and IR registers in decimal after the execution: i. CLE ii. CLA iii. CMA iv. CME 8. Write an assembly language program to simulate the machine for following memory reference instructions and determine the contents of AC, E, PC, AR, and IR registers in decimal after the execution: i. LDA ii. STA iii. BUN	
9	(43 Students) 1610 AGRIMA SINGH 1358 AKSHITA GUPTA 125 ANJALI 1618 ANSHIKA GANJOO 1574 ANSHITA SAXENA 341 ESHEETA SHARMA 1598 HARSHITA CHAUDHARY 394 HARSHITA YADAV 1558 ISHA 437 JAHNAVI 440 JANHVI 535 KHUSHI UPADHYAY 583 LAVANYA AMIT 612 MANISHKA PANDEY 1602 MEENAKSHI TIWARI 1385 MEENU SEVDA 637 MEHAK 700 NANDINI KUTIYAL 705 NANDINI YADAV 1621 NEETU RANI 1539 NEHA BISHT 724 NIDHI KUMARI 1393 NIKITA 764 PALAK 1452 PRATIBHA KANWAR RATHORE 1397 PRATIKSHA THAKUR 1639 PRERNA BHARTI 1623 PRIYA RANI 867 PRIZMA	NEP-DSC 04: B.Sc. Prog UGCF:Operating System - Semester 4 Usage of following commands: ls, pwd, cat, who, rm, mkdir, rmdir,cd. 2. Usage of following commands: cal, cat(append), cat(concatenate), mv, cp, man, date. 3. Usage of following commands: chmod, grep, bc. 4. Write a shell script to display date in the mm/dd/yy format. 5. Write a shell script to display the multiplication table any number. 6. Write a shell script to find the factorial of a given number. 7. Program to show the pyramid of special character “*”. 8. Write a shell script to find the sum of digits of a given number. 9. Write a shell script to perform the tasks of basic calculator. 10. Write a shell script to find the power of a given number. 11. Write a shell script to check whether the number is Armstrong or not. 12. Write a shell script to find the GCD (greatest common divisor) of two numbers. 13. Write a shell script to check if the number entered at the command line is prime or not. 14. Write a shell script to display on the screen sorted output of “who” command along with the total number of users.	Dr Seema Aggarwal

	872 PURVA VARSHNEY 1005 SANJANA CHIMWAL 1519 SEJAL 1034 SEZAL GARG 1559 SHANVI 1053 SHEETAL YADAV 1061 SHIKSHA MALL 1076 SHIVANSHI YOGI 1132 SNEHA GUPTA 1253 TVISHA KHATRI 1261 UNNATI SHARMA 1422 VANCHITA SHARMA 1291 VARTIKA MOHAN 1315 YASHASVI GOSWAMI	15. Write a shell script to accept a login name. If not a valid login name display message – "Entered login name is invalid". 16. Write a shell script to compare two files and if found equal asks the user to delete the duplicate file. 17. Write a shell script to merge the contents of three files, sort the contents and then display them page by page. 18. Write a shell script to check whether the file has all the permissions or not. 19. Write a shell script to modify "cal" command to display calendars of the specified months. 20. Write a shell script to modify "cal" command to display calendars of the specified range of months.	
10	(48 students) Roll No. Name 267 ADITHYA SURESH 32 ANJALI TEWARI 1127 ANKITA 1435 ANURADHA 1121 APEKSHA VYAS 1441 ARCHANA 99 BANTI 1057 DIVYA 1009 DIVYA RAO 1793 FATIMA BASIM JASIM 319 GRESSY RANA 1369 HARSHEEN KOUR 1228 JALSHA LODHI 705 JOYA YADAV 1699 KANIKA MALIK 1727 KHUSHI CHAUHAN 230 KIRAN 485 KIRAN GAUR 632 KUMARI VINI 37 LINGAMPALLY MANISHA 87 MAHIMA MOMALIYA 827 MANSI 685 MANSI 900 MUSKAN 581 NAVAMI VIJAYAN 1159 NEHA PUNJLOT 1071 NISHA 88 PALAK GODARA 1393 PAREENA SAIDA 1840 PRACHI 1034 PRIYANKA 336 SATAKSHI MEENA	CBCS-LOCF, DSE- Data Structures- B.Sc. (P)- Semester V Suggested Practical List **Practical List** Implement the following programs in C++: 1. To sort the elements of an array using: a. Bubble sort b. Selection sort c. Insertion sort d. Merge sort e. Quick sort. 2. To search an element using Linear Search in: a. An array b. A Linked List 3. To search an element in a sorted array using Binary Search.	Dr. Tulika Kumari

