A Mobile Application for Linking Talented Users to Opportunity providers and Digitally showcasing Talents in The Media and Entertainment Industry

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Declaration

I **Simiyu Daniel** declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the research proposal contains no material previously published or written by another person except where due reference is made in the research proposal itself.

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Sign:

Data: January 2021

Abstract

With the increased number of users on digital platforms such as YouTube, TV and Social media, most of the marketing is done online today. People get an opportunity to showcase what they have, all thanks to digital channels. In the light of talent showcasing, talented people have also had an opportunity to showcase their talents through various digital channels. According to a survey conducted during this research over 50% of the talented respondents who took the survey say that they showcase their talents on digital platforms such as social media. However, the same survey indicates that over 65% of the talented respondents rarely get a chance to showcase their talents. This then bring us to an understanding that much as there are digital platforms to showcase talents, the scope (quantity) of talents being showcased on these platforms is very little. With the rise in technology today, most of the people are on their phones, this can be a very good audience for talented people to showcase their talents. Thanks to the broadband internet today, the world has now become a global village, talented people can get a chance to entertain a global audience without planning for an event or preparing for any auditions. Opportunity providers such as Film production companies may need talented people in order to perform various day to day tasks. In most cases connecting with talented people for them is time consuming as one has to rally for auditions which may cost a lot of money. This project therefore seeks to solve two problems by; increasing the scope of talents being showcased in the media and entertainment industry and also bridging the gap between talented people and opportunity providers. The RAD methodology will be instrumental in ensuring that the system has been well developed and prototyped before it is released to the market. Additionally, OOAD approach will be used throughout the development period. Concepts such as inheritance and polymorphism will be implemented. Class diagrams as well as other UML diagrams will be drawn for visual representation of the system on paper. This document also explains the systems backend such as the database. Firebase DBMS is well elaborated and explained as well as the necessary IDE and languages involved in the development of the information system.

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List of Abbreviations

API: Application Programming Interface.

DBMS: Database management System.

JSON: JavaScript Object Notation.

ICT: Information Communication and Technology.

IDE: Integrated Development Environment.

IOS: IPhone Operating system.

RAD: Rapid Application Development.

UML: Unified Modelling Language.

XML: Extensible Markup Language.

Chapter 1: Introduction.

1.1 Background

Talent has been a great source of entertainment today. ICT has also played a great role in ensuring that platforms are available for talents to be showcased. Digital platforms such as TV programs, social media platforms as well as applications such as Spotify and YouTube have played a great role in ensuring that talents are showcased. The problem however is that there is no direct link between opportunity providers and talented people. Most of the talents are advertised on social media platforms and mostly showcased on YouTube. According to an interview that I conducted on 29th May 2020 with a group of Burundian dancers, they highlighted that most of their talents are normally showcased on their Facebook and Instagram accounts as well as their YouTube channels. These platforms however rarely link them to opportunity providers since anyone can make a view on social media or YouTube whether or not they want to provide opportunities for talented people. Moreover, the talent scope being marketed on these present platforms, like Spotify, for instance is too small. In platforms such as TV programs, a lot of auditions are done so as to filter talents and narrow down to the best talents to be showcased. This then leaves other talented people with almost no opportunity to showcase their talents.

A platform therefore that showcases all kinds of talents in audio, video, image and document formats is necessary to increase the scope of talents being showcased. This is important because almost all talents will have an opportunity to be showcased. Moreover, a platform that allows opportunity providers and talented people to be able to interact and talk business will help save on costs and time. This project therefore seeks to develop an application that will ensure that: as many people as possible get a chance to showcase their talents, Event planners and talented people get a platform to easily interact, talented people get an opportunity to have their own profiles and integrate their social media accounts with their profiles and also get notified whenever there is an opportunity for them to showcase and sell their talents.

1.2 Problem statement.

With the existing talent showcasing platforms today, not all talents get to be showcased due to factors such as strict auditions that seek to only select the best talents. Moreover, opportunity providers such as event planners spend a lot of money trying to find talented people that can offer entertainment services.

1.3 Aim

The aim is to come up with an information system that will help solve the problem stated in section 1.2. The information system will solve the problem by allowing users to be able to showcase their talents in audio, video, image and any document format such as pdf. Any user shall have an opportunity to showcase their talents via the information system thus increasing the scope of talents being showcased. Talented people will also be able to interact with opportunity providers thus making it easier for both of them to save on unnecessary costs.

1.4 Specific objectives

i. To critique the existing talent showcasing platforms.
ii. To develop a mobile application that will be a platform for talent showcasing and marketing.
iii. To test the system.

1.5 Justification

According to (Sara,2018) mobile devices are very much accessible and a part of a huge population's daily lives. The researcher explains that it is very likely that whenever an interaction occurs, the mobile phone is always close to the user. In this context, having a mobile application as a platform for talent marketing and showcasing would be more effective given that most of the people nowadays are on their phones. This therefore implies that talented people will have an opportunity to showcase their talents to a significantly large audience without having to go through any costly stages such as, registering for auditions or searching for a big event in order to showcase their talents to a huge number of people.

Opportunity providers on the other hand will also save on a lot of time and costs when searching for talented people. They will barely have the need to have auditions to pick the best talents or travel so far to get a talented person to serve their needs. This is because the proposed system proposes to allow talented people to have their own digital portfolio where event planners can just login to the system and view them and thus make a conclusion as to whether or not they are willing to work with those talented people. Moreover, with the google locations API that

the proposed system proposes to implement, opportunity providers can simply search for talented people nearby saving on time and costs of outsourcing talents from far.

1.6 Scope and Limitation.

1.6.1 Scope

Users will be able to have a profile, link their, upload talents, gain views, likes and comments on the materials they upload and be notified of any opportunities posted by opportunity providers.

1.6.2 Limitation

The information system will however be using firebase as a DBMS. This DBMS is quite new compared to others such as MySQL, thus it hasn't been well and widely tested. This therefore posses a risk for errors. The system also shall not have a proper way of validating contents that will be uploaded by users to check whether or not they are talents. It lacks the intelligence of a human judge to distinguish between a video containing talents and one that doesn't

Chapter 2: Literature Review

2.1 Introduction

This chapter helps us get an understanding of the existing digital platforms used to showcase talents. It also critiques these platforms and uses primary data from interviews and surveys conducted during research to explain the need of having a mobile application as a digital platform for talent showcasing as well as a bridge of the gap between talented people and opportunity providers.

2.2 A Description of Current Digital platforms for talent showcasing.

There are various digital platforms today that are able to showcase talents. Examples of this platforms include, social media, YouTube and TV programs such as Churchill show, America's Got Talent, East Africa's Got talent among others. This section takes a deep look into these platforms so as to bring out an understanding of how they affect talent showcasing.

