MINI PROJECT - 1

(2021-22)

"PLACEMENT UPGRADE"

Project Report

Institute of Engineering & Technology

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Declaration

I/we hereby declare that the work which is being presented in the Bachelor of technology. Project **"PLACEMENT MANAGEMENT SYSTEM"**, in partial fulfillment of the requirements for the award of the ***Bachelor of Technology*** in Computer Science and Engineering and submitted to the Department of Computer Engineering and Applications of GLA University, Mathura, is an authentic record of my/our own work carried under the supervision of MD. AMIR KHAN**, Technical Trainer, Dept. of CEA, GLA University.**

The contents of this project report, in full or in parts, have not been submitted to any other Institute or University for the award of any degree.

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ACKNOWLEDGEMENT

Presenting the ascribed project paper report in this very simple and official form, we would like to place my deep gratitude to GLA University for providing us the instructor MD. AMIR KHAN our technical trainer and supervisor.

He has been helping us since Day 1 in this project. He provided us with the roadmap, the basic guidelines explaining on how to work on the project. He has been conducting regular meeting to check the progress of the project and providing us with the resources related to the project. Without his help, we wouldn't have been able to complete this project.

And at last but not the least we would like to thank our dear parents for helping us to grab this opportunity to get trained and also my colleagues who helped me find resources during the training.

Thanking You

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ABSTRACT

Placement in college place a very important role. It affects the image of the college or university and most important career of a student in college or university. Even being a student of a college many students have no idea about the process of getting placement and their ineligibilities. So here we represent an android application where student can login and enter their details and get the reason why they are ineligible and if they are eligible then what further more they need to get place in a company with company details and guidance. Student login details will be used by using firebase technology.

This app is developed in a manner so that students get details of company for which they are eligible with tentative dates. By using this app students will have got the idea of what should they exactly do for the future scope or we can say that placement.

CONTENT

CHAPTER - 1

INTRODUCTION

1.1 CONTEXT

This Website “PLACEMENT UPGRADE” has been submitted in partial fulfilment of the requirements for the award of the degree of Bachelor of Technology in Computer Science and Engineering at GLA University, Mathura supervised by MD. AMIR KHAN. This project has been completed approximately three months and has been executed in modules, meetings have been organized to check the progress of the work and for instructions and guidelines.

1.2 MOTIVATION

Placement I a very crucial time. A small mistake can ruin students’ life very easily. Colleges and university also showing lots of efforts to maintain updation about placement for the students. But mostly work is done by email and website. So we got an idea to develop an android application “PLACEMENT UPGRADE”.

1.3 OBJECTIVE

One of the worst impact on education system. Due to Covid-19 we got stuck to their home. It causes the loss of job and Education in a very wide field. Many students didn’t get places in companies.

The second thing is Lots of students have no idea about themselves as well as about career that what should they do or which kind of training they need, ideas of various project. The main objective of "PLACEMENT UPGRADE" is to resolve approximately 70% of the student doubts regarding placement and manual work of managing placement regarding information.

- It manages the placement details according to the students' criteria for the eligibility.
- Saves the time of placement officer and faculties.
- Reduces the manual works.

1.4 EXISTING SYSTEM

A web-based placement management system. High-quality placements bring good benefits and positive impacts on students as well as for the colleges. The placement management system is an online application that can be accessed throughout the college and outside with proper login details.

There are various web based application are available on the internet for the placement management system, but we are trying to build a particular app for placement management system.

- Maximum manual work: in the existing system all the work that is done by human intervention. Humans should do all the work.
- Errors: due to the manual intervention there are maximum chances of errors.

- Maximum human interface: the interface between the student and administrator is maximum.
- Time consuming: due to above problems every procedure becomes time consuming

1.5 SOURCES

The source of our project (including all the project work, documentations and presentations) will is available at the following link –

https://demonnazia.github.io/mini_project1/

CHAPTER – 2

SOFTWARE REQUIREMENTS

2.1 IMPACT OF PLACEMENTS AND STUDENTS

Many graduate jobs require someone with previous experience which is where placement comes in. Lectures alone does not teach you all you need to know about your chosen career. It gives you knowledge but having a placement gives you experience and skills which can put you in a better place. You can never really understand what it takes to do a job until you have worked practically within that role.

Many employers are looking for people with not only the necessary academic knowledge but also the practical experience. Why pay money to train someone when you can hire someone that already has the experience? That is why placement is important.

Students are the basic fundamental or we can say that basic element for changing or upgrading the view of our society as well as our country. As per our generations become smarter day by day, somewhere or approximately it starts from students. So, to keep updating our students is our basic duty to improve or update the point of view of our society.

2.2 PROBLEM STATEMENT

In colleges the records were stored in excel sheets hence sorting the data is always a problem. The excel sheets are also less advanced. Hence sorting and searching problems arises. Updating Records is another tedious task. Due to the above problems the updating was very difficult and ambiguous. The files were not stored in a hierarchical format, hence searching the eligible students was the greatest problem. The placement officer has to find out the eligible students by looking at the excel sheet. He/she has to see the marks of every student and their eligibility. Another problem student face is that they are not made aware of the Training and Placement activity held in their institutions, hence there might have been a loss of opportunities. There is also a large communication gap between students and the placement officers as it is difficult to maintain coordination between them. The existing method used for placement management is not computerized. All the records are main- trained manually. The departments or the management carry out this job manually making it more complicated and tedious most of the time.

The administrator should refer all the records kept for years ago to simply know details. This so tedious and time consuming. This process is so difficult when the number of users increases.

2.3 HARDWARE AND SOFTWARE REQUIREMENTS

2.3.1 SOFTWARE REQUIEMENTS

Software used	Android Studio
Language Used	Java, XML
Database	FireBase
User Interface Design	Android Application

TABLE -1 SOFTWARE REQUIREMENTS

Hardware Requirements

Processor	Intel core i5s/RYZEN 3
Operating System	Windows 10
RAM	4+ GB
Hard Disk	64 GB
Hardware Devices	Computer System

TABLE -2 HARDWARE REQUIREMENTS

2.4 WORKING METHODOLOGY

- The motive of developing this app to reduce the placement regarding issues of students.
- We develop this app with the vision of no tendency of issues and query regarding placement drives of students.
- In this app we provide answers which are based on students input.
- The first page is Login Page, where student get login through email and password.
- The second page is registration page where students can register themselves by entering their email and password.
- Then Home page come to screen where students will get various option like check eligibility etc.
- There is a page that shows the information of current technology.
- The other page is taking information of skills.
- There is a separate page for interpersonal skills.
- There is a page where student will get the information about important academic subjects preferable for placement especially.
- Then there is a logout page to logout the app.