	1324 SHEETAL KULDEEP SANGWAN 1212 SHIVANI 1230 SHIVANI 1665 SHRADDHA DIXIT 261 SHUBHI SAHU 1908 SHWETA GAUTAM 1122 SIMRAN CHUGH 489 SONIYA 1054 SUDHA YADAV 927 TANISHA CHAUHAN 113 TANUJA YADAV 1238 UDITI RAINA 1309 VAIBHVI 1667 VIDHI AGRAWAL 1750 YASHASWI GUPTA 313 YOGITA	4. Write a menu driven program to implement Stack data structure using (I) Array (II) Linked Lists with the following operations: a. push() b. pop() c. peek() d. isFull() e. isEmpty() f. display() 5. Using a stack data structure: a. Convert infix expression into prefix expression b. Convert infix expression into postfix expression c. Evaluate postfix expression 6. Write a menu driven program to implement Queue data structure using (I) Array (II) Linked Lists with the following operations: a. enqueue() b. dequeue() c. peek() d. isFull() e. isEmpty() f. display() 7. Write a menu driven program to implement Circular Queue using array with the following operations: a. insert() Or enqueue() b. delete() Or dequeue() c. isFull() d. isEmpty() e. display() 8. Implement solutions to the following problems using recursion: a. Tower of Hanoi b. Fibonacci series	
11.	(83 students) Roll No. & Name 1191 SUVIDHA 1020 SARIKA BASWAL 419 IQRA ANSARI 1011 SANKHYA RANI 12 AAROHI CHAUHAN 460 JYOTI 1050 SHATABDI DEY 1262 UPHAR AARTI YADAV 1590 KAJAL 693 NANCY YADAV 108 ANANYA PANDEY 1271 VAISHNAVI VOHRA 1141 SNEHA YADAV 561 KRITIKA BHATTACHARYA 1117 SIVAPRIYA C B 1283 VANSHIKA SLATHIA 952 RIYANSHI 288 DESKYONG TSOMO 301 DIDIKSHYA KAKOTY 1225 TANUSHIKHA 489 KARISHMA DAHIYA 202 ARUSHI AGARWAL 433 ISHITA MARMAT 6 AAKRITI VERMA 954 ROHA SIDHU	SEC- Front End Web Design and Development, B.Sc.(H)/ BA(H)/ BSc Prog,, Semester -III Suggested Practical List **HTML** ☐ Create an HTML document with following formatting – Bold, Italics, Underline, Colors, Headings, Title, Font and Font Width, Background, Paragraph, Line Brakes, Horizontal Line, Blinking text as well as marquee text. ☐ Create an HTML document with Ordered and Unordered lists, Inserting Images, Internal and External linking ☐ Create an HTML document for displaying the current semester's timetable. ☐ Create a website with horizontal and vertical frames. Top horizontal frame needs to show your college's name and logo. Bottom horizontal frame is to be split into two vertical frames. The left frame has hyperlinks to pages related to faculty, courses, student activities, etc. The right frame shows the corresponding webpage based on the link clicked on the left frame. ☐ Create a student registration form using HTML which has the following controls and make an interactive content presentation using CSS.: I. Text Box II. Dropdown box III. Option/radio buttons IV. Check boxes V. Reset and Submit button ☐ Create a webpage for your department with a drop-down navigation menu for faculty, courses, activities, etc.. Implement the webpage using styles, rules, selectors etc. learned in CSS ☐ Write event-driven programs in JavaScript for the following: • Enter a number and on click of a button print its multiplication table. • Print the largest of three numbers entered by the user. • Find the factorial of a number entered by the user. • Enter a list of positive numbers using the prompt terminated by a zero. Find thesum and average of these numbers. ☐ Create a student registration form using text, radio button, check box, drop down box, text field and all other required HTML elements. Customize the CSS and javascript to input and validate all data. Create functions to perform validation of each element, example: a. Roll number is a 7-digit numeric value b. Name should be an alphabetical value (String) c. Non-empty and valid fields like DOB	Dr. Tulika Kumari

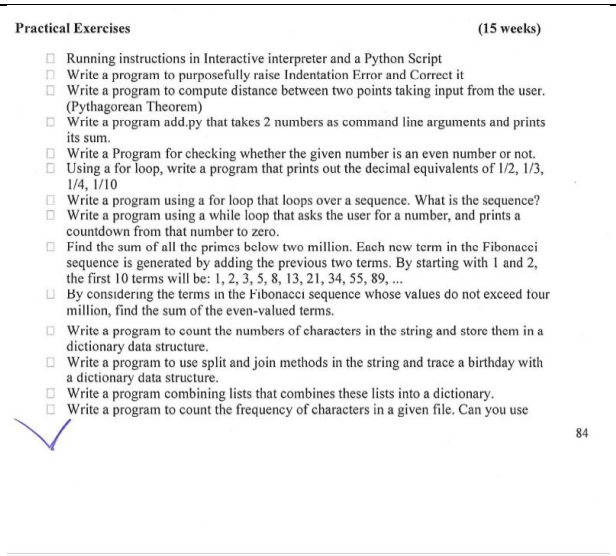
	1103 SHUBHAM 466 KAJAL 799 PRABHNOOR KAUR 1557 AMISHA MISHRA 875 R GAUTAMI IYER 1279 VANSHIKA JAISWAL 399 HIMANGI 227 BHAGYA LAXMI KUMARI 690 NANCY ASTHA XAXA 834 PREETI 148 ANN MARIA JOSEPH 632 MEENAL NETAM 1377 JYOTI 1624 SHRUTI 105 ANANYA GUPTA 119 ANISHA 400 HIMANI 224 BARKHA 87 ALKA RANI 830 PRATIBHA PRAKASH 1316 YASHI DINKAR 1085 SHREYA GUSAIN 1096 SHRUTI KAIRA 903 REETA PAL 1228 TANYA 1143 SNITI BHATTACHARYA 951 RIYA YADAV 1454 SRISHTI NISHAD 1570 RUPANSHI PAL 1336 NILANJANA BAGCHI AURPA 785 PIYA SOMANI 71 AKANSHA 1005 SANJANA CHIMWAL 394 HARSHITA YADAV 1315 YASHASVI GOSWAMI 764 PALAK 535 KHUSHI UPADHYAY 705 NANDINI YADAV 1061 SHIKSHA MALL 612 MANISHKA PANDEY 700 NANDINI KUTIYAL 583 LAVANYA AMIT 872 PURVA VARSHNEY 440 JANHVI 724 NIDHI KUMARI 1076 SHIVANSHI YOGI 1034 SEZAL GARG 1053 SHEETAL YADAV 1393 NIKITA 1452 PRATIBHA KANWAR RATHORE 1602 MEENAKSHI TIWARI 1598 HARSHITA CHAUDHARY		