2.2.1 A Critique on Social Media as a talent showcasing platform

Social media is a platform that allows profile creation and visibility of relationships between users (Maxim Wolf, 2017). From the definition, social media gives users a chance to describe themselves as well as interact with other users. Users are able to share contents, like or dislike contents as well comment on contents on social media. Talented users also use social media to gain popularity through earning followers. They also post their talents on social media for people to be able to view. Social media generally gives talented people a chance to create their own digital portfolio (collection of one's works) online. This might not directly earn them revenue but will open opportunities for studio visits or event invitations (Baron,2010).

The disadvantage of using social media as a talent showcasing platform is that it is not specialized on talent showcasing thus making it difficult for one to find their target audience. This therefore creates a gap for a different platform that is only specialized in talent showcasing.

2.2.2 A Critique on YouTube

YouTube is a common entertainment platform today especially for young people, that has made a lot of people successful (Melendres, 2019) .However, according to an interview that I managed to conduct during the research with a group of dancers in Burundi, it was highlighted that there still is a gap between opportunity providers and talented people despite the presence of YouTube in the entertainment industry. This therefore means that YouTube gives a platform for talented people to showcase their talents but rarely links them to opportunity providers who

could further give them a chance to not only showcase their talents but also showcase their talents at a price. This therefore demonstrates that there is a gap between talented people and opportunity providers despite the presence of a digital platform for talent showcasing.

2.2.3 A Critique on TV programs

TV programs such as East Africa's got talents are also digital platforms used to showcase talents. Most of the programs conduct Auditions to determine which talent to showcase and which one not to. On a survey conducted during the course of this research, it was found out that over 50% of the sample of talented people that responded to the survey have never had an opportunity to showcase their talents o TV programs. This then proves that the scope of talents in terms of number of talented users that can be showcased on TV programs is very small. The extremely selective nature of TV programs denies most of the upcoming talents and opportunity to grow and be showcased.

2.3 Why is it important to have the proposed system?

The main reason as to why the proposed system is necessary is that the scope of talents being showcased across all platforms today is not wide enough to cover the many talents available all over Kenya and beyond. According to the results of the survey conducted during this research, most of the talented people prefer a mobile application that would give them an opportunity to showcase their talents. The same survey also highlights that most of the talented people rarely get a chance to showcase their talents. It provides a clear information on how difficult it is for talented people to get an opportunity to showcase their talents. This therefore means that talents are available but platforms that will link these talents to the targeted audiences are unavailable.

The proposed system therefore will play an important role in availing a platform for talent showcasing at anytime anywhere.

2.4 A review of possible Development Technologies

Section 2.3 above highlights that there is a very limited scope on talent showcasing in the available digital platforms discussed. There is also a gap identified between talented people and opportunity providers. The proposed system seeks to bridge this gap and increase talent showcasing scope by building a mobile application that allows users to upload their talents at any time. However, it is also possible to solve the problem identified by this research by having a web based application that showcases talents. The downside of having a web based

application however is the issue of mobility. It is much easier to access an application installed on a mobile phone than a website rendered on a domain. This advantage of mobile application over web based application justifies the proposed solution, building a mobile application, as the best.

2.5 Conceptual Framework

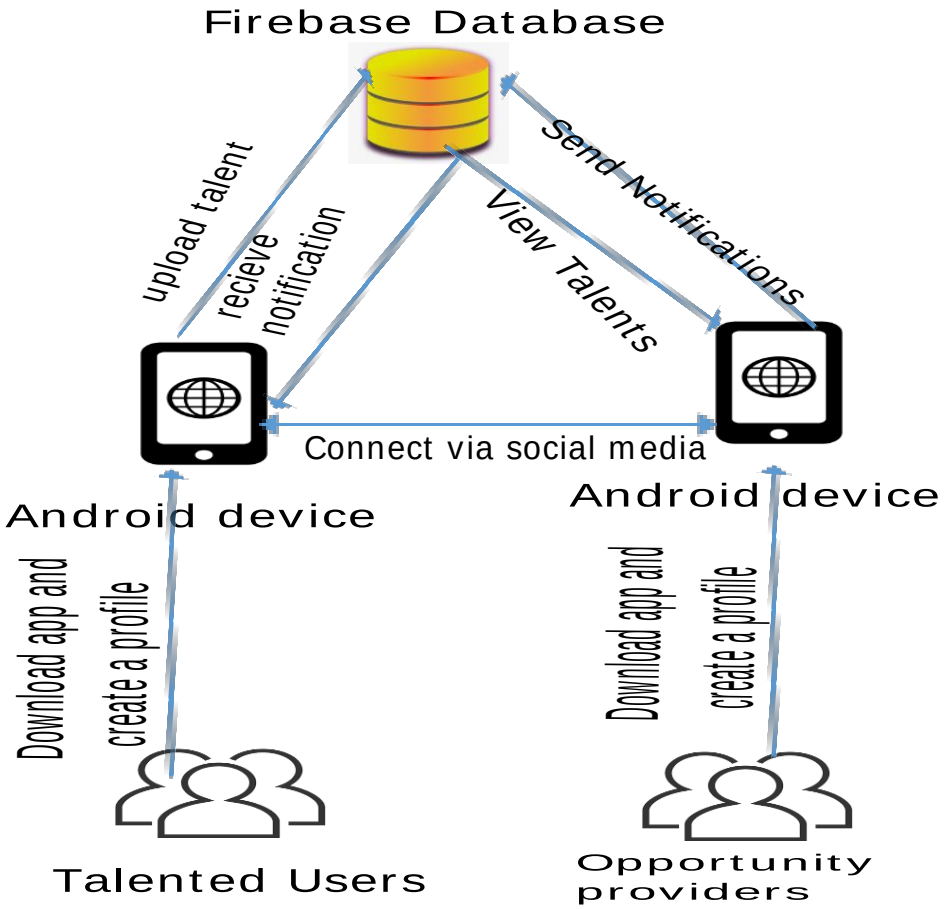

Figure 1Figure 2.1 Conceptual Diagram

Chapter 3: System Development Methodology

3.1 Introduction

This chapter gives a summary of the methodology that will be used for the proposed system. The Methodology that is most appropriate for development if the proposed system is RAD. RAD methodology allows minimal software modelling and exploits software prototyping(Martin,2017). This means that using this methodology will help save on time and also increase feasibility of the proposed system by exploiting software prototyping. This chapter explains the stages of RAD methodology in relation to the development of the proposed system.