2.5 MODULES AND FUNCTIONS

- **Login Page**: This page is for those users who have already registered themselves on the app and have a username and a password. There is also a way on this page for the new users to register themselves which will take them to the registration page.

- **Registration Page:** This is page is solely designed for the new users of the app who are willing to register themselves. This page takes input of the various details of the user and stores it in the database, later helping the user to login into the account with credentials they have provided.

- **Logout page**: Then is this last panel for the users to sign out from the account. As soon as the users sign out they are brought back to the login page.

- **Interpersonal Skills: -** This page provide the information about various activity which are important for interview skills with short description and resources.

- **Trending Tech: -** This page provide the information of trending technology using by the industry.

- **Academic Skills: -** This Page provide the information of academic subjects that are important for placements with resources.

2.6 PLACEMENT UPGRADE ON APP

PLACEMENT UPGRADE is a query based application where students can easily login through email and ask any query regarding placement drives. They directly contact to some staff members of placement drives. They can check their eligibility criteria. They can check which company suits them better and when they should apply for that company and how.

This app will provide a generalized idea of placement regarding companies as well as some information about personal and technical interview.

CHAPTER – 3

TECHNOLOGY USED

3.1 ANDROID

Android is a linux-based operating system designed primarily for touch screen devices such as smart phone tablets and computers. Released in 2008, is now owned by Google. So android is a operating system like Windows, Ubuntu and Mac OS and a lot number of devices use Android these days like mobile phones, watches, laptop and television. So we also created an android application “PLACEMENT UPGRADE”, a library of e-books. Play Store is a market place for all the Android Apps. So we need to know what basically an android app is. An Android app is software running on a Android Platform. So this can be concluded that like all the software it is a combination of Backend and Frontend. Backend to design the logical parts of the app, for the functionality whereas Front End to develop the User Interface. And to implement the various parts of the android app, we require a number of tools and technologies which will come into picture. But first it would be great to see the three different type of Android Apps:-

- **Native Apps:** An executable program coded in the machine language of the hardware platform it is running in. **Native applications** are compiled into the machine language of that CPU. For example, **Windows** and Mac executable **apps** are in x86 machine language, while **mobile apps** are ARM based. Native apps are the most common. They're coded in a specific language like Swift for **iOS** or Java for Android. A popular example is WhatsApp.

- **Web Apps:** are accessed via the internet browser and will adapt to whichever device you're viewing them on. They are not native to a particular system, and don't need to be downloaded or installed. Due to their responsive nature, they do indeed look and function a lot like mobile apps — and this is where the confusion arises.

- **Hybrid Apps:** Hybrid apps are deployed in a native container that uses a mobile Web View object. When the app is used, this object displays web content thanks to the use of web technologies (CSS, JavaScript, HTML, HTML5).It is in fact displaying web pages from a desktop website that are adapted to a Web View display. The web content can either be displayed as soon as the app is opened or for certain parts of the app only i.e. for the purchase funnel. In order to access a device's hardware features (accelerometer, camera, contacts…) for which thenative apps are installed, it is possible to include native elements of each platform's user interfaces (iOS, Android): native code will be used to access the specific features in order to create a seamless user experience. Hybrid apps can also rely on platforms that offer JavaScript APIs if those functionalities are called within a Web View.

3.1.1 VERSION OF ANDROID

Each year Android releases a new version with better features, better security and better User Interface experience and a new symbol. Here is the table of list of versions.

FIGURE – 1 ANDROID 11

3.1.2 LIST OF ANDROID VERSIONS

Name	Internal codename	Version number(s)	Initial stable release date
Android 1.0	N/A	1.0	September 23, 2008
Android 1.1	Petit Four	1.1	February 9, 2009

Android Cupcake	Cupcake	1.5	April 27, 2009
Android Donut	Donut	1.6	September 15, 2009
Android Eclair	Éclair	2.0	October 27, 2009
		2.0.1	December 3, 2009
		2.1	January 11, 2010
Android Froyo	Froyo	2.2 – 2.2.3	May 20, 2010
Android Gingerbread	Gingerbread	2.3 – 2.3.2	December 6, 2010
		2.3.3 – 2.3.7	February 9, 2011
Android Honeycomb	Honeycomb	3.0	February 22, 2011
		3.1	May 10, 2011
		3.2 – 3.2.6	July 15, 2011
Android Ice Cream Sandwich	Ice Cream Sandwich	4.0 – 4.0.2	October 18, 2011
		4.0.3 – 4.0.4	December 16, 2011
Android Jelly Bean	Jelly Bean	4.1 – 4.1.2	July 9, 2012
		4.2 – 4.2.2	November 13, 2012
		4.3 – 4.3.1	July 24, 2013

Android KitKat	Key Lime Pie	4.4 – 4.4.4	October 31, 2013
		4.4W – 4.4W.2	June 25, 2014
Android Lollipop	Lemon Meringue Pie	5.0 – 5.0.2	November 4, 2014
		5.1 – 5.1.1	March 2, 2015
Android Marshmallow	Macadamia Nut Cookie	6.0 – 6.0.1	October 2, 2015
Android Nougat	New York Cheesecake	7.0	August 22, 2016
		7.1 – 7.1.2	October 4, 2016
Android Oreo	Oatmeal Cookie	8.0	August 21, 2017
		8.1	December 5, 2017
Android Pie	N/A	9	August 6, 2018
Android 10	Quince Tart	10	September 3, 2019
Android 11	Red Velvet Cake	11	September 8, 2020
Android 12	Snow Cone	12	October 4, 2021
Android 12L	Unknown	Unknown	Q1 2022

TABLE – 3 LIST OF ANDROID VERSIONS

FIGURE – 2 PICTURE OF ALL ANDROID VERSIONS

3.2 TOOLS USED TO BUILD APP

- **Android Studio**: Android Studio is an environment that help us create and edit Android applications. It is the official IDE for Android App Development. It has intelliJ's powerful code editor and developer tools and various features that enhance productivity while developing apps.

FIGURE – 3 ANDROID STUDIO

- **Software Development Kit (SDK)**: Android Studio requires a collection of libraries and data therefore SDK is mandatory.