	1623 PRIYA RANI 1639 PRERNA BHARTI 909 RESHU PAMNANI 659 MUGDHA SETH 559 KRITIKA		
12.	(48 students) Roll No. Name 267 ADITHYA SURESH 32 ANJALI TEWARI 1127 ANKITA 1435 ANURADHA 1121 APEKSHA VYAS 1441 ARCHANA 99 BANTI 1057 DIVYA 1009 DIVYA RAO 1793 FATIMA BASIM JASIM 319 GRESSY RANA 1369 HARSHEEN KOUR 1228 JALSHA LODHI 705 JOYA YADAV 1699 KANIKA MALIK 1727 KHUSHI CHAUHAN 230 KIRAN 485 KIRAN GAUR 632 KUMARI VINI 37 LINGAMPALLY MANISHA 87 MAHIMA MOMALIYA 827 MANSI 685 MANSI 900 MUSKAN 581 NAVAMI VIJAYAN 1159 NEHA PUNJLOT 1071 NISHA 88 PALAK GODARA 1393 PAREENA SAIDA 1840 PRACHI 1034 PRIYANKA 336 SATAKSHI MEENA 1324 SHEETAL KULDEEP SANGWAN 1212 SHIVANI 1230 SHIVANI 1665 SHRADDHA DIXIT 261 SHUBHI SAHU 1908 SHWETA GAUTAM 1122 SIMRAN CHUGH 489 SONIYA 1054 SUDHA YADAV	CBCS-LOCF,DSE-Analysis of Algorithms, B.Sc. (P), VI Semester Suggested Practical List 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.	Dr. Tulika Kumari

	927 TANISHA CHAUHAN 113 TANUJA YADAV 1238 UDITI RAINA 1309 VAIBHVI 1667 VIDHI AGRAWAL 1750 YASHASWI GUPTA 313 YOGITA		
13.	(71 students) 2022/569 Kumari Asima 2022/258 Cheshta Upreti 2022/44 Aditi Rawat 2022/1564 Anita Kumari 2022/189 Ariba Idrees 2022/102 Anamika 2022/1076 Shivanshi yogi 2022/661 Muskaan choubey 2022/519 Khushi Bharti 2022/321 Divyanshi Jayant 2022/612 Manishka Pandey 2022/440 Janhvi 2022/1377 Jyoti 2022/58 AISWARYA S SEKHAR 2022/1143 SNITI BHATTACHARYA 2022/181 Aparna Sharma 2022/834 Preeti 2022/1317 Yashica aggarwal 2022/1325 Yutika Singh 2022/676 Muskan Meena 2022/1643 Sakshi Sihag 2022/1073 Shivani Sinha 2022/1534 Dipanshi Sharma 2022/535 Khushi Upadhyay 2022/400 Himani 2022/1393 nikita 2022/589 Lisita 2022/7 Aamna Jalal 2022/616 Manshi Gupta 2022/71 Akansha 2022/1639 Prerna Bharti 2022/754 Nuzha Zubair PK 2022/1141 Sneha yadav 2022/1008 Sanjana Rani 2022/853 Priya Mishra 2022/950 Riya Yadav 2022/1452 Pratibha Kanwar Rathore 2022/432 Ishita 2022/1574 anshita saxena 2022/369 Grace Lamneihat Kipgen 2022/1320 Yashna Vats	SEC- Back-End Web Development, B.Sc.(H)/ BA(H)/ BSc Prog,, Semester -IV 1.Creation of a sample site in Django. 2.Creation of super user or administrator for the website administration. 3.Django project that displays “Hello World” on web browser. 4.Django project that displays student details (name, department name & college roll number) on web browser. 5.Set up the database, create a model, and interact with the database by invoking python shell and Django’s admin site. 6.Creation of a basic API using Django Rest Framework. 7.Build a website for student admission in a college/university.	Dr. Tulika Kumari