3.2 RAD Software development methodology

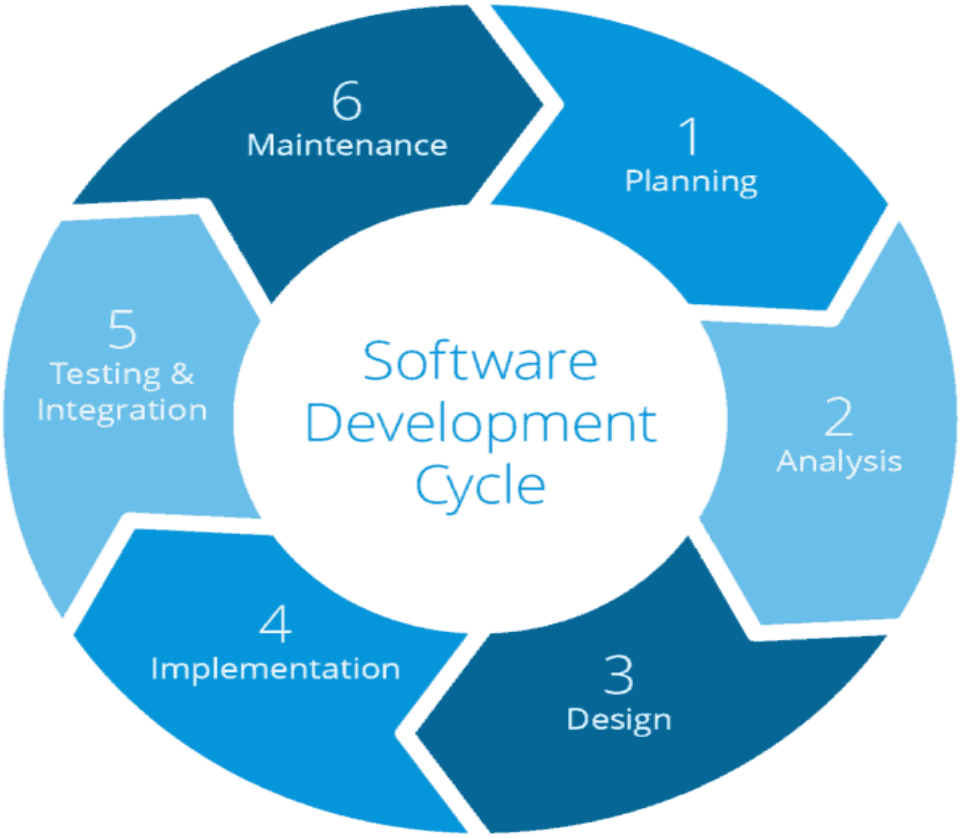

Figure 3.2 RAD Methodology Phases as represented by mendix.com

RAD software development methodology is a methodology that is designed to improve the overall speed of system implementation (murrel and plant,2007). As stated earlier, this methodology exploits software prototyping in the sense that after user requirements are

collected from users and tested on a pre-leased prototype conducted on users and finally reuse the pre-released prototype to further develop the product.

The following are the steps for RAD software development as indicated in figure 3.1:

3.2.1 Planning

This is the first phase in RAD methodology. This phase basically entails collection of user requirements. The user gets an opportunity to give his or her specifications during this phase.

3.2.2 Analysis

This phase formally documents the user requirements. At this stage the developer needs to come up with a formal document that clearly shows the user requirements that had been acquired during the communication phase.

3.2.3 Design

At this phase modelling takes place. There are three types of modelling in RAD software development. The three types of modelling are; business modelling, data modelling, process modelling. From business and data modelling, data sets or objects are normally created based on the information acquired form the users. These data sets are then implemented in the process modelling stage of modelling. Out of the datasets, a design is achieved that will inform the visual representation of the information system. This design is normally used in the implementation stage.

3.2.4 Implementation

This phase of RAD is when the information system is built. Software development is done through coding in this stage. At this stage a prototype is built and ready to be pre-released.

3.2.5 Testing and Integration

At this stage, the prototype us pre-released in order to get feedback from the targeted users. Iteration of application generation can be done at this stage to ensure that user requirements are fully met.

3.2.6 Maintenance

The information system is now reviewed periodically and maintained according to demand at this stage.

3.2 Analysis

The proposed information system will use Object oriented analysis and Design (OOAD) approach. OOAD is an analysis approach that that uses object-oriented techniques to

manipulate, analyze and improve the quality of the information system being developed(mukherji,2016). OOAD is most suitable for the development of the proposed system because it works well with the RAD methodology. This is because OOAD delivers system functions to users in very small steps (Hunt, 2000), just the way RAD methodology also supports simple and few steps during development.

3.2.1 Functional Requirements

Functional requirements are behaviors of the application that support the business goal(Paradkar,2017). In this case functional requirements would be behaviors of the proposed system that support digital showcasing of talents and bridges the gap between opportunity providers and talented people. Below are the proposed system's functional requirements;

3.2.1.1 Upload Content feature

This is important since it will allow users of the proposed system to be able to showcase their talents by uploading content containing their talents.

3.2.1.2 Create profile Feature

The system should be able to allow users to have their profile which they can freely update. This will make interactions between system user easier. It will also give users an opportunity to link their social media platforms to their profiles.

3.2.1.4 Authentication

Every user must be verified before logging in. This will be done by ensuring users enter correct usernames and passwords before they are allowed to login.

3.2.2 Non Functional Requirements

Whereas functional requirements define behaviors of the application, non functional requirements define the constraints of the application that point towards achieving the goals of the application (Paradkar, 2017). Below are some examples of non-functional requirements

3.2.2.1 Usability

Usability is simply the extent to which an information system can be used by its users to achieve specified goal with effectiveness, efficiency and satisfaction in a specified context of use (Mandl, 2017) . To achieve the specified goals, talent showcasing and bridging gap between talented people and opportunity providers, with effectiveness, efficiency and satisfaction, the proposed system must have user friendly interfaces to allow users to be able to easily use it and enjoy their experiences with the application.

3.2.2.2 Performance

Good performance of the proposed system is very key. The system should be able to post as much content as possible, simultaneously without crushing.

3.2.2.3 Portability and Compatibility

The proposed system should be able to properly run on almost all versions of android without any difficulty.

3.3 Design(s)

This section basically focuses on the diagrammatic representation of the proposed system. Object oriented programming mostly uses UML diagrams to represent the system diagrammatically. UML is a standard language for specifying, visualizing, constructing and documenting the artefacts of software systems (Waykar,2018). Examples of UML diagrams include; Use Case diagrams, class diagrams and sequence diagrams. The proposed system will use the following UML diagrams to ensure proper system design for accurate visualization of the system;

3.3.1 Use Case Diagram

The Use Case diagram assists in gathering the requirements of the system (mule and waykar,2018). It is a graphical or diagrammatic representation of what the system should do. This proposed system proposes to have this diagram as part of its design because it ensures success of the system through capturing user requirements in a visualized manner for much better understanding.

3.3.2 Class diagram

A class diagram is mostly used for construction of executable code for the application (waykar,2014). Class diagrams contain classes, objects and attributes that are fundamental in the development of the information system. The proposed system requires a class diagram so as to visually represent what will be implemented as code during development to save on time.