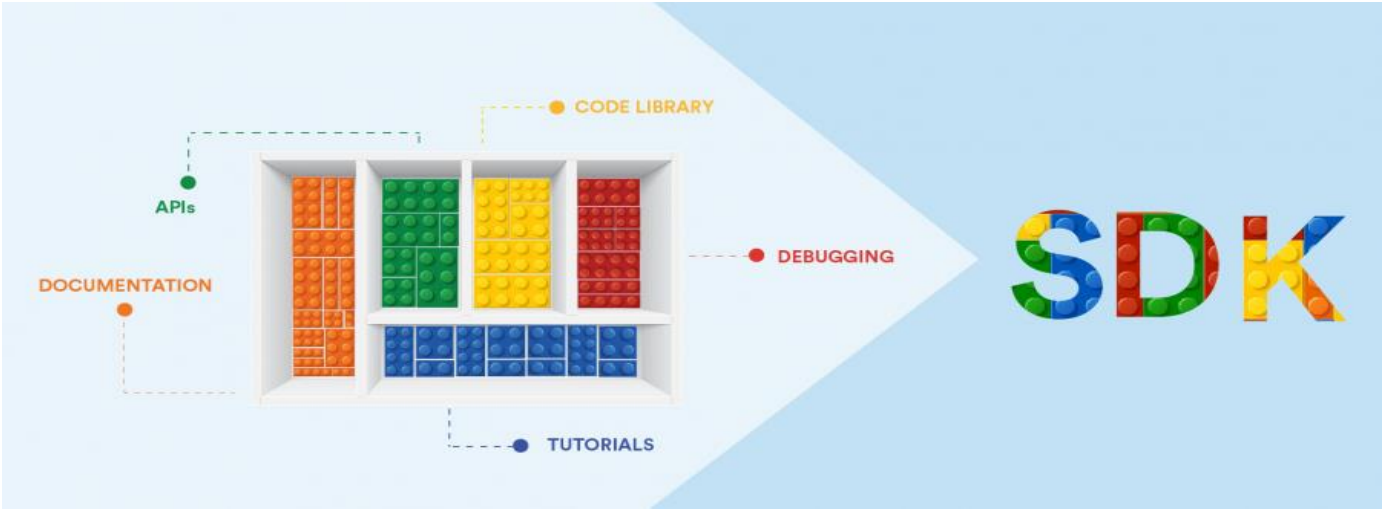

FIGURE – 4 SDK

- **XML:** XML is the extensible Markup Language. It is the met language which allows users to define their own customized markup language especially in order to display documents on Internet. It is the language that contains tags that store information. And the tags can be used to present data on the screen.

- **Firebase Console:** Google Firebase is a Google-backed application development software that enables developers to develop iOS, Android and Web apps. Firebase provides tools for tracking analytics, reporting and fixing app crashes, creating marketing and product experiment. We use firebase in order to verify the phone number or email.

FIGURE – 5 FIREBASE

3.4 BASIC TERMINOLOGY

- **Layout:** Layout is the parent of view. It arranges all the views in a proper manner on the screen.

- **Activity**: An activity can be referred as your device's screen which you see. User

can place UI elements in any order in the created window of user's choice.

- **View**: A view is an UI which occupies rectangular area on the screen to draw and handle user events.

- **Manifest file**: Manifest file acts as a metadata for every application. This file contains all the essential information about the application like app icon, app name, launcher activity, and required permissions etc.

- **Intent:** Intents are an essential part of the Android ecosystem. They are used to express an action to be performed. Intents allow you to interact with components from the same applications as well as with components contributed by other applications. It can be classified into implicit and explicit intents.

- **Implicit intent:** It does not name a specific component, but instead declare a general action to perform, which allows a component from another app to handle it.

- **Explicit Intent:** It specifies the component to start by name. You'll typically use an explicit intent to start a component in your own app, because you know the class name of the activity or service you want to start.

- **APK**: Short for "Android application package." The extension used in Android app installation files (e.g., app.apk). Similar in nature to an EXE file on Windows.

- **SDK:** Short for "Software Development Kit." As it pertains to Android, the SDK

is a set of tools such as code libraries, a debugger, and a handset emulator that can be run on Windows, Mac, or Linux to facilitate the creation of Android apps by developers. While the SDK is generally intended for use by developers, end users can install the software on their home computer to execute ADB and Fast boot commands.

- **Action Bar**: The action bar is an important design element, usually at the top of each screen in an app that provides a consistent familiar look between Android apps. It is used to provide better user interaction and experience by supporting easy navigation through tabs and drop-down lists.

- **Firebase** is a Backend-as-a-Service (Baas). It provides developers with a variety of tools and services to help them develop quality apps, grow their user base, and earn profit. It is built on Google's infrastructure. Firebase is categorized as a NoSQL database program, which stores data in JSON-like documents. Firebase has three core services: a real-time database, user authentication and hosting. With the Firebase iOS SDK, you can use these services to create apps without writing any server code.

- **JSON** stands for JavaScript Object Notation. It is an independent data exchange format and is the best alternative for XML. JSON is used for data interchange (posting and retrieving) from the server. Hence knowing the syntax and it's usability is important. JSON is the best alternative for XML and its more readable by human.

CHAPTER – 4

IMPLEMENTATION

4.1 FEATURES AND FUNCTIONS

FIRST PAGE:

- This is login page. Here students can login through their email and registered password.
- In case of no registration there is option of sigh-up.