	2022/1519 Sejal 2022/1602 Meenakshi Tiwari 2022/730 Niharika 2022/1430 Arsha P S 2022/979 Sakshi Yadav 2022/700 Nandini Kutiyal 2022/1005 SANJANA CHIMWAL 2022/442 Jasbina Quadri 2022/1315 Yashasvi Goswami 2022/541 Kiran meena 2022/688 Namrata Kumari 2022/878 Rachna Ranjith 2022/827 Prashansa sahai 2022/394 Harshita Yadav 2022/416 Indira Roy 2022/785 Piya Somani 2022/495 Kashish Rawat 2022/1520 Aditi Mishra 2022/1650 Shahina imam 2022/1336 Nilanjana Bagchi Aurpa 2022/813 Pragati Chauhan 2022/744 Nisha kumari 2022/903 Reeta Pal 2022/469 Kalpana Choudhary 2022/1053 Sheetal Yadav 2022/818 Prakanshi Boudh 2022/1160 Sreyanjali Mishra 2022/525 Khushi jain 2022/596 Mahak Yadav 2022/577 Kusum		
14	(48 Students) Roll No. Name 267 ADITHYA SURESH 32 ANJALI TEWARI 1127 ANKITA 1435 ANURADHA 1121 APEKSHA VYAS 1441 ARCHANA 99 BANTI 1057 DIVYA 1009 DIVYA RAO 1793 FATIMA BASIM JASIM 319 GRESSY RANA 1369 HARSHEEN KOUR 1228 JALSHA LODHI 705 JOYA YADAV 1699 KANIKA MALIK 1727 KHUSHI CHAUHAN 230 KIRAN 485 KIRAN GAUR 632 KUMARI VINI	CBCS-LOCF,SEC-Advanced Programming In Java, B.Sc. (P), V Semester	Dr. Tarun Kumar Gupta

	37 LINGAMPALLY MANISHA 87 MAHIMA MOMALIYA 827 MANSI 685 MANSI 900 MUSKAN 581 NAVAMI VIJAYAN 1159 NEHA PUNJLOT 1071 NISHA 88 PALAK GODARA 1393 PAREENA SAIDA 1840 PRACHI 1034 PRIYANKA 336 SATAKSHI MEENA 1324 SHEETAL KULDEEP SANGWAN 1212 SHIVANI 1230 SHIVANI 1665 SHRADDHA DIXIT 261 SHUBHI SAHU 1908 SHWETA GAUTAM 1122 SIMRAN CHUGH 489 SONIYA 1054 SUDHA YADAV 927 TANISHA CHAUHAN 113 TANUJA YADAV 1238 UDITI RAINA 1309 VAIBHVI 1667 VIDHI AGRAWAL 1750 YASHASWI GUPTA 313 YOGITA	**Practical List** 1. Write a program to calculate the area of rectangle and triangle using interfaces. 2. Design a class named Car in package P1, having registration number, model and engine as its private members. Here engine is an object of a class called Engine in package P2 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. 3. Define a class Figure in package P1, having dim1 and dim2 as two private members. Inherit two more classes: Rectangle and rightAngledTriangle. Write a Java program (in package P2) to ask the user for the type of shape and then using the concept of dynamic method dispatch, display the area of the appropriate subclass. 4. Write a program in Java that reads an integer numberOfRows and handles NumberFormatException if any invalid integer is entered by the user. If numberOfRows is negative, then display a message to the user to enter a positive number. If numberOfRows is positive, then display the following pattern (e.g. - numberOfRows in the figure below is 4): 1 1 2 1 1 2 3 2 1 1 2 3 4 3 2 1 5. Create a class called Fraction that can be used to represent the ratio of two integers. Include appropriate constructors and methods. If the denominator becomes zero, throw and handle an exception. 6. Write a program to create a frame using AWT. Implement mouseClicked(), mouseEntered() and mouseExited() events such that: a. Size of the frame should be tripled when mouse enters it. b. Frame should reduce to its original size when mouse is clicked in it. c. Close the frame when mouse exits it. 7. Using AWT, write a program to display a string in frame window with pink color as background. 8. Using AWT, write a program to create two buttons named "Red" and "Blue". When a button is pressed the background color should be set to the color named by the button's label. 9. Using AWT, write a program using appropriate adapter class to display the message ("Typed character is: <*typedCharacter*>") in the frame window when user types any key. 10. Using AWT, write a program to create two buttons labelled 'A' and 'B'. When button 'A' is pressed, it displays your personal information (Name, Course, Roll No, College) and when button 'B' is pressed, it displays your CGPA in previous semester.	
15	(70 Students) 39 ABHILIPSA PATRA 49 ADITI SINGH 61 AKANKSHA KOTHARI 63 AKANKSHA KUMARI SAHU 66 AKANSHA KANDARI 1740 AMISHA GUPTA 154 ANSHIKA SHARMA 181 ANUSHKA SINGH 188 ANVI CHAWLA 1605 ASHLESHA SHARMA 266 BHADRA VINEED 271 BHAVNA SINGH 1635 BHAVYA RANA 276 BHAWNA 292 BRAHMI PATEL 325 DEEPSHIKHA AMRAWAT 330 DEVIKA SURESH 1672 DHRITI GOYAL 360 DIVYA JYOTI SEMWAL	NEP SEC- Programming Using Python, B.Sc.(H)/ BA(H)/ BSc Prog,, Semester -I	Dr. Tarun Kumar Gupta