3.3.3 Sequence Diagram

A sequence diagram is a visual representation of the interactions between objects (Chris Alvin, 2019) . This diagram is important since it provides important information on debugging, system comprehension and system maintenance.

3.4 System Development Tools and Techniques

3.4.1 Android studio

The proposed system will use specific tools and techniques for the best results. The IDE that will be used is Android studio. Android studio is a google IDE for android apps (Google Developer Training Team, 2016). This IDE is most appropriate for development of the proposed system because it has an advanced code editor and a set of code templates, it also has tools for development, debugging, testing and performance that make it faster and easier to develop apps.

3.4.2 Firebase

The proposed system will also use Firebase DBMS. Firebase is a JSON DBMS format which doesn't use queries to insert, update, delete and add data into the database (Chunnu Khawas, 2018). The reason why this DBMS is most appropriate for development of the proposed system is; firebase has a test lab for android apps. It provides cloud-based infrastructure for testing android apps (Chunnu Khawas, 2018). This allows developers to test their apps across a wide variety of devices and device configurations. Moreover, firebase has a powerful and cost effective cloud store that can be used to store and retrieve data.

3.4.3 Programming languages

The proposed system proposes to use Java as programming language. Java is a concurrent (several parts of the program can be run in parallel), object – oriented and class based programming language that is widely used in software development. Java programming language is the most appropriate language to be used since it is platform independent, when java is compiled it is compiled into platform independent byte code (Foster, 2014) . Java is also very secure; it allows for development of very secure system free from viruses. It uses authentication techniques that are based on public-key encryption making it hard for one to temper with systems built using java programming language (Foster, 2014).

The proposed system also proposes to use XML as a programming language. Xml is a programming language that contains markup symbols that are used to describe content (Rouse, 2014). This language is important since it will help in designing the outward look of the proposed system.

3.4.4 Native Apps

Native apps are built by using native programming language of the device which is being created for (Jahid, 2016) . Native apps are mostly downloaded on the phone from app stores such as play store. The proposed system proposes to built a native application for android phones since android phones are widely used compared to IOS phones.

3.5 Methods to be used to test the developed system

Software testing is the technique of verifying and validating the quality of software by executing the software with an intention of finding faults (S.Nidhra, 2012). Testing of the proposed system is fundamental as it guarantees less if not completely no errors in the developed system. It helps to bring assurance that the system does exactly what it is meant to do. Below is a description of the testing method that the proposed information system proposes to use;

3.5.1 White Box Testing

The proposed system proposes to use white box testing as a testing method. This type of testing involves having test cases derived from information on the source code (S.Nidhra, 2012) .White box testing is appropriate in this case because the tests will be done by the proposed system developer, who has written the code and knows what to expect from the written code.

3.6 Domain of Execution

The domain of execution that is most suitable for the proposed system is mobile-based. This is because the proposed system involves a lot of interactions between users and thus a hand hold device such as a mobile phone would be most appropriate for reaching as many people as possible. Mobile devices are movable, easy to use and accessible from any place (Mazumder, 2010) , this makes it possible for as many talents as possible to be showcased anywhere at any time through mobile devices.

3.7 Proposed Modules and system architecture

Modules are basically features of the prosed system that will work together to ensure the goal of the system has been achieved. Below are some of the modules;

3.7.1 Talented User Registration

This module allows talented users to signup into the system. It allows them to have an account that will be secured by a password of their own choice. After registration, talented users will be able to login to the system.

3.7.2 Opportunity providers Registration

Opportunity providers will also get a chance to create their own account. Their role will be mainly to post opportunities for talented people to be able to notice and apply for the opportunities posted.

3.7.3 Home and profile module

All users will have a profile that they can manage. User profiles will provide necessary details required during interactions between users of the proposed system. A user will be able to view profiles of other users and get to know them better before interacting with them. User profiles also will allow talented people to be able to market their brands on their profiles and intergrade their social media platforms onto their profiles.

3.7.4 Upload Content Module

This module will allow users of the proposed system to be able to showcase their talents by uploading contents of their talents on the proposed mobile application. This is essentially the backbone of showcasing talents on the system.

Chapter 4: System Analysis and Design Description

4.1 Introduction

This chapter seeks to highlight the various functional and non-functional requirements, the system architecture as well as the system analysis and design view. The aim of this chapter is to basically give a visual model representation of the actual information system putting into consideration all the user requirements.

4.2 Requirements Gathering

The method used to gather the requirements is quantitative in nature. That is, Questionnaires were presented to a sample of the target population and the results were analyzed to understand the user's requirements as so far as the link between talented users and opportunity providers as well as the scope of showcasing talents is concerned. The aim of this approach was to help acquire an approximate figure as far as acceptance of the idea is concerned.

A qualitative approach of gathering requirements was also done. This was done on survey monkey. A targeted number of people were specifically picked (Random Group of Talented users from Kenya and Burundi) and asked to take a survey that was aimed at bringing out a response on the efficiency and the positive impact the system would have if it was developed. The system requirements were also gathered by reviewing other digital talent showcasing platforms such as YouTube as well as social media platforms such as Facebook.

The requirements gathered include: Upload Talent feature, Link between Opportunity provider and Talented users, Posting and viewing opportunity feature.

4.3 System Requirements

The system requirements are basically the features and functionalities of an information system (Point, Software Requirements, 2019), comprise of both functional and non functional requirements as shown respectively in sections 4.3.1 and 4.3.2.

4.3.1 Functional Requirements

The systems functional requirements, which are the requirements that are related to the functional aspect of the Talent showcasing mobile application (Point, Tutorials Point, Learn Software Engineering, 2019),are as listed below:

FR1	The system should allow Talented user as well as Opportunity provider to Signup according to their roles
FR2	The system should allow opportunity providers and Talented users to login upon registration
FR3	The system should allow talented users to showcase their talents by uploading them to the system
FR4	The system should allow both opportunity providers and talented users to view the talents posted on the system
FR5	The system should allow Opportunity providers and Talented users to react on the talents posted by commenting or liking them.
FR6	The system should allow Opportunity providers to post opportunities.
FR7	The system should allow Talented users to be able to View Opportunities available
FR8	The system should allow Opportunity providers and Talented users to Link Up via Chat.
FR9	The system should allow both opportunity providers and Talented users to be able to create their own profiles.
FR10	The system should be able to generate reports.