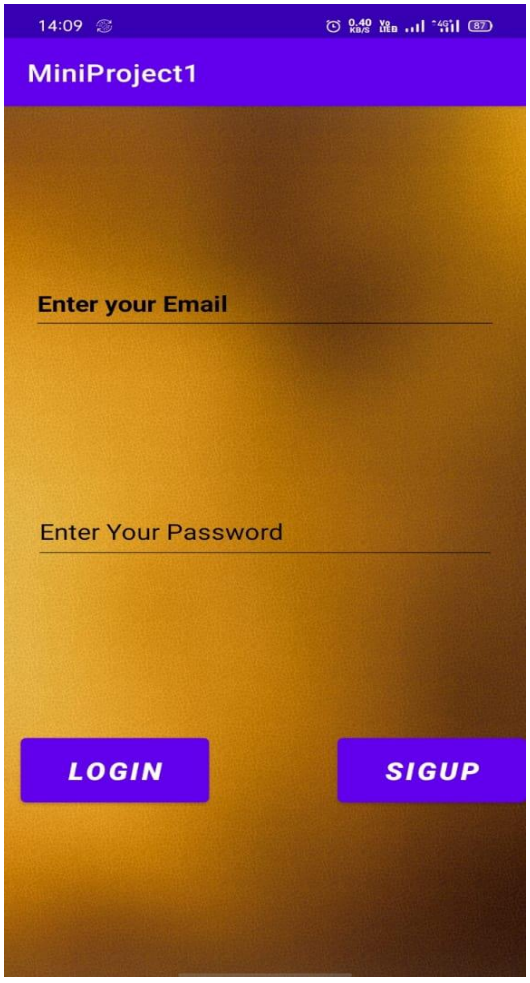

FIGURE – 6 LOGIN PAGE

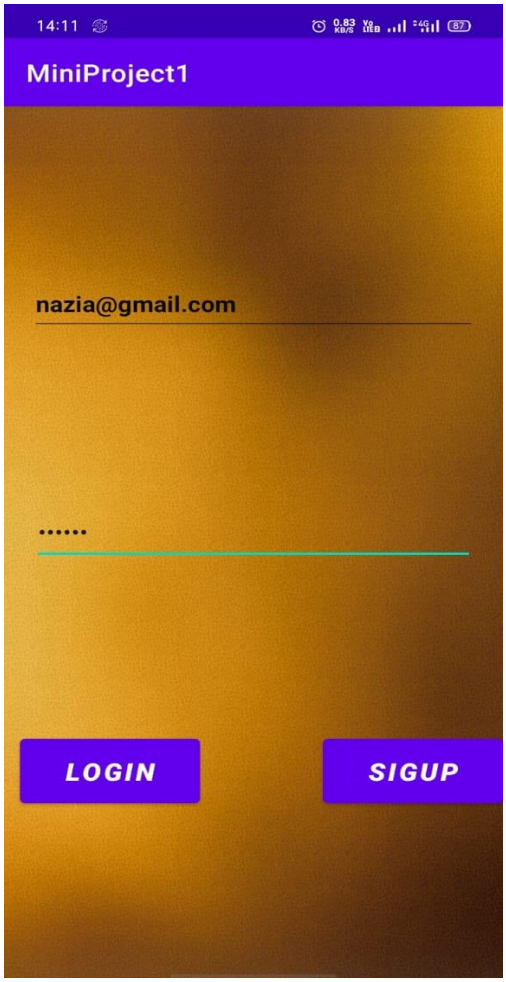

FIGURE – 7 LOGIN PAGE WITH ID

REGITRATION PAGE : - In case student is/are not registered so they can registration themselves on registration page.

Here is a register button for registering the students themselves after entering the data.

A back button if anyone want to go back on login page.

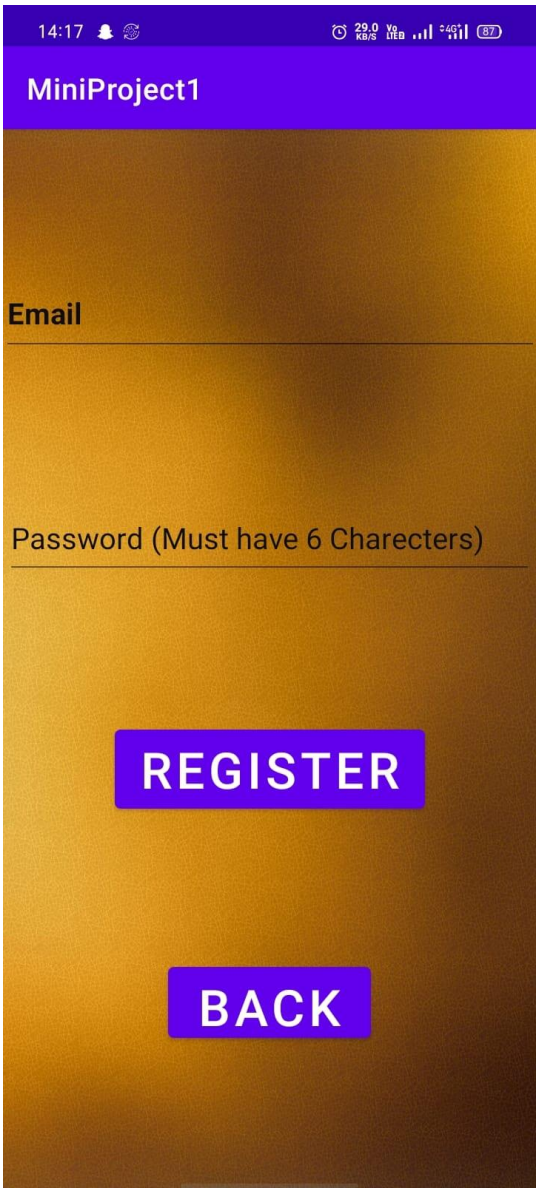

FIGURE – 8 REGISTRATION PAGE

HOME PAGE:

- This is our home page.
- Here students get various options such as
  - Check availability
  - Academic skills
  - Interpersonal skills
  - Trending tech
  - Logout

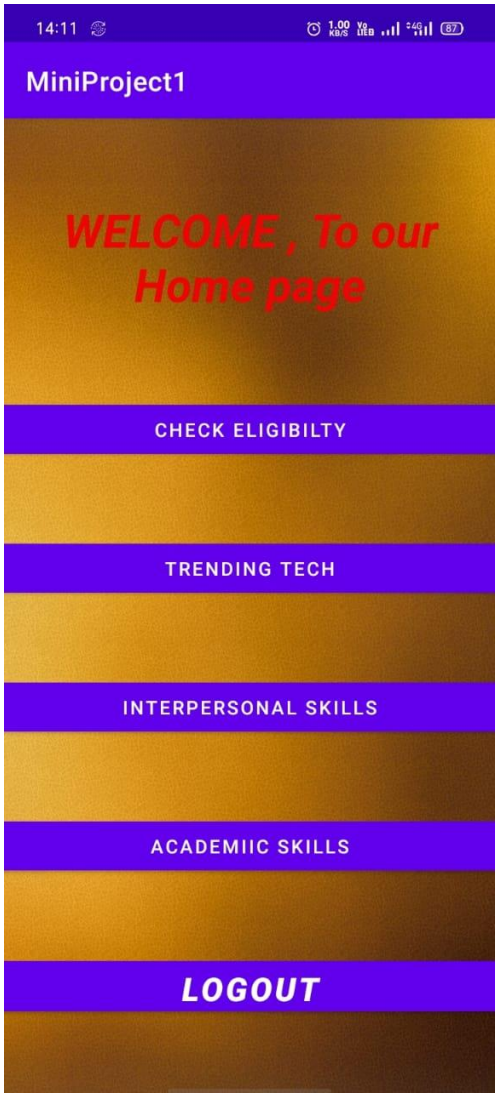

FIGURE – 9 HOME PAGE

CHECK ELIGIBILITY PAGE:

Here students can check their eligibility for placements by entering their CPI, Attendance and GDPI marks.