	399	GARGI TRIPATHI		
	400	GARIMA		
	477	ISHITA		
	489	JANAKI C JOBY		
	508	JIGYASA RANA		
	561	KATYAYNI AARYA		
	566	KAVYA JAIN		
	606	KHUSHI YADAV		
	609	KHYATI SRIVASTAVA		
	622	KOMAL		
	630	KOMAL YADAV		
	643	KUMARI ANANYA		
	665	LEEZA RANA		
	679	MAHAK		
	688	MAHI CHOUDHARY		
	805	NAVYA GUPTA		
	817	NEHA MAWAI		
	835	NIKITA AHIRWAR		
	840	NIKITA TEWARI		
	848	NIRNITA GHOSH		
	876	PALAK		
	1765	Prachi Kumari		
	934	PRAGYA DESHWAL		
	945	PRASHETHA S		
	949	PRATIKSHA BHUYAN		
	957	PREETI		
	982	PRIYADARSHANI		
	990	PRIYANKA ASHKE		
	1599	PURVANSHI SHARMA		
	1010	RAEESA PARVEEN		
	1027	RASHMI PRABHA		
	1028	RASHMI RANI		
	1065	RITIKA SINGH		
	1070	RIYA		
	1732	RUHANI MALIK		
	1642	SAKSHI SINGH		
	1127	SANDHYA KUMARI		
	1134	SANIYA ANSARI		
	1203	SHREEPARNA SENGUPTA		
	1218	SHREYA SINGH		
	1227	SHRUTI GUPTA		
	1702	SIDDHIKA		
	1736	SIMRAN JOSHI		
	1303	SOUMYA KUMARI		
	1323	SUBRITI MISHRA		
	1335	SUHANI KHANDELWAL		
	1387	TANISHQ GAUTAM		
	1392	TANIYA RAWAL		
	1444	VAIDEHI KUMAR		
	1670	VANSHITA GUPTA		
	1498	YASHASVI		

Practical Exercises **(15 weeks)**

- Running instructions in Interactive interpreter and a Python Script
- Write a program to purposefully raise Indentation Error and Correct it
- Write a program to compute distance between two points taking input from the user. (Pythagorean Theorem)
- Write a program add.py that takes 2 numbers as command line arguments and prints its sum.
- Write a Program for checking whether the given number is an even number or not.
- Using a for loop, write a program that prints out the decimal equivalents of 1/2, 1/3, 1/4, 1/10
- Write a program using a for loop that loops over a sequence. What is the sequence?
- Write a program using a while loop that asks the user for a number, and prints a countdown from that number to zero.
- Find the sum of all the primes below two million. Each new term in the Fibonacci sequence is generated by adding the previous two terms. By starting with 1 and 2, the first 10 terms will be: 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ...
- By considering the terms in the Fibonacci sequence whose values do not exceed four million, find the sum of the even-valued terms.
- Write a program to count the numbers of characters in the string and store them in a dictionary data structure.
- Write a program to use split and join methods in the string and trace a birthday with a dictionary data structure.
- Write a program combining lists that combines these lists into a dictionary.
- Write a program to count the frequency of characters in a given file. Can you use

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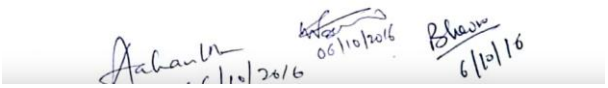
character frequency to tell whether the given file is a Python program file, C program file or a text file?

- Write a program to print each line of a file in reverse order.
- Write a program to compute the number of characters, words and lines in a file.
- Write a function ball collide that takes two balls as parameters and computes if they are colliding. Your function should return a Boolean representing whether or not the balls are colliding. Hint: Represent a ball on a plane as a tuple of (x, y, r), r being the radius. If (distance between two balls centers) <= (sum of their radii) then (they are colliding)
- Find mean, median, mode for the given set of numbers in a list.
- Write a function nearly equal to test whether two strings are nearly equal. Two strings a and b are nearly equal when a can be generated by a single mutation on b.
- Write a function dups to find all duplicates in the list.