Table 1

4.3.2 Non Functional Requirements

The systems non functional requirements are those that do not relate to the functional aspect of the Talent showcasing application and are expected characteristics of the system (Point, Tutorials Point, Learn Software Engineering, 2019). These requirements describe the environment under which the the developed system will work. They are as listed below:

NFR1	The system should allow users to navigate the user interface with ease
NFR2	The system should only grant access to registered users by authenticating every user before logging them in
NFR3	The system should allow talented users to upload their talents with ease
NFR4	The system should allow Opportunity providers to post opportunity with ease

Table 2

4.4 System Architecture

The system architecture, a diagram that illustrates the interaction between the system components is as shown in figure 4.1 below.

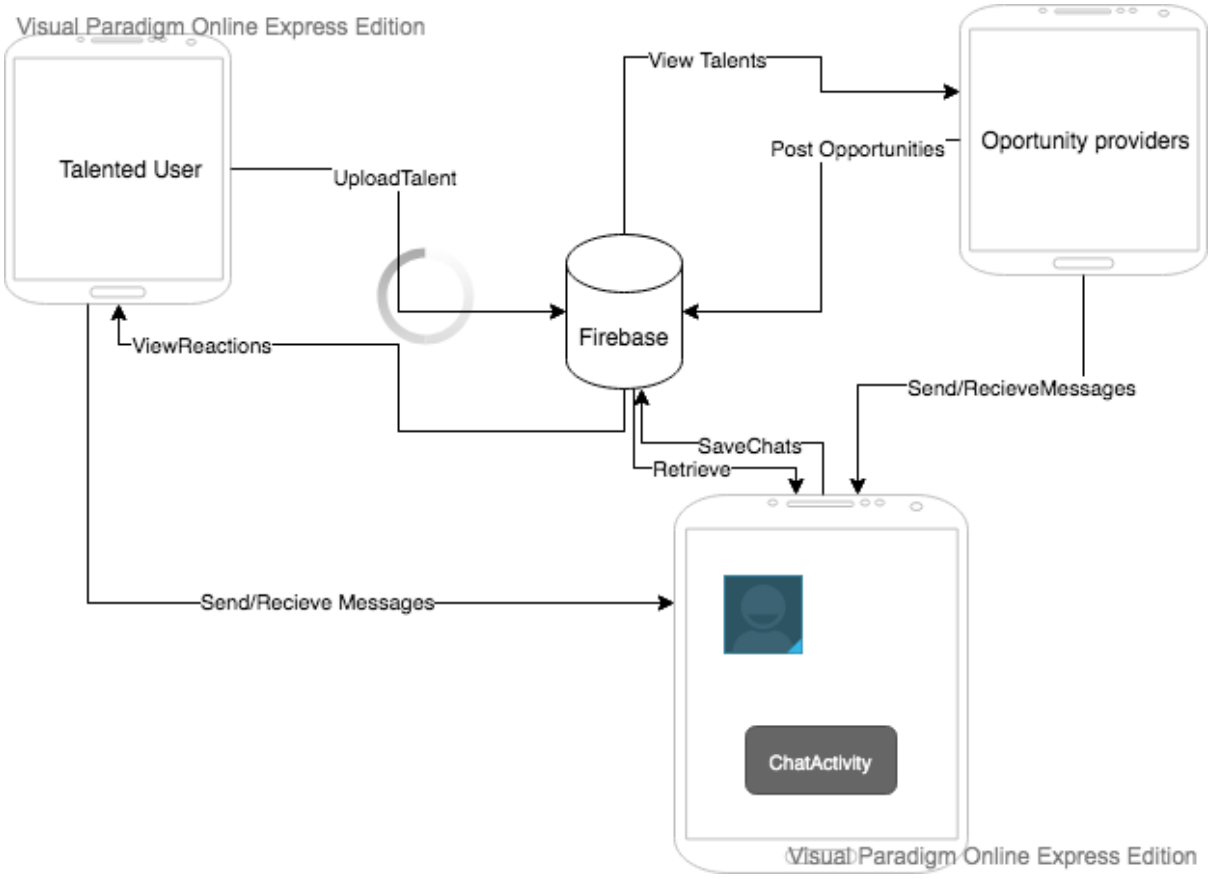

Figure 4.4 system Architecture

4.5 System Design

System design diagrams are diagrams that illustrate the visual model of the system's components and their interactions (Salustri, 2018). Below are the system diagrams that are to illustrate the visual model of the information system and their interactions. They include: use-case diagram, a sequence diagram, a class diagram and a database schema.