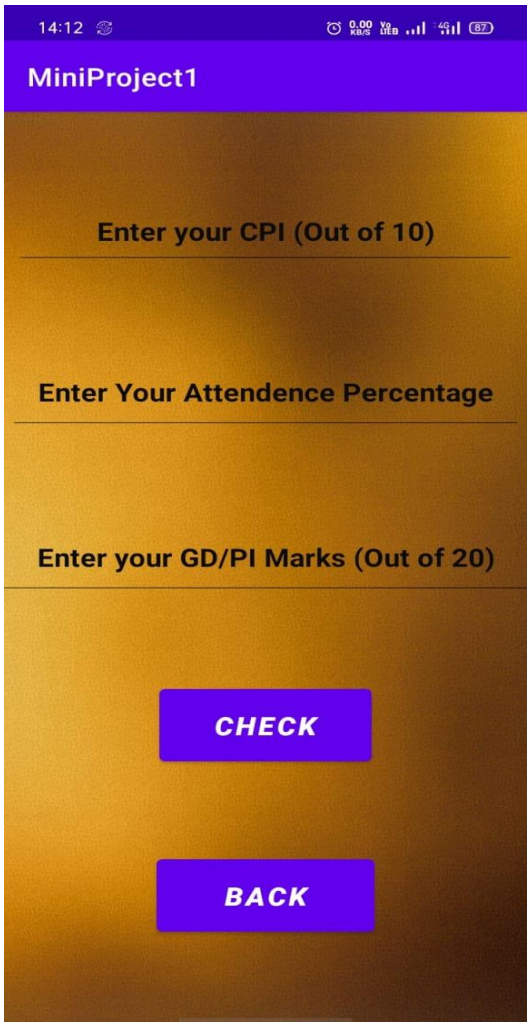

FIGURE – 10 CHECK ELIGIBILTY PAGE

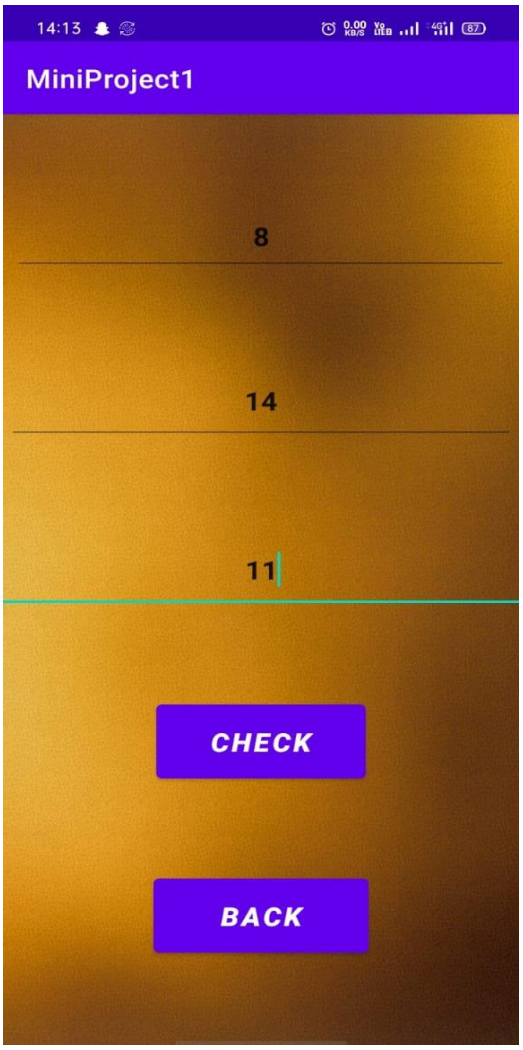

FIGURE - 11 ELIGIBBILITY PAGE WITH DATA

PREDECIDED ELIGIBILITY CRITERIA PAGE: -

- In case of ineligibility of students they will get a page where they will get the information of what should be their marks, at least.
- Here is a button next to GDPI predefined marks.
- On pressing that button student will go to interpersonal skills page.