Miranda House
UNIVERSITY OF DELHI

16	(62 Students) 8 AANCHAL 71 AKANSHA 1482 ALEENA BANERJEE 91 AMINA ANUSH 92 AMIRTHAVARSHINI KANNAN 146 ANMIGHA NAIR 149 ANNIKA GWALANI 186 APURVA NARAYAN 1538 ASHALI SAXENA 299 DHANSHRI NARENDRA THAKRE 1534 DIPANSHI SHARMA 335 EKANSHI MAKHEJA 347 FIDHA B USMAN 350 GARGI GANGAN 400 HIMANI 416 INDIRA ROY 1490 JANVI SHARMA 442 JASBINA QUADRI 457 JIYA CHAHAR 467 KAJAL 1380 KARISHMA SEHGAL 526 KHUSHI JAIN 541 KIRAN MEENA 561 KRITIKA BHATTACHARYA 581 LAKSHMI HARIKUMAR 1524 MANSHI 616 MANSHI GUPTA 626 MANVI YADAV 638 MEHAK 654 MONIKA 686 NAKSHATA AGARWAL 697 NANDINI AJAY CHOUBEY 698 NANDINI KALANTRI 745 NISHITA SINGH 1449 NITIGYA AYUSHI JHA 1467 PAAVNI TANDON 763 PAKHI GOEL 1551 PALAK GADROO 1567 PAVYA SINGH 817 PRAGYA RANJAN 853 PRIYA MISHRA 868 PUNGBALE RANGKAU 881 RADHIKA BAJAJ 902 REENI CHOPRA 931 RISHITA JAIN 1593 SAHELI GARAI 979 SAKSHI YADAV 1513 SHAGUN MISHRA	NEP GE 3-DBMS, B.A(H)/B.Sc(H) Semester III **Suggested Practical List (if any): (30 hours)** **Do the practical exercises based on given schema. Note that these are suggestive schemas for practical exercise, but in final practical examination any other schema of same difficulty level may be given for implementation and queries** 1. Create and use the following student-course database schema for a college to answer the given queries using the standalone SQL editor. **STUDENT** | **Roll No** | **Student Name** | **Course ID** | **DOB** Char(6) | Varchar(20) | Varchar(10) | Date **COURSE** | **CID** | **Course Name** | **Course Type** | **Teacher-in-charge** | **Total Seats** | **Duration** Char(6) | Varchar(20) | Char(8) | Varchar(15) | Unsigned int | Unsigned int **ADMISSION** | **Roll No** | **CID** | **Date of Admission** Char(6) | Char(6) | Date Here, Roll No (ADMISSION) and CID (ADMISSION) are foreign keys. Note that course type may have two values viz. Fulltime and Parttime and a student may enrol in any number of courses. 1. Retrieve names of students enrolled in any course. 2. Retrieve names of students enrolled in at least one part time course. 3. Retrieve students' names starting with letter 'A'. 4. Retrieve students' details studying in courses 'computer science' or 'chemistry'. 5. Retrieve students' names whose roll no either starts with 'X' or 'Z' and ends with '9' 6. Find course details with more than N students enrolled where N is to be input by the user. 7. Update student table for modifying a student name. 8. Find course names in which more than five students have enrolled 9. Find the name of youngest student enrolled in course 'BSc(P)CS' 10. Find the name of most popular society (on the basis of enrolled students) 11. Find the name of two popular part time courses (on the basis of enrolled students) 12. Find the student names who are admitted to full time courses only. 13. Find course names in which more than 30 students took admission 14. Find names of all students who took admission to any course and course names in which at least one student has enrolled. 15. Find course names where teacher-in-charge has 'Gupta' as surname and the course is full time. 16. Find the course names in which the number of enrolled students is only 10% of its total seats. 17. Display the vacant seats for each course 18. Increment Total Seats of each course by 20% 19. Add enrolment fees paid ('yes'/'No') field in the enrolment table. 20. Update the date of admission for all the courses by 1 year. 21. Create a view to keep track of course names with total number of students enrolled in it. 22. Count the number of courses with more than 5 students enrolled for each type of course. 23. Add column Mobile number in student table with default value '9999999999' 24. Find the total number of students whose age is > 18 years. 25. Find names of students who are born in 2001 and are admitted to at least one part time course. 26. Count all courses having 'science' in the name and starting with the word 'B.Sc.'. 2. Create the following tables with appropriate data type for attributes and integrity constraints on the 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, Quantity)** 1. Find supplier numbers for suppliers in Mandi with status less than 20. 2. Find supplier details for suppliers who supply part P2. Display the supplier list in decreasing order of supplier numbers. 3. Find suppliers names for suppliers who do not supply part P2. 4. For each shipment get full shipment details, including total shipment weights computed as Weight*Quantity of corresponding parts. 5. Get all the shipments where the quantity is in the range 300 to 750 inclusive. 6. Get part numbers for parts that either [iPhone Mirroring] e supplied by suppliers S2 or both.	Dr. Tarun Kumar Gupta