4.5.1 Use Case Diagram

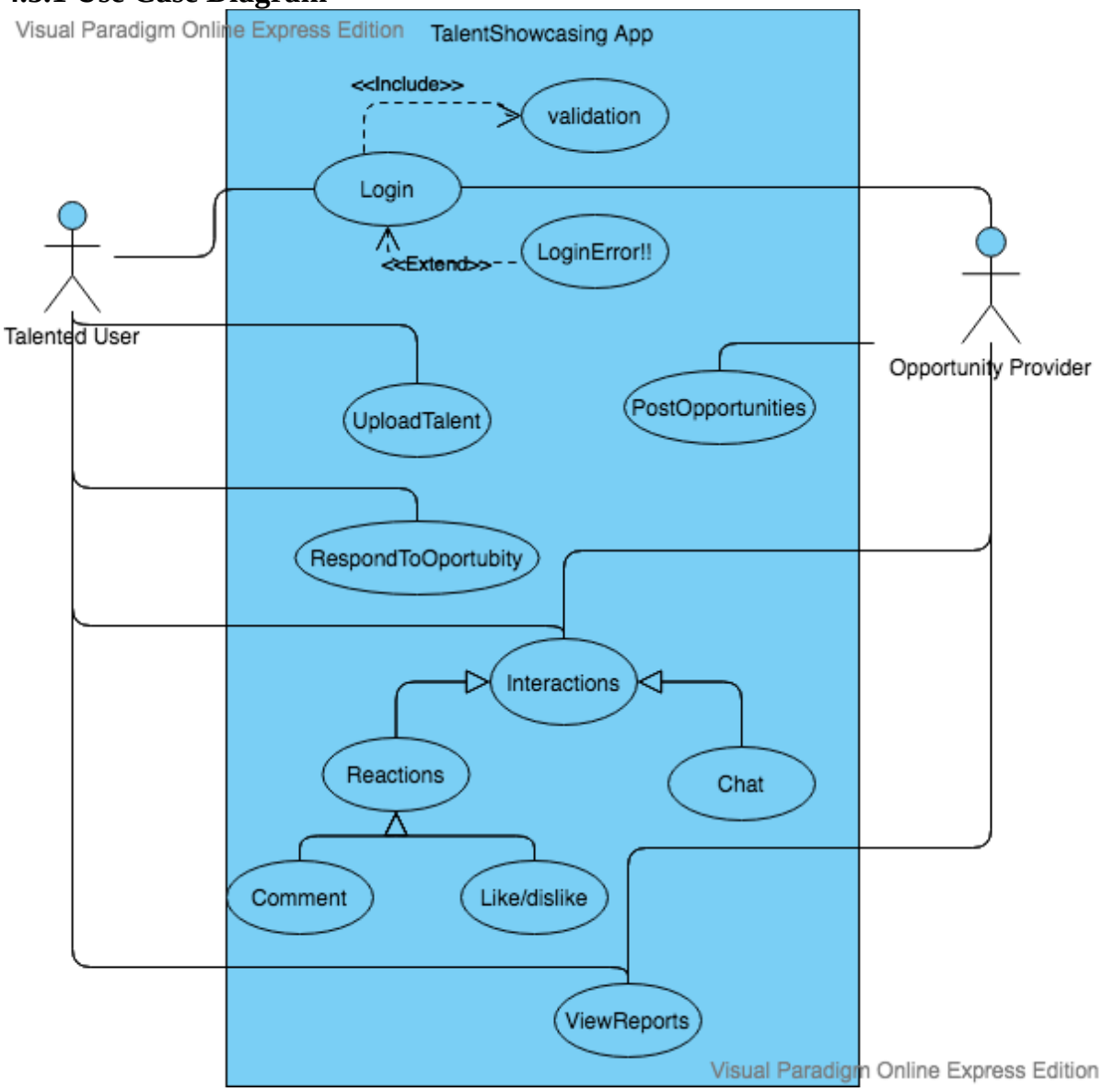

Figure 4.5.2 Usecase Diagram

The use case diagram represents the various requirements as provided by the system users. The talented users are the primary actors of the system meaning they initiate the functions where as the opportunity providers are the secondary users of the system and they respond to action.

4.5.2 Sequence Diagram

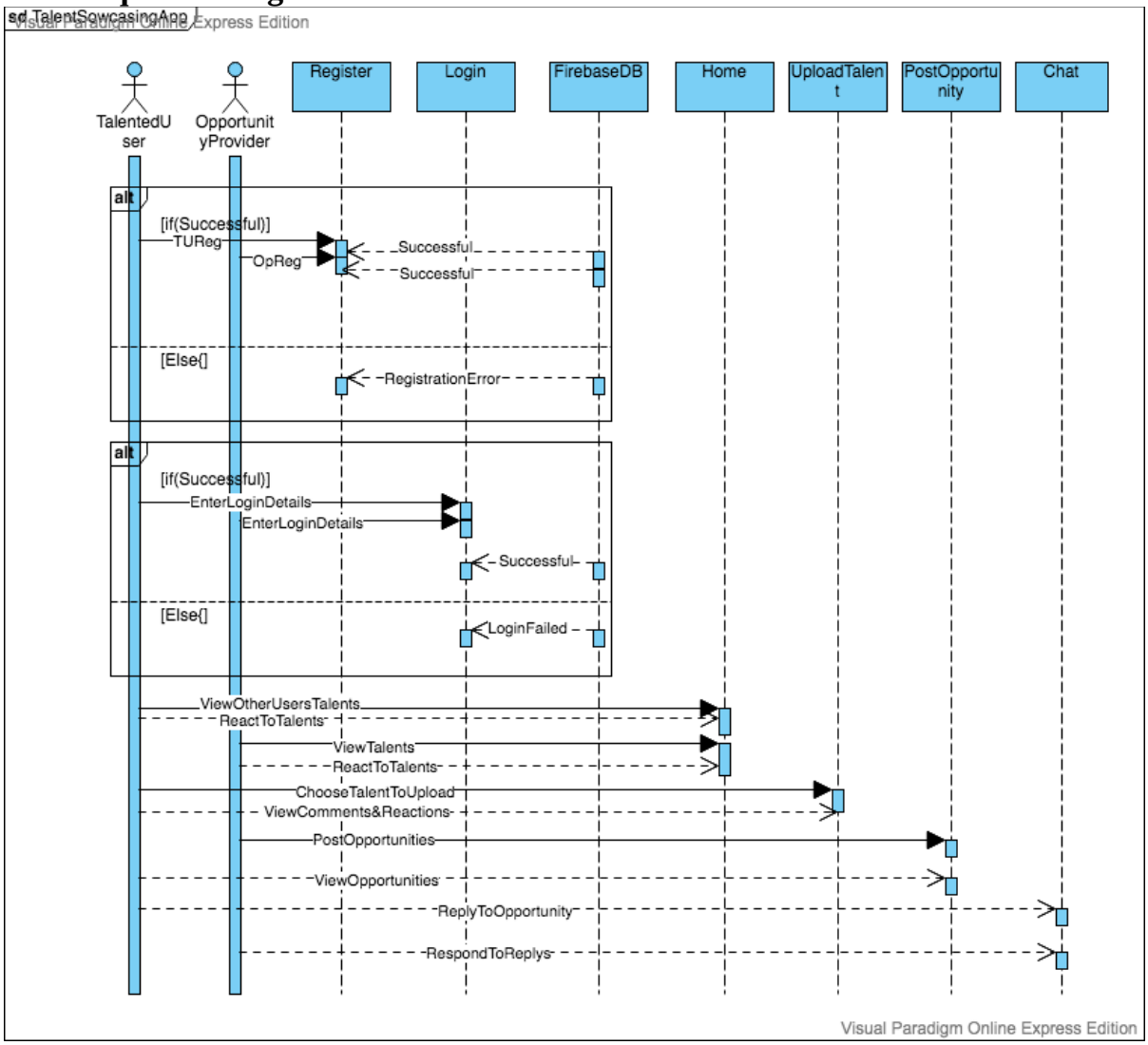

Figure 4.5.2 Sequence Diagram

The sequence diagram above gives a visual model of the step by step process of using the application right to user registration. The diagram consists of Two actors (Users of the system) and seven lifelines(Major modules of the system).

