



**Miranda House  
UNIVERSITY OF DELHI**

**INNOVATION PROJECTS 2015-16**

**FINAL REPORT**



**MH-309**

**Reward Network As a Form of  
Experiential Marketing**

## Table of Contents

PRINCIPAL INVESTIGATORS .....	3
MENTOR.....	3
STUDENT DETAILS.....	4
Abstract.....	5
INTRODUCTION .....	6
OBJECTIVES .....	6
METHODOLOGY .....	6
Initiation Phase.....	6
Major Requirements Specifications for the WOOO App .....	7
Software and Hardware Platform for App Development.....	7
Designing the WOOO App.....	8
Coding the WOOO App.....	14
Testing WOOO .....	14
Launching WOOO .....	15
OTHER WORK CARRIED OUT .....	15
Market Research .....	15
Developing multiple lists for brands and gaming apps.....	15
Pitch Decks and Proposals:.....	15
Brands and cafes approached:.....	16
Website Development.....	16
RESULT AND DISCUSSION .....	17
Secondary Research.....	17
Market Research .....	17
Technological Research.....	17
INNOVATIONS SHOWN BY THE PROJECT .....	17
Android App Development.....	17
Social Welfare.....	17
CONCLUSION AND FUTURE DIRECTION .....	18
REFERENCES .....	19

## PRINCIPAL INVESTIGATORS

### **Dr. Bhupinder Kaur**

Assistant Professor  
Department of Economics  
Miranda House  
University of Delhi  
bhupinder.kaur@mirandahouse.ac.in

### **Dr. Meetu Bhatia Grover**

Assistant Professor  
Department of Mathematics  
Miranda House  
University of Delhi  
meetu.grover@mirandahouse.ac.in

### **Dr. Ritu Gupta**

Assistant Professor  
Department of Mathematics  
Miranda House  
University of Delhi  
ritu.gupta@mirandahouse.ac.in

### **Ms. Priti Rai Jain**

Assistant Professor  
Department of Computer Science  
Miranda House  
University of Delhi  
priti\_r\_jain@rediffmail.com

## MENTOR

### **Mr Vibhor Gupta**

Weekendr Innovation Labs Pvt Ltd  
1st Floor, 2230 Outram Lines,  
New Delhi, Delhi 110009  
vibhor.gupta@weekendr.in

**STUDENT DETAILS**

<b>S.No</b>	<b>Name</b>	<b>Course and Year</b>	<b>College Roll no.</b>	<b>Email</b>
1	Priyanka Gill	B.Tech Computer Science, IIIrd Year	2013/1088	priyankagill08@gmail.com
2	Paahuni Khandelwal	B.Tech Computer Science, IIIrd Year	2013/1428	paahunikh@gmail.com
3	Richa Dewan	B.Tech Computer Science, IIIrd Year	2013/1432	richadewan95@gmail.com
4	Kritika Arora	B.Tech Computer Science, IIIrd Year	2013/1426	Kritika.arora2@gmail.com
5	Palakh Shangle	B.Tech Computer Science, IIIrd Year	2013/1062	pshangle@gmail.com
6	Abhishikha Aggarwal	B.Tech Computer Science, IIIrd Year	2013/1435	abhishikhaaggarwal4@gmail.com
7	Himani Gupta	B.Sc (Hons) Mathematics, IIIrd Year	2013/1098	himani.gupta879@gmail.com
8	Komal Agarwal	B.Sc (Hons) Mathematics, IIIrd Year	2013/1077	komal.010395@gmail.com
9	Lavanya Tayal	B.A (Hons) Economics, IInd Year	2014/1279	lavanya07.tayal@gmail.com
10	Harshita Agarwala	B.Sc (Hons) Mathematics, IIIrd Year	2013/380	agarwala95@gmail.com

## Abstract

To introduce reward network as a form of experiential marketing the project started to see its potential as a new digital marketing strategy. Various brands and gaming applications were approached for implementing this strategy. After a lot of market research and improvisations finally an android quiz application at college level has been created in which the users would be rewarded with free coupons and special discounts based on their performance. The goal is to provide real rewards for virtual achievements.