	1572 SHANKY 1073 SHIVANI SINHA 1075 SHIVANKI PRASAD 1109 SIMARJEET KAUR 1141 SNEHA YADAV 1157 SOUMYA MEHTA 1165 STUTI SINGH 1183 SURABHI CHADHA 1499 TANIRIKA GHOSH 1628 TANVI 1231 TANYA YADAV 1251 TRISHA SINGHAL 1271 VAISHNAVI VOHRA 1293 VARTIKA YADAV		
17	(48 Students) Roll No. Name 267 ADITHYA SURESH 32 ANJALI TEWARI 1127 ANKITA 1435 ANURADHA 1121 APEKSHA VYAS 1441 ARCHANA 99 BANTI 1057 DIVYA 1009 DIVYA RAO 1793 FATIMA BASIM JASIM 319 GRESSY RANA 1369 HARSHEEN KOUR 1228 JALSHA LODHI 705 JOYA YADAV 1699 KANIKA MALIK 1727 KHUSHI CHAUHAN 230 KIRAN 485 KIRAN GAUR 632 KUMARI VINI 37 LINGAMPALLY MANISHA 87 MAHIMA MOMALIYA 827 MANSI 685 MANSI 900 MUSKAN 581 NAVAMI VIJAYAN 1159 NEHA PUNJLOT 1071 NISHA 88 PALAK GODARA 1393 PAREENA SAIDA 1840 PRACHI 1034 PRIYANKA 336 SATAKSHI MEENA 1324 SHEETAL KULDEEP SANGWAN 1212 SHIVANI 1230 SHIVANI	CBCS LOCF SEC - Android Programming, B.Sc. Physical Sciences, Semester VI **Proposed List of Practical for B.sc(H) Computer Sc. SEC-1(Android programming)** | Sr. No	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 to display various android activity lifecycle phases. | | 3 | Create an application with first activity with an editText and send button. On click of send button, make use of explicit intent to send text to second activity and display there in text view. | | 4 | Create an application with first activity with an editText and send button. On click of send button, make use of implicit intent that uses a SEND ACTION and let user select app from app chooser and navigate to that application. | | 5 | Create spinner with strings taken from resource folder (res >> value folder) and on changing the spinner value, Image will change. | | 6 | Create a menu with 5 options and selected option should appear in text box. | | 7 | Create a radio button group with radio button 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. | | 8 | Create an application with three buttons vertically aligned, on selecting a button color of the screen will change. | | 9 | Create an application with three buttons horizontally aligned, on selecting a button color of the screen will change. | | 10 | Create a Login application (check username and password). On successful login, pop up the message. ("Welcome username") | | 11 | Create a login application as above, on successful login redirect to another activity with logout button. On click of logout button a dialog appears with OK and CANCEL button. On OK button click go to login activity and on CANCEL stay at same activity | | 12 | Create an application to Create, Insert, update and Delete operation on the database. | 	Dr. Tarun Kumar Gupta

	1665 SHRADDHA DIXIT 261 SHUBHI SAHU 1908 SHWETA GAUTAM 1122 SIMRAN CHUGH 489 SONIYA 1054 SUDHA YADAV 927 TANISHA CHAUHAN 113 TANUJA YADAV 1238 UDITI RAINA 1309 VAIBHVI 1667 VIDHI AGRAWAL 1750 YASHASWI GUPTA 313 YOGITA		
18	(67 Students) 416 Indira Roy 335 Ekanshi Makheja 763 Pakhi Goel 638 Mehak 1293 Vaishnavi Vohra 457 Jiya Chahar 299 Dhanshri Thakre 91 Amina Anush 526 Khushi jain 1183 Surabhi Chadha 347 Fidha B Usman 8 Aanchal 1141 Sneha yadav 186 Apurva Narayan 881 Radhika Bajaj 745 Nishita Singh 92 Amirthavarshini Kannan 561 Kritika Bhattacharya 1251 Trisha Singhal 979 Sakshi Yadav 149 Annika Gwalani 698 Nandini Kalantri 626 Manvi Yadav 1109 Simarjeet kaur 931 Rishita jain 654 Monika 1499 Tanirika Ghosh 1490 Janvi Sharma 1482 Aleena Banerjee 1467 Paavni Tandon 1551 Palak Gadroo 1538 Ashali Saxena 1534 Dipanshi Sharma 1513 Shagun Mishra 1567 Pavya Singh 1628 Tanvi 730 Niharika	NEP GE 4 - Introduction to Web Programming, B.A(H)/B.Sc(H), Semester IV **Practical List** **HTML** 1. Create an HTML document with following formatting – Bold, Italics, Underline, Colors, Headings, Title, Font and Font Width, Background, Paragraph, Line Breaks, Horizontal Line, marquee text. 2. Create an HTML document with Ordered and Unordered lists. 3. Create an HTML document demonstrating use of images in webpages (including images as logos, cell data in a table, background of a table, clickable icons, etc) 4. Create an HTML document to demonstrate Internal and External linking. 5. Create an HTML document to display the following table: **Table Example** Seminar Day / Schedule (Start Time, End Time) / Topic Monday 8:00 AM 5:00 PM — Introduction to HTML; Important HTML Tags Tuesday 8:00 AM 11:00 AM — CSS-1 Tuesday 11:00 AM 2:00 PM — CSS-1 Tuesday 2:00 PM 5:00 PM — JavaScript-1 Wednesday 8:00 AM 12 Noon — JavaScript-2 Thursday 8:00 AM 12 Noon — JQuery Thursday 1:00 PM 3:00 PM — Valedictory 6. Create an HTML page demonstrating the following semantic tags: a. Header b. Nav c. Main d. Section e. Footer f. Details g. Summary h. Figure i. Figure caption 7. Create a student registration form using HTML which has the following controls: a. Text Box b. Text Area c. Dropdown box d. Option/radio buttons e. Check boxes f. Reset and Submit button On pressing the Submit button, a message "Form submitted" should be displayed.	Dr. Tarun Kumar Gupta