4.3.3 Class Diagram

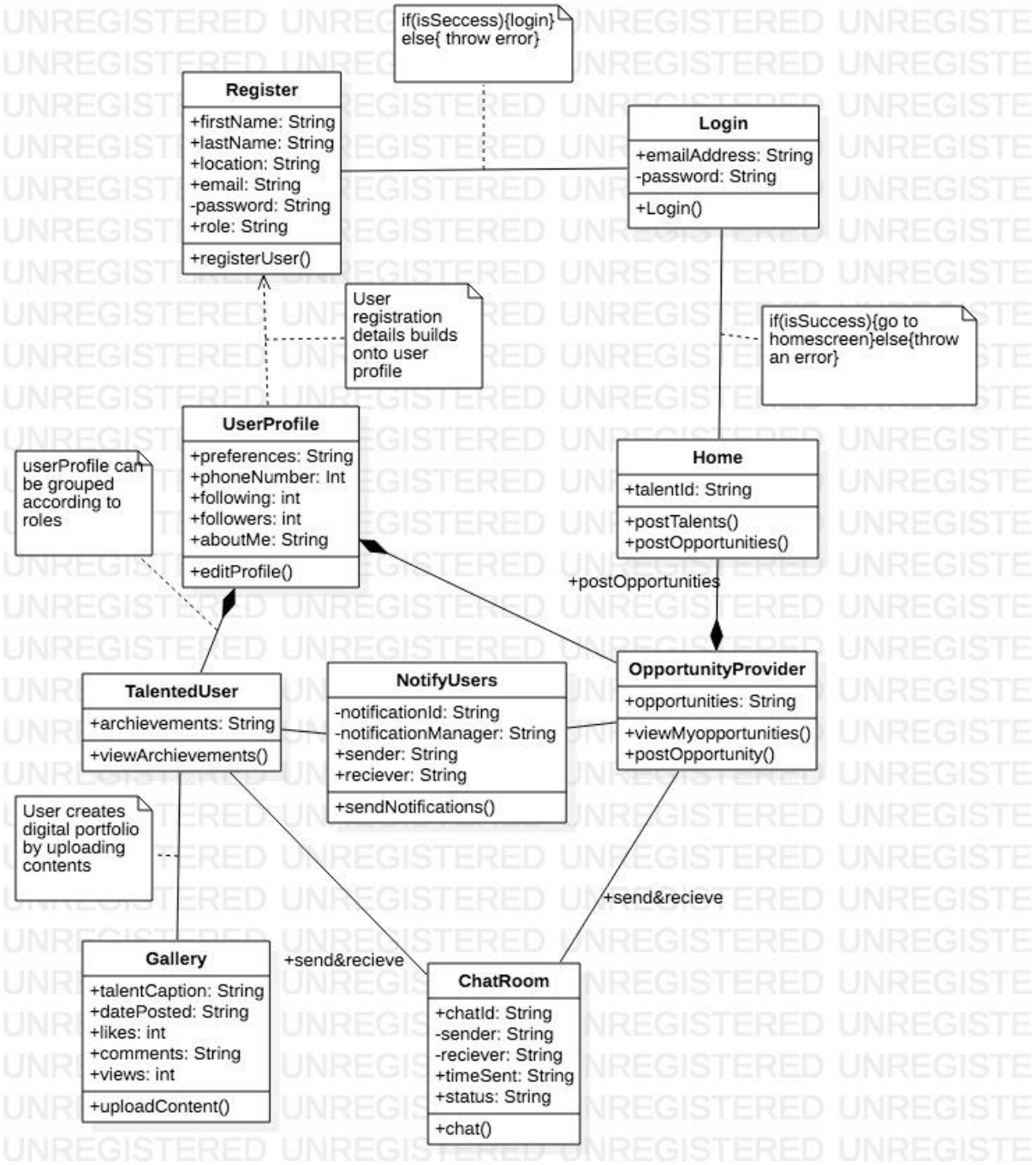

Figure 4.3.3 Class Diagram

The class diagram above gives a brief summary of the most important classes of the information system and how they relate to one another.

4.5.4 Database Schema

The information system uses Firebase Database as its database, Firebase database is a NoSQL database hence there is no tool yet that is able to design NoSQL databases. However below are some of the screenshots of firebase Database that might help get the visual to the representation of the information system.

Firebase Authentication/Registration.

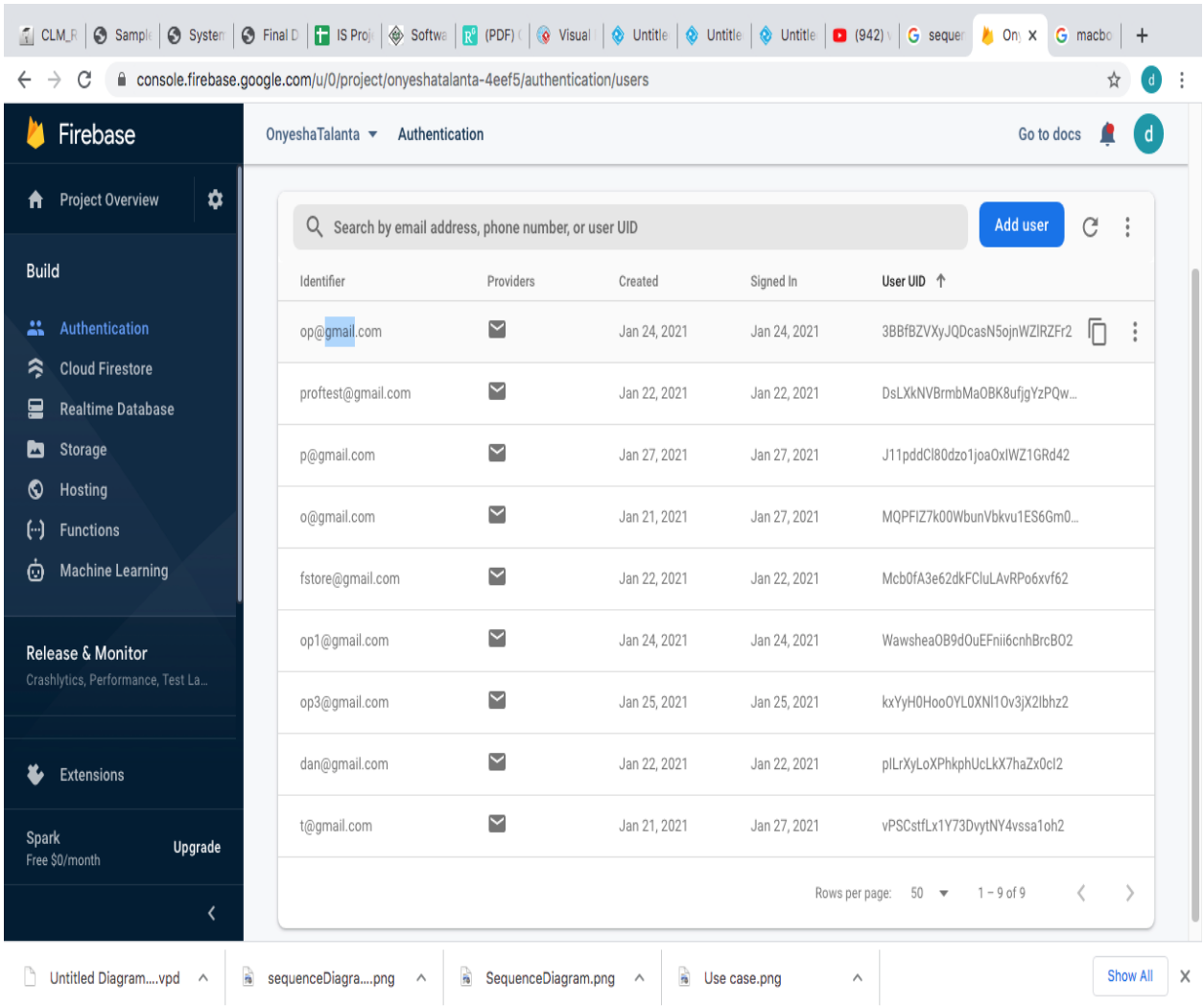

Figure 4.5.4.1 Firebase Authentication

This is similar to the Users table for instance in the common SQL databases.