## **INTRODUCTION**

The world of digital marketing has seen a great revolution in past few years. While all other industries are struggling with a growth rate of 5 to 10 percent, Digital Media Industry is booming high with 30 percent growth rate and is expected to become the fastest growing industry in the years to come, of which mobile advertising space is growing the fastest. With the rapidly growing number of mobile-internet users in India, this industry has very bright prospects in future.

Keeping this in mind, it was decided to base the innovation project around this industry, especially experiential marketing which is concerned with connecting consumers with brands through live interactions and personalized experiences.

Among all the types of experiential marketing, the reward network is the one which has yet to make an impact. In order to explore the possibility of introducing reward networking in its new avatar (other than advertising) the project was undertaken with the following objectives.

## **OBJECTIVES**

1. To develop a platform to provide real rewards for virtual achievements.
2. Conduct a Market and Secondary Research to assess the credibility of the project idea.
3. Make lists of brands and gaming applications for the same.
4. Develop an Android app where the participants would be given real rewards based on virtual achievements like games, quizzes, participation in surveys etc.
5. Provide admin panel as backend for uploading/editing app content.

## **METHODOLOGY**

### **Initiation Phase**

During this phase, the broad objectives and goals behind our innovation project were figured out and discussed. The primary goal of the project was to test the scope and future potential of experiential marketing in the context of the Indian youth. It was decided to prepare an interface that could act as a mediator between gaming app providers and brands who are looking for promotion.

The project team was divided into two parts; one to handle the technological aspect and the other to focus on business development and marketing aspect.

The business development persuaded the gaming app providers to share their database with the project and the leading brands willing to offer coupons for virtual achievements of players of these games.

A survey was conducted to identify the market feasibility of this idea. The survey had 209 respondents where the sample population consisted of people between the age group of 8 - 60 years. The survey was mainly conducted to see how frequently people used rewards. Out of the total responses, 43% people had used a coupon within the last 1 month; also the monetary

value of the coupons used was between Rs.100-500 for exactly half of the respondents. 81 people preferred playing puzzles, board games, card games, and trivia on their mobile phones whereas 55 preferred action or sports games and the rest chose social games or others. 73.2% of the respondents used social networking other than gaming apps. 82.3% respondents i.e. (172 out of 209) said that they would be happy to receive coupons after virtual achievements.

During the survey, the project team got a positive response from the brands that were approached. Gaming app providers were very excited with the idea, however, during the later course of the project it was realised that there were restrictions and reservations in electronic sharing of data by the gaming apps and the project being conducted. The concerns were basically the data privacy agreements and disclaimers they had with the game users.

So we had to tweak our project plan and decided to create a quiz cum survey links Android application and persuade brands to provide rewards to the users and winners of this app.

The major deliverable identified was indeed the Android app christened WOOO.

### Major Requirements Specifications for the WOOO App

The requirements of the application were identified as under:

1. The users of the app will have to register through Google+ login.
2. WOOO should include quizzes on various subjects and topics.
3. There should be an option to add more quizzes and Google survey links to the app.
4. A quiz or survey link to be available for specific time duration. Users shall not be able to attempt a quiz/survey after the date specified expires.
6. Quiz to be timed.
7. The results of each participant to be stored, a leader board to keep the track of the winners.
8. Contact information of the quiz organisers to be available on the app so that the winners could contact them to collect their real rewards if need be.
9. A web-application for administrator to upload/edit surveys and quizzes in the application.