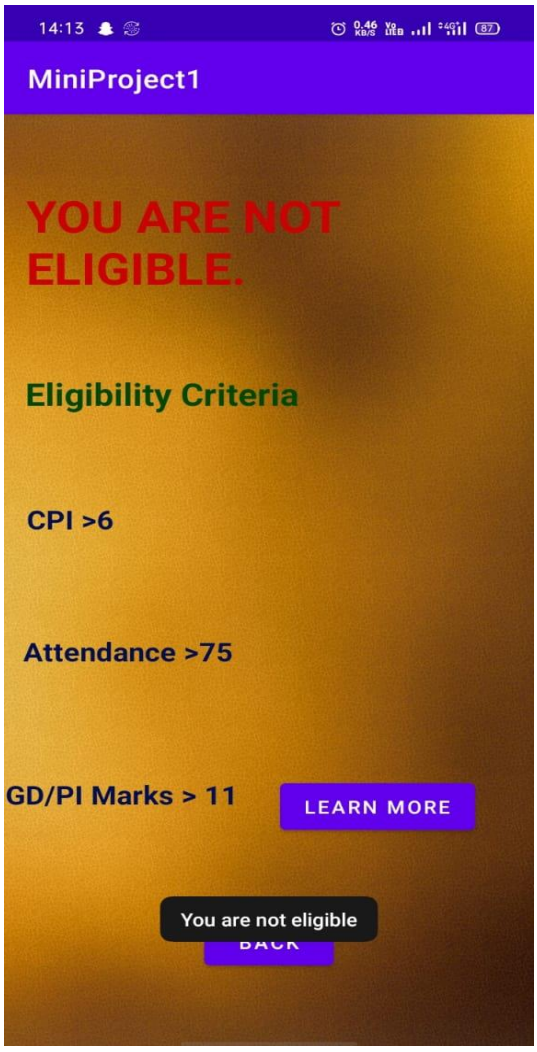

FIGURE – 12 PREVIOUSLY SET CRITERIA

INTERPERSONAL SKILLS: -

Here students will get various option of interpersonal skills, such as –

- Group Discussion
- Quant
- Personal Interview
- Verbal

FIGURE – 13 INTERPERSONAL SKILL

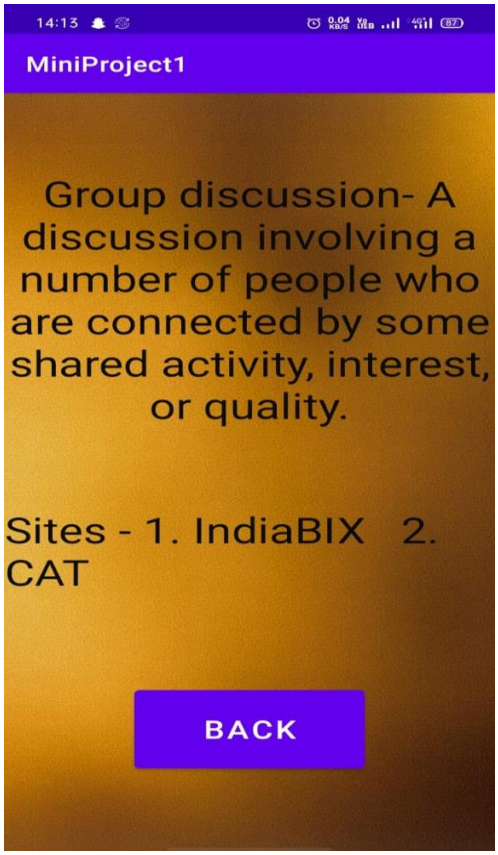

FIGURE – 14 GROUP DISCUSSION

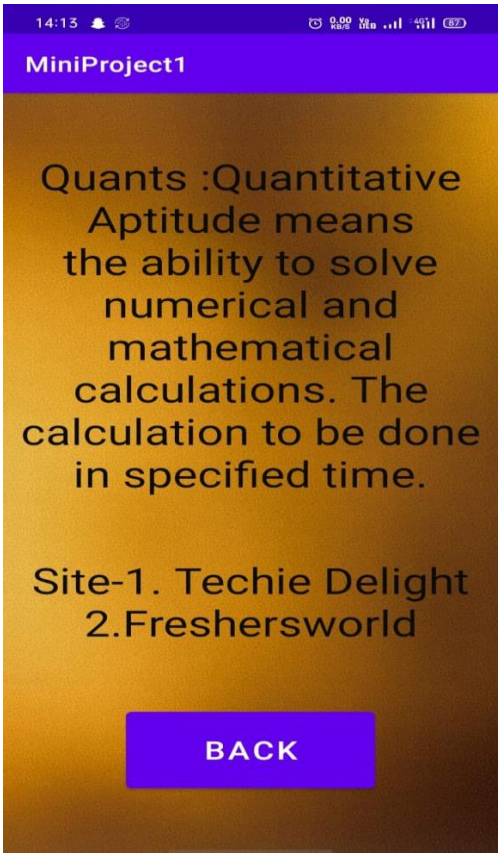

FIGURE – 15 QUANTS

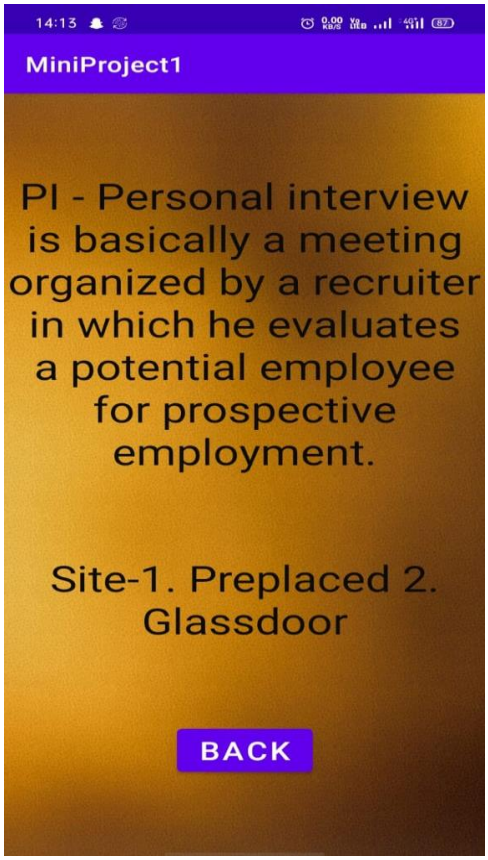

FIGURE – 16 PERSONAL INTERVIEW

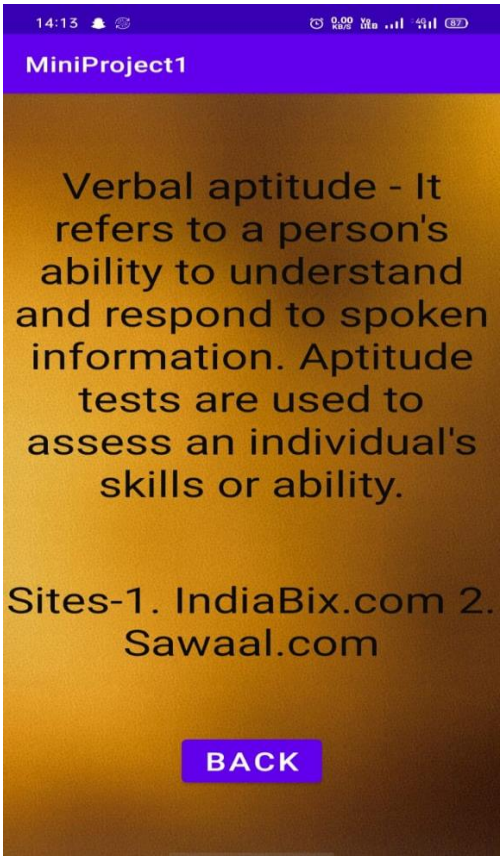

FIGURE – 17 VERBAL

TRENDING TECHNOLOGY: -

Here students get the information technology that are currently used in industries and their resources, such as –