Firebase Firestore

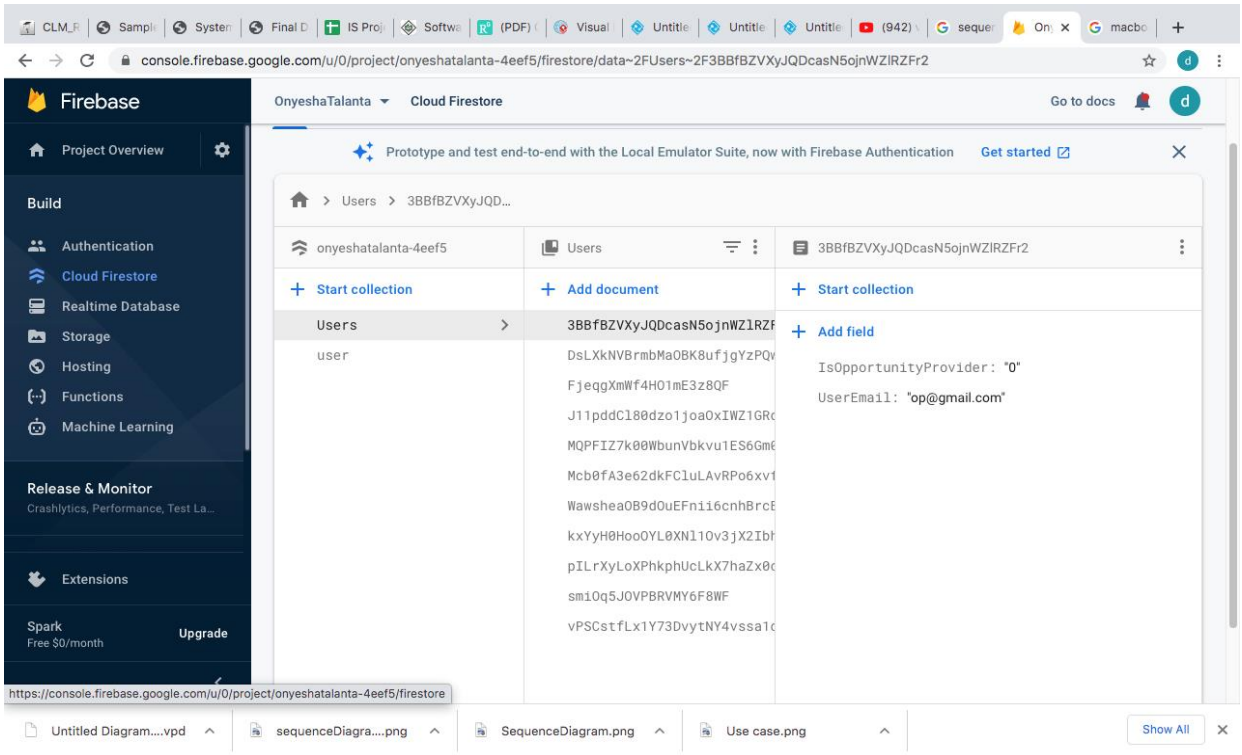

Figure 4.5.4.2 FirebaseFirestore screen capture

The FirebaseFirestore screen capture above was used to administer roles as well as store large sizes of data that cannot be stored in real time database.

Firebase Real Time Database

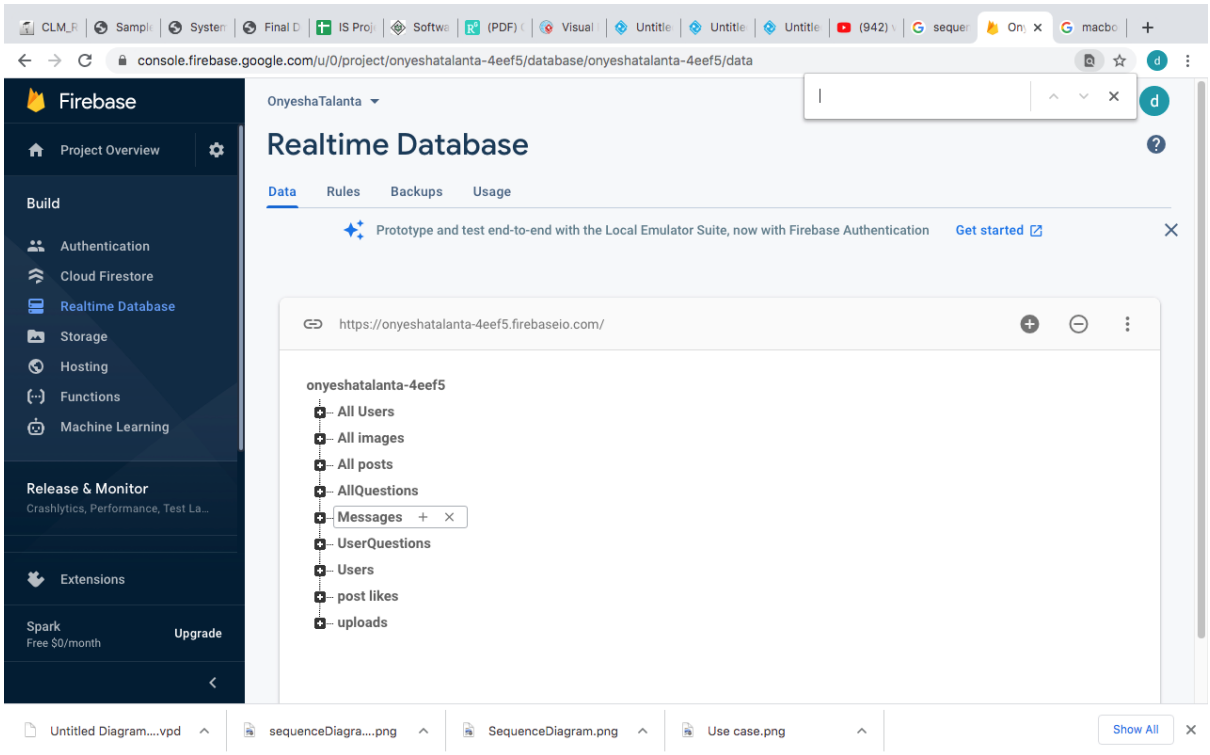

Figure 4.5.4.3 Firebase Real Time Database

The real time database had several (childs) that stored data for different modules that would be retrieved on real time basis.

Firebase Storage