### Software and Hardware Platform for App Development

#### HARDWARE

Processor	:	PENTIUM IV
Processor Speed	:	1.9 GHz Intel Core I3
Total RAM	:	4GB
Hard Disk	:	1TB

#### SOFTWARE

Front End	:	JAVA
Back End	:	RESTful Server
IDE	:	ECLIPSE
Operating System	:	WINDOWS 7

**MOBILE**

Platform	:	Android
Android Version	:	Jellybeans
Processor	:	Qualcomm Snapdragon
Processor speed	:	1.2GHZ
RAM	:	2GB

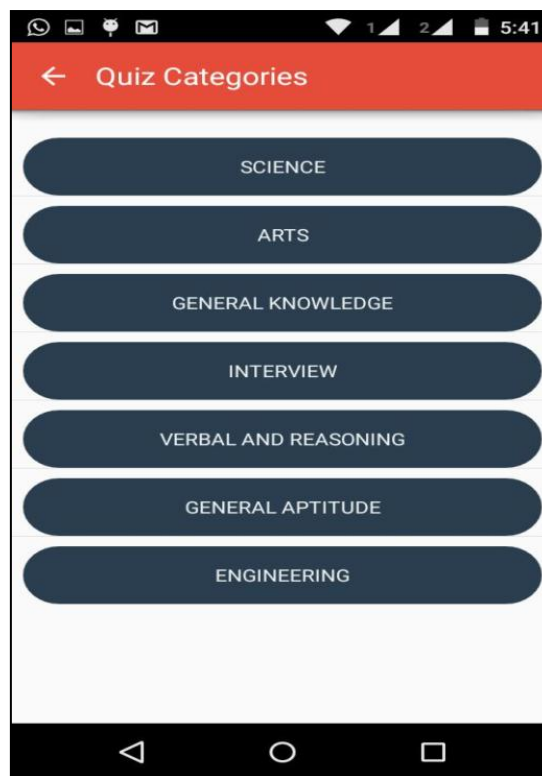
**WEBSITE**

Front end	:	Joomla Content Management System(CMS)
Back End	:	SQL
Operating System	:	Windows 7

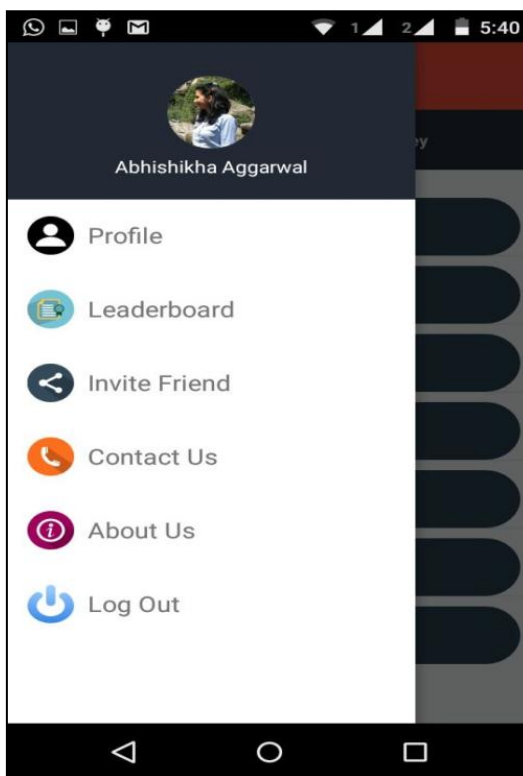
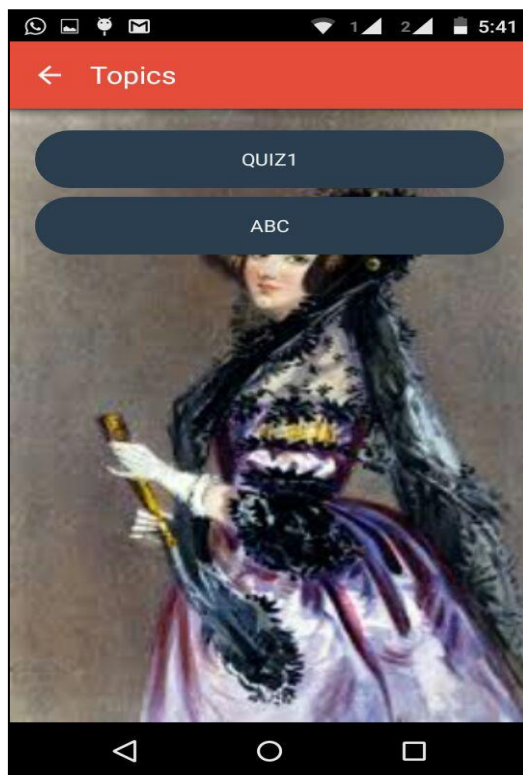
**Designing the WOOO App**

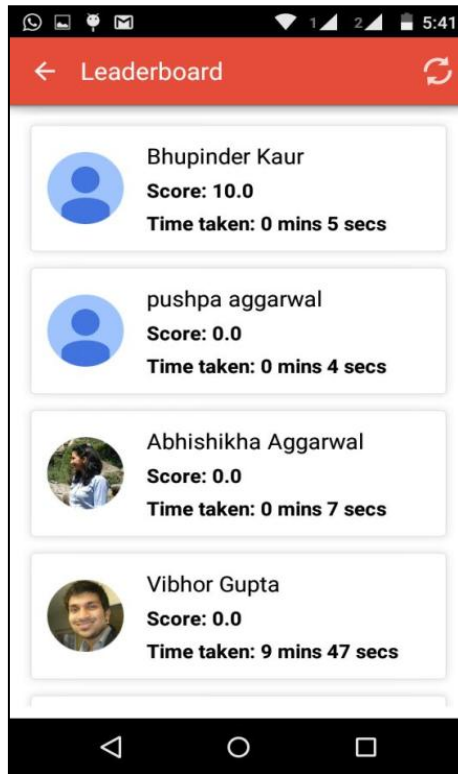
For designing the Android app a Top-Down approach was followed, i.e. the whole software was visualised as one entity and then decomposed to achieve more components based on different characteristics.

Major screen layouts prepared are presented as under:









## Backend Table Design

There are 10 tables in database named wooddb.

### 1. Table Name : *survey*

Name	Data Type	Default	Null	Extra
id (Primary Key)	int(11)	None	No	AUTO_INCREMENT
title	varchar(100)	None	No	
link	varchar(200)	None	No	
start_date	date	None	No	
end_date	date	None	No	
created_on	timestamp	CURRENT_TIME STAMP	No	ON UPDATE CURRENT_TIMEST AMP

**2. Table Name: *categories***

<b>Name</b>	<b>Data Type</b>	<b>Default</b>	<b>Null</b>	<b>Extra</b>
category_id (Primary Key)	int(11)	None	NO	AUTO_INCREMENT
category_name	varchar(100)	None	NO	
type	varchar(100)	None	NO	

**3. Table Name: *questions***

<b>Name</b>	<b>Data Type</b>	<b>Default</b>	<b>Null</b>	<b>Extra</b>
question_id (Primary Key)	int(11)	None	NO	AUTO_INCREMENT
quiz_id	int(11)	None	NO	
question	varchar(500)	None	NO	
option_1	varchar(150)	None	NO	
option_2	varchar(150)	None	NO	
option_3	varchar(150)	None	NO	
option_4	varchar(150)	None	NO	
correct_option	varchar(11)	None	NO	

**4. Table Name: *quiz***

<b>Name</b>	<b>Data Type</b>	<b>Default</b>	<b>Null</b>	<b>Extra</b>
quiz_id (Primary Key)	int(11)	None	No	AUTO_INCREMENT
quiz_name	varchar(100)	None	No	
category_id	int(11)	None	No	
start_date	date	None	No	
end_date	date	None	No	
organiser_contact_detail	varchar(200)	None	No	
no_of_winners	int(11)	None	No	
created_on	timestamp	CURRENT_TIMESTAMP	No	

**5. Table Name: *user\_details***

<b>Name</b>	<b>Data Type</b>	<b>Default</b>	<b>Null</b>	<b>Extra</b>
user_id (Primary Key)	int(11)	None	No	AUTO_INCREMENT
user_name	varchar(500)	None	No	
email	varchar(500)	None	No	
institution	varchar(150)	None	No	
image_url	varchar(150)		No	
push_notification_id	varchar(150)		No	
created_on	timestamp	CURRENT_TIMESTAMP	No	