	581 Lakshmi Harikumar 853 Priya Mishra 817 Pragya Ranjan 1593 Saheli Garai 1271 Vartika Yadav 697 Nandini Ajay Choubey 1075 Shivanki Prasad 1073 Shivani Sinha 541 Kiran meena 868 Pungbale Rangkau 1231 Tanya Yadav 1237 Tejal Pancholi 787 POOJA 442 Jasbina Quadri 709 Navya Dabas 726 Nidhi Lohia 616 Manshi Gupta 146 Anmigha Nair 1165 Stuti Singh 400 Himani 350 Gargi Gangan 317 Divya Sharma 1308 Vrinda Rastogi 686 Nakshata Agarwal 1380 Karishma Sehgal 467 Kajal 71 Akansha 902 Reeni Chopra 1643 Sakshi Sihag 1157 Soumya Mehta	**CSS** 1. Create a webpage for your department with a drop-down navigation menu for faculty, courses, activities, etc. Implement the webpage using styles, rules, selectors, ID, class. 2. Add appropriate CSS code to change the text, list, div element and table properties of the HTML questions above. **Javacript** 1. Write a Javascript code to accept a number from the user through the prompt and print its multiplication table. 2. Create an HTML form having two text boxes and 4 buttons as shown below: First Number Second Number + − • / Write a Javascript code to implement respective operation when a user clicks on a button. The result of the operation is to be displayed on an alert window. 3. Write a Javascript code to change the background color of a text box when the text box gets focus. 4. Write a Javascript code for Q7 (of HTML above) to input and validate all data. Create functions to perform validation of each element, for example: a. Roll number is a 7-digit numeric value. b. Name should be an alphabetical value (String). c. Non-empty fields like DOB. **jQuery and JSON** 1. Change text color and contents using button click events using jQuery. 2. Select elements using ID, class, elements name, attribute name. 3. Write a JQuery function to test whether a date is a weekend. 4. Demonstrate various events: blur, change, focus, click, dblClick, submit. 5. Write a jQuery code that demonstrates the mouseOver and mouseOut event. a. The web page should have a hyperlink labeled “It shows the mouse events” and linked to your college website. b. When the mouse hovers over the link, the background color of webpage should change to green and link text should change to “I’m green now”. c. When the mouse is taken away from the link, the background color of webpage should change to red and the link text should change to “I’m red now”.	
19	(33 Students) 2023/1436 Upasana Bhattacharjee 2023/28 Aastha 2023/1216 Shreya Shukla 2023/1153 SASWATI BORPHUKAN 2023/1462 Vanshika Singh 2023/1006 Punit Nandini 2023/1589 Vitanshi Yadav 2023/925 Prachi Brahamin 2023/240 Avni 2023/524 Kajal kumari 2023/815 Neha Bishnoi 2023/258 Ayushi Yadav 2023/873 P MONIKA 2023/1456 Vanshika Dogra 2023/1197 Shivi Chauhan 2023/1572 Tejaswita dalal 2023/17 Aanjoleena 2023/576 khushi 2023/368 Divyani Patidar	NEP SEC- Programming Using Python, B.Sc.(H)/ BA(H)/ BSc Prog,, Semester -II **Practical Exercises** **(15 weeks)** ☐ Running instructions in Interactive interpreter and a Python Script ☐ Write a program to purposefully raise Indentation Error and Correct it ☐ Write a program to compute distance between two points taking input from the user. (Pythagorean Theorem) ☐ Write a program add.py that takes 2 numbers as command line arguments and prints its sum. ☐ Write a Program for checking whether the given number is an even number or not. ☐ Using a for loop, write a program that prints out the decimal equivalents of 1/2, 1/3, 1/4, 1/10 ☐ Write a program using a for loop that loops over a sequence. What is the sequence? ☐ Write a program using a while loop that asks the user for a number, and prints a countdown from that number to zero. ☐ Find the sum of all the primes below two million. Each new term in the Fibonacci sequence is generated by adding the previous two terms. By starting with 1 and 2, the first 10 terms will be: 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ... ☐ By considering the terms in the Fibonacci sequence whose values do not exceed four million, find the sum of the even-valued terms. ☐ Write a program to count the numbers of characters in the string and store them in a dictionary data structure. ☐ Write a program to use split and join methods in the string and trace a birthday with a dictionary data structure. ☐ Write a program combining lists that combines these lists into a dictionary. ☐ Write a program to count the frequency of characters in a given file. Can you use 84 character frequency to tell whether the given file is a Python program file, C program file or a text file? ☐ Write a program to print each line of a file in reverse order. ☐ Write a program to compute the number of characters, words and lines in a file. ☐ Write a function ball collide that takes two balls as parameters and computes if they are colliding. Your function should return a Boolean representing whether or not the balls are colliding. Hint: Represent a ball on a plane as a tuple of (x, y, r), r being the radius. If (distance between two balls centers) <= (sum of their radii) then (they are colliding) ☐ Find mean, median, mode for the given set of numbers in a list. ☐ Write a function nearly equal to test whether two strings are nearly equal. Two strings a and b are nearly equal when a can be generated by a single mutation on b. ☐ Write a function dups to find all duplicates in the list.	Dr. Tarun Kumar Gupta

	2023/734 Mehak Raj 2023/284 Bhumika Pathak 2023/189 Apala 2023/150 Anshika 2023/1649 Vandita Vidisha 2023/1257 Simran Chaudhary 2023/1128 Sandhya kumari 2023/185 Anushkaa Jain 2023/1464 Vanya Khurana 2023/1383 Tanisha Singh 2023/1297 Sonia Das 2023/1309 Srijita Sana 2023/1610 Swarnima Singh 2023/1278 Sneha Verma		

Part A.2

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