- Data Science
- Cyber security
- AIML
- DevOps
- Cloud

FIGURE – 18 TRENDING TECHNOLOGY PAGE

FIGURE – 19 AIML

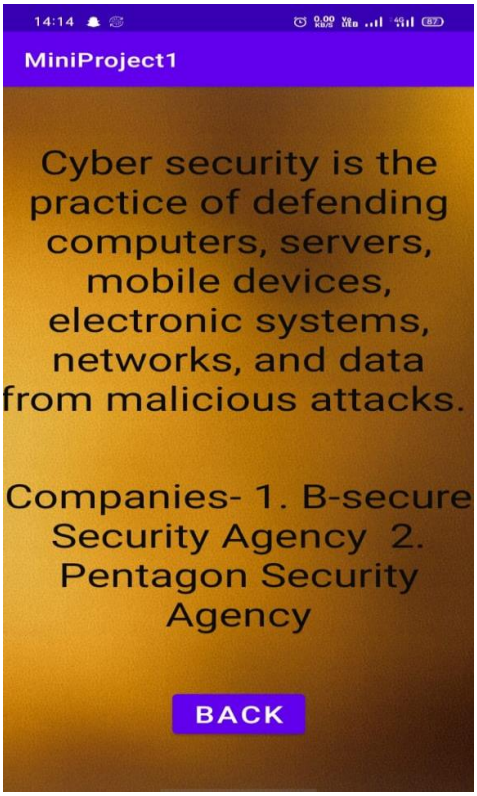

FIGURE – 20 CYBER SECURITY

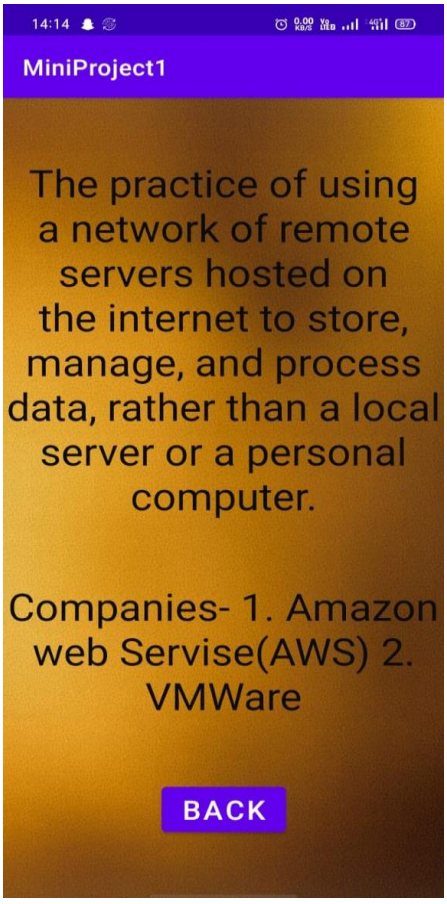

FIGURE – 21 CLOUD

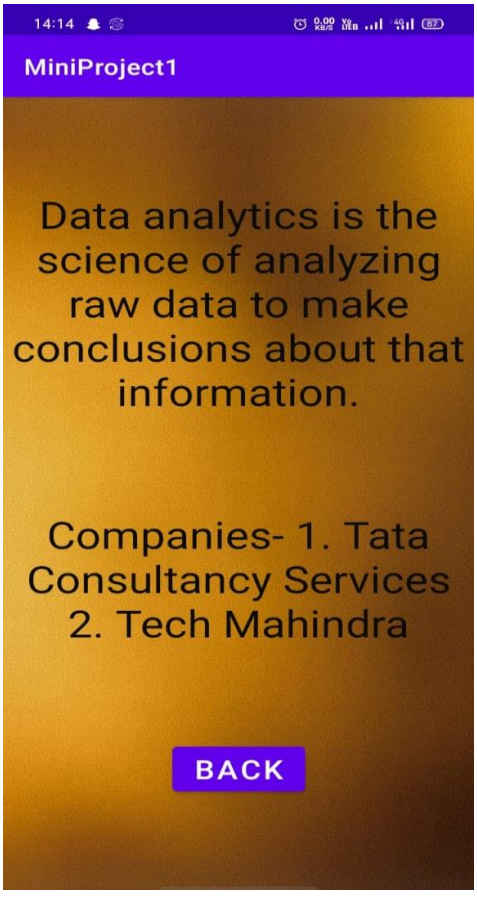

FIGURE – 22 DATA SCIENCE

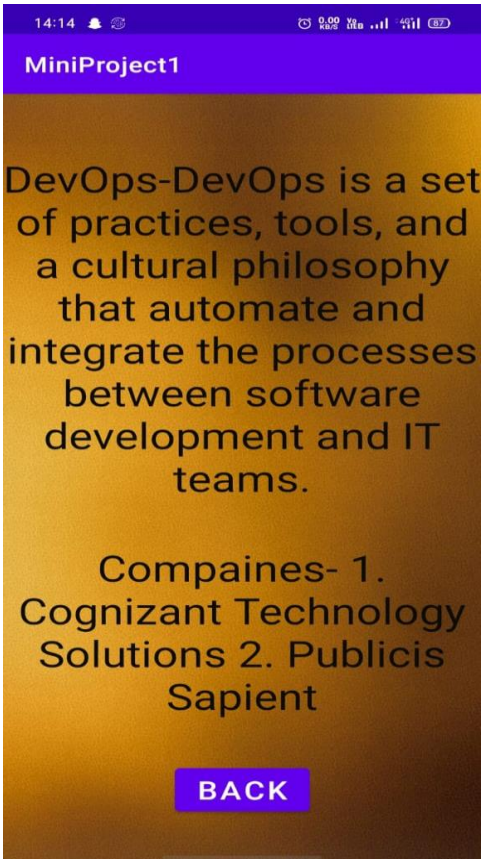

FIGURE –23 DEVOPS

ACADEMIC SKILLS: -

Here students get information and resources as well of important subjects for placements, such as –

- Python
- Java
- Object Oriented Programming
- Computer networks
- Operating System
- C language
- DBMS