**6. Table Name: *user\_quiz\_submit***

<b>Name</b>	<b>Data Type</b>	<b>Default</b>	<b>Null</b>	<b>Extra</b>
id (Primary Key)	int(11)	None	No	AUTO_INCREMENT
user_id	int(11)	None	No	
quiz_id	int(11)	None	No	
score	double	0	No	
time	int(5)	None	No	
options_marked	varchar(100)	None	No	
created_on	timestamp	CURRENT_TIMESTAMP	No	

**7. Table Name: *adminlogin***

<b>Name</b>	<b>Data Type</b>	<b>Default</b>	<b>Null</b>	<b>Extra</b>
userno (Primary Key)	int(2)	None	NO	AUTO_INCREMENT
admin_type_id	int(3)	None	NO	
sub_user_type_id	int(3)	-1	NO	
userid	varchar(30)	None	NO	
pass	text	None	NO	
name	varchar(200)	None	NO	
email	varchar(80)	None	NO	
email2	varchar(80)	NULL	YES	

mobile	varchar(50)	None	NO	
user_type	enum('ADMIN', 'SUBADMIN', 'SUBUSER')	SUBUSER	NO	
permission_type	varchar(80)	None	NO	
under	int(3)	-1	NO	
last_login	datetime	None	NO	
active	int(1)	None	NO	

**8. Table Name: *admin\_reset\_password***

Name	Data Type	Default	Null	Extra
id (Primary Key)	int(2)	None	No	AUTO_INCREMENT
userno	int(2)	NULL	Yes	
code	varchar(70)	NULL	Yes	
status	int(1)	1	Yes	
req_date	datetime	NULL	Yes	

**9. Table name: *mail\_body***

Name	Data Type	Default	Null	Extra
id (Primary Key)	int(10)	None	No	AUTO_INCREMENT
_order	int(1)	None	No	
type	text	NULL	Yes	
subject	text	NULL	Yes	
mail_body	text	NULL	Yes	
mail_keys	text	NULL	Yes	
status	int(2)	1	Yes	

**10. Table name: *mail\_keyword***

Name	Data type	Default	Null	Extra
id (Primary key)	int(10)	None	No	AUTO_INCREMENT
key (index)	varchar(100)	NULL	Yes	
vars	varchar(100)	NULL	Yes	
comment	text	NULL	Yes	

The dependency between the screens and tables :-

		Screens						
Tables		Screen 1	Screen 2	Screen 3	Screen 4	Screen 5	Screen 6	Screen 7
	Table 1	NO	NO	YES	NO	NO	NO	NO
	Table 2	NO	YES	NO	YES	YES	NO	NO
	Table 3	NO	NO	NO	YES	YES	YES	NO
	Table 4	NO	NO	NO	YES	YES	YES	NO
	Table 5	YES	NO	NO	NO	NO	YES	YES
	Table 6	NO	NO	NO	NO	NO	YES	NO

### Coding the WOOO App

The details of the functionality and coding is available at Annexure 2.

### Testing WOOO

After the coding was complete, the next step was testing. Testing was done at every level of android application development. Before jumping onto the next module of the application, a module was tested and verified. This is called Unit Testing. It helped to decide that individual module of programs were working as per requirement and were error free. Once the individual modules of software were working fine individually, all the modules were integrated together to see if they were also working without errors. This type of testing is called Integration Testing.

The application was then compiled as product and then was tested as a whole to check its functionality and performance. The feedbacks was taken and necessary modifications were made.

Following are some of the test cases used for testing WOOO app:

Scenario	Outcome
User trying to attempt a quiz after the deadline	The quiz will not accessible to user after deadline only leaderboard will be visible
User trying to LogIn through other than Google+	No other option of Login will be available
User trying to re attempt a quiz	Quiz will not be accessible, only leaderboard will be visible
User trying to attempt a survey after deadline	Survey will not load

## **Launching WOOO**

The WOOO app can be downloaded from the following link:

<http://139.59.19.131/wooo/Wooo.apk>

Once it is downloaded, user can refer the user manual at Annexure 3 to enable her/him to use it.

***NOTE : The application only works on android phones.***

## **OTHER WORK CARRIED OUT**

### **Market Research**

Conducted a survey to find out the credibility of the business idea by assessing how users of different age groups and gender respond to the concept of reward network. The survey was mainly conducted to see how frequently coupons are used. Further the survey also analysed the frequency pattern. The data collected has been displayed in the Observation Section. (A copy of the survey is attached in Annexure 1.2)

### **Developing multiple lists for brands and gaming apps**

For brands to target, a list of e-commerce websites with their specific services and products was made. Lists of gaming apps categorized as “Action”, ”Arcade”, ”Casual”, ”Role-Playing”. These were also sorted according to the age group of users for analysis.. (All lists attached in Annexure 1.3).

### **Pitch Decks and Proposals:**

Samples were studied and the idea was projected perspicuously in pitches and proposals through graphs, tables and images. (Pitch attached in Annexure 1.4)

### Brands and cafes approached:

NAMES	CONTACT DETAILS	STATUS
Aaram Shop	premiumservices@aaramshop.com	Response awaited
A1 Books India	info@a1booksindia.com	Response awaited
Elitify Ninja Service	info@elitify.com	Processing
Bevy Shop	work@bevyshop.com	Response awaited
Egully	b2b@egully.com	Response awaited
EMI Bazaar	cservice@emibazaar.com	Response awaited
CraftsVilla	customercare@craftsvilla.com	Response awaited
Pizza Planet	011 4707504	Response awaited
Mood Swingers	+91 8470988855	Response awaited
Magikk Kitchen	011 4551318	Response awaited
Rangmanch	+91 7289815134	Response awaited
Kittu King	+91 9910391900	Positive Feedback
Slice of Italy	+91 11-40608888	Response awaited

### Website Development

A website was constructed using Joomla. The work started by initially researching on Joomla and understanding its functions. Then various YouTube videos and tutorials were referred to make a website. Many themes were considered and eventually the best was chosen according to the design of the website. The website is maintained by SQL queries.



## **RESULT AND DISCUSSION**

### **Secondary Research**

According to Global Media Report by McKinsey, digital advertising will be the fastest growing industry over the next five years, with a projected 14.7 percent compound annual growth to 2017. In India, digital advertising is growing at a rate of 40 percent year on year. Last year the global spend on advertising was 1.6 trillion dollars and is expected to cross the 2 trillion dollar mark by 2018. Of these mobile advertising space is growing the fastest. Mobile advertising spend is increasing around 52% year on year. However a report from Adobe and PageFair estimates that the rise of ad blocking technology could cost advertisers a total of more than \$40 billion by next year.

### **Market Research**

Market Research and analysis is one of the most essential components of any start-up strategy. Hence, to identify and customize the project venture a local survey of 209 respondents was conducted for which the sample population consisted of people between the age group of 8 - 60 years.

Out of the total responses, 43% people have used a coupon within the last 1 month; also the monetary value of the coupons used was between Rs.100-500 for exactly half of the respondents. 81 people prefer playing puzzles, board games, card games, and trivia on their mobile phones whereas 55 prefer action or sports games and the rest chose social games or others. 73.2% of the respondents use social networking other than gaming apps. 82.3% respondents i.e. (172 out of 209) would be happy to receive a coupon after virtual achievements. (A complete list of survey responses attached in Annexure 1.5)

### **Technological Research**

To connect the potential brands and customers, the students created a website introducing their platform so as the brands and customers get to know the objectives and goals of their product. The screenshots of the website created have been attached in the Annexure 1.6

The students have developed an Android app WOOO.

## **INNOVATIONS SHOWN BY THE PROJECT**

### **Android App Development**

The students have developed an Android app WOOO.

### **Social Welfare**

The idea behind the app is an innovations is proved by the popularity of the app amongst its users.



This project aims to bring about a revolution in India's Experiential Marketing Industry by using the concept of 'REWARD NETWORK' which has not yet entered the Indian market and is yet to make an impact. This initiative thus carries a high potential to create new business streams and tremendous job opportunities for the people in country. This is also a step forward in the Hon'ble Prime Minister, Shri Narendra Modi's vision of 'Make In India' and 'Digital India' campaigns.

## CONCLUSION AND FUTURE DIRECTION

It was found that Indian brands to share their database. Thus the aim to introduce 'reward networking' to Indian market during the first phase of the project could not get materialised. Looking at the problems we faced to implement this strategy at the market level in the second phase of the study we tried to implement the same idea at smaller level.

As a result of the project, 'Wooo' has been designed as a free award-winning quizzing game application where the users can challenge their friends or family in any topic, randomly tests their breadth of knowledge and climb the ranks while winning real rewards.

During the research and planning process, a lot of new skills and knowledge were gained by the students like relevance of reward networking as a marketing tool for building and promoting apps, programming in JAVA and developing android app using IDE like Eclipse.

After the completion of the application and trial test taken place in college, it's evident that reward network certainly has a bright market potential in India. Users were motivated to play more when they won rewards. This is congruent with the concept of Nash equilibrium which is a win-win situation for all the players involved in the game i.e. the app user, the app owner as well as the third party brands which offered discount/coupons. The application thus developed got a positive responsive from many a users.

Thus, what has currently been developed and tested at the college level can be run at a larger scale too. The concept can further be refined and used as a mediator between the gaming applications and brands who are looking for some promotion. Various brands can incentivize

students through quiz designed under 'wooo' by focussing on the appropriate target group. Through the quiz they can gain knowledge about the product. Through this they can also increase the inquisitively about their product.

With the help of the app designed the college can analyse the needs among the students and can provide better facilities and services. In view of the current demand the survey can also be conducted for various organizations who deal with students.

The students can also be motivated to try products and services of a particular brand. Simultaneously the students can give feedback through the surveys. This exercise will help brands to model their product accordingly. Further various companies and organisations can conduct academic quizzes for the purpose of placement and scholarships as the new quiz questions can be easily uploaded.

Moreover the student innovators have gained practical knowledge of developing such apps, which will help the students in future to work in this area.

## REFERENCES

1. <https://developer.android.com/training/index.html>
2. <https://www.coursera.org/specializations/android-app-development>
3. <https://www.udacity.com/course/developing-android-apps--ud853>
4. [https://www.youtube.com/watch?v=2Wo\\_QfQZ0IE&list=PLAwxTw4SYaPnMwH5-FNkErnnq\\_aSy706S](https://www.youtube.com/watch?v=2Wo_QfQZ0IE&list=PLAwxTw4SYaPnMwH5-FNkErnnq_aSy706S)
5. <https://www.tutorialspoint.com/java/>
6. <http://www.w3schools.in/java-tutorial/>
7. <https://www.coursera.org/learn/java-for-android>
8. <https://www.coursera.org/specializations/full-stack>
9. <http://blog.udacity.com/2014/12/front-end-vs-back-end-vs-full-stack-web-developers.html>
10. [https://www.tutorialspoint.com/sqlite/sqlite\\_java.htm](https://www.tutorialspoint.com/sqlite/sqlite_java.htm)
11. <http://www.sqlitetutorial.net/sqlite-java/>
12. <https://www.siteground.com/tutorials/phpmyadmin/>
13. [https://www.siteground.com/tutorials/phpmyadmin/phpmyadmin\\_create\\_database.htm](https://www.siteground.com/tutorials/phpmyadmin/phpmyadmin_create_database.htm)
14. <https://help.github.com/articles/set-up-git/>
15. [https://www.siteground.com/tutorials/ssh/ssh\\_winscp.htm](https://www.siteground.com/tutorials/ssh/ssh_winscp.htm)
16. <https://blog.udemy.com/xampp-tutorial/>
17. Head First Android Development
18. Java EE 7 Developer Handbook
19. Java Server Programming Java EE 7 (J2EE 1.7)
20. Sun Certified Programmer For Java 6 SCJP