FIGURE – 24 ACADEMIC SKILLS

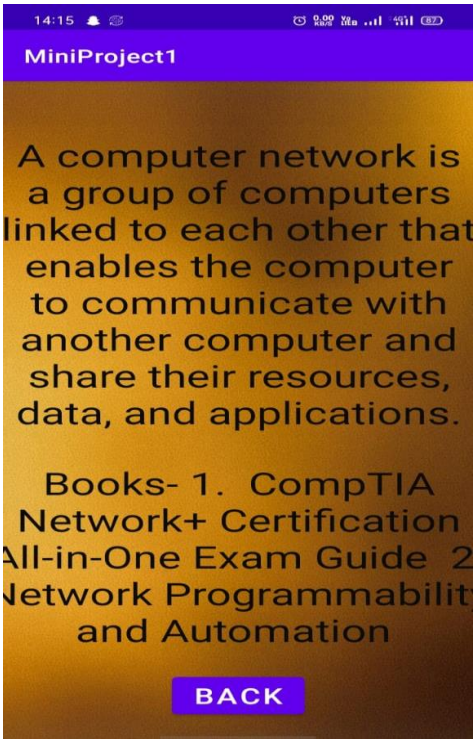

FIGURE – 25 COMPUTER NETWORKS

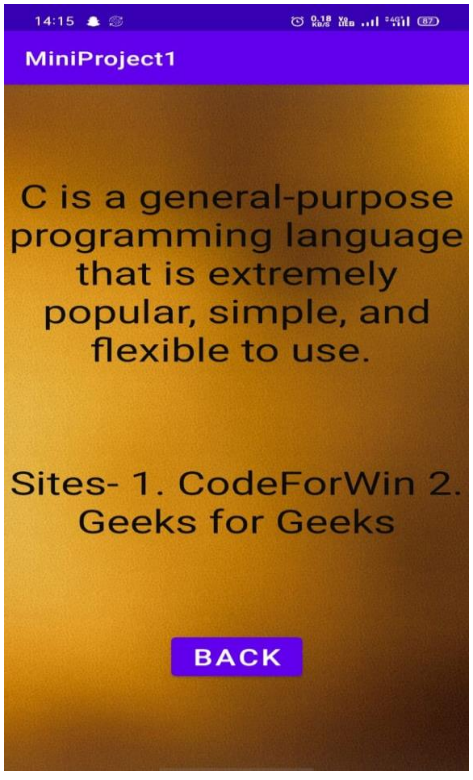

FIGURE – 26 C LANGUAGE

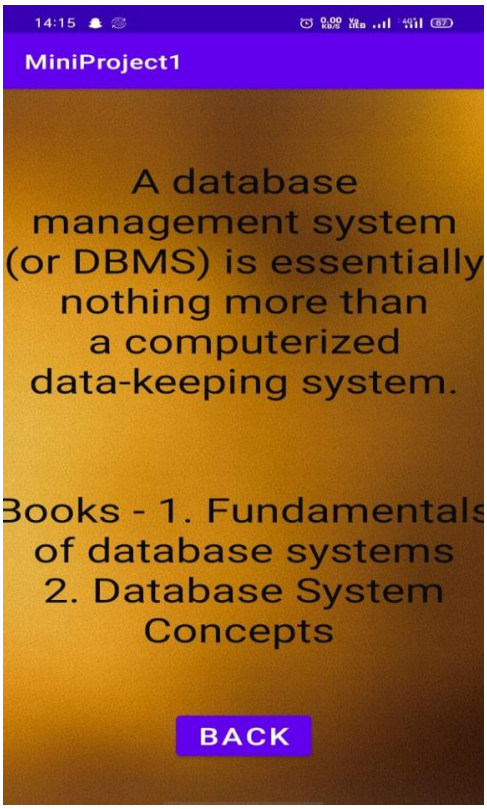

FIGURE – 27 DBMS

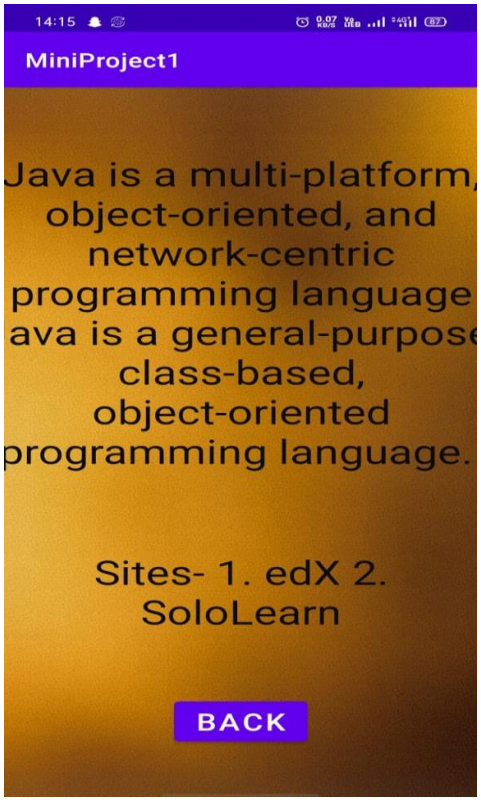

FIGURE – 28 JAVA

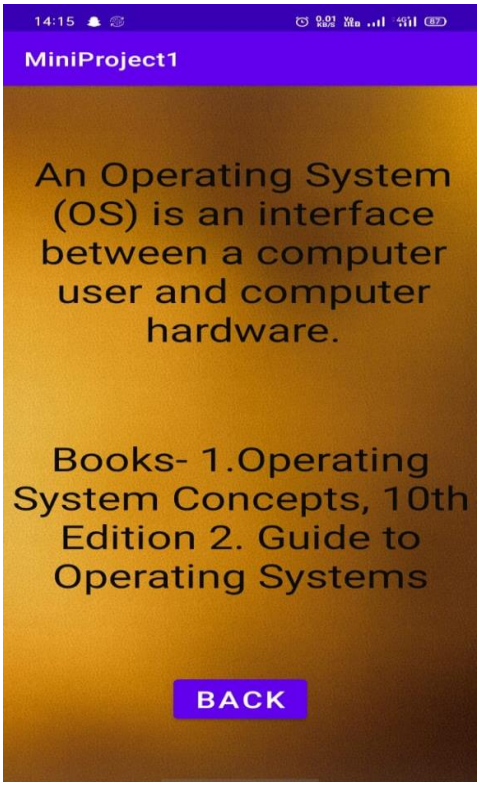

FIGURE – 29 OPERATING SYSTEM

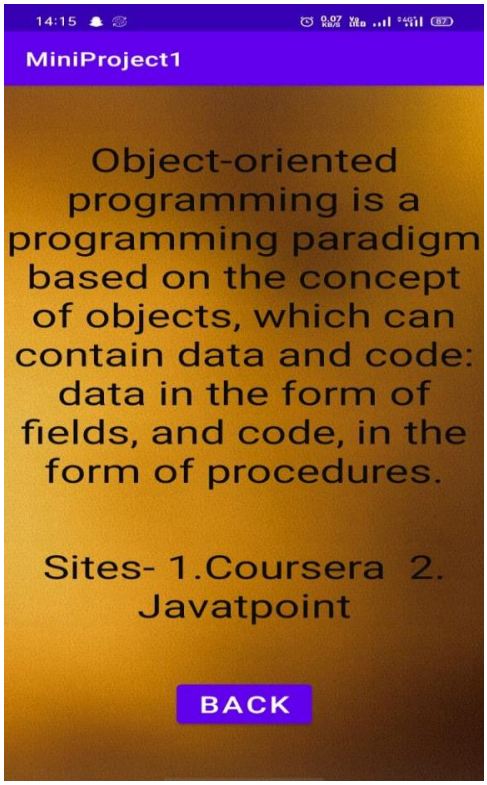

FIGURE – 30 OOP'S

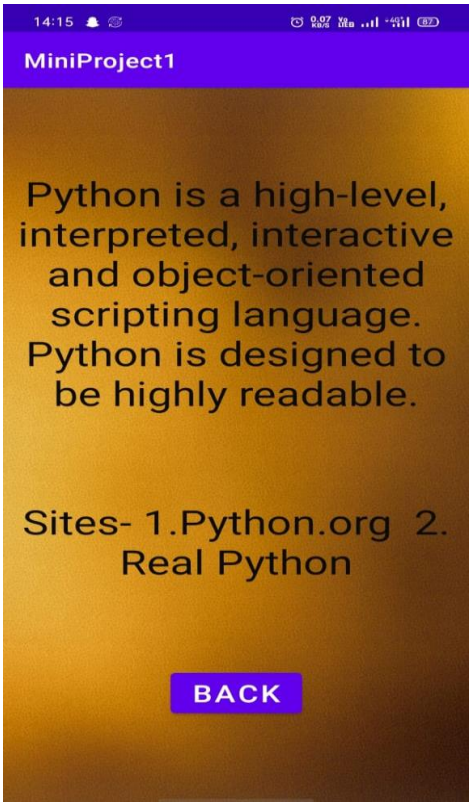

FIGURE – 31 PYTHON

CONCLUSION

Maximum work goes manually in the present placement system which makes it take time to avail changes. This includes main problems like searching for the data of students and sorting them along with it. Also, updating student data is a cumbersome job and does not have a method to notify the student in time which makes the management of the placements very difficult. In the proposed system, all of these problems become automated. The registration of the student for an upcoming placement, the addition of a new user, notifying students, sharing information, the privacy of the student, etc. is all met.

REFERENCES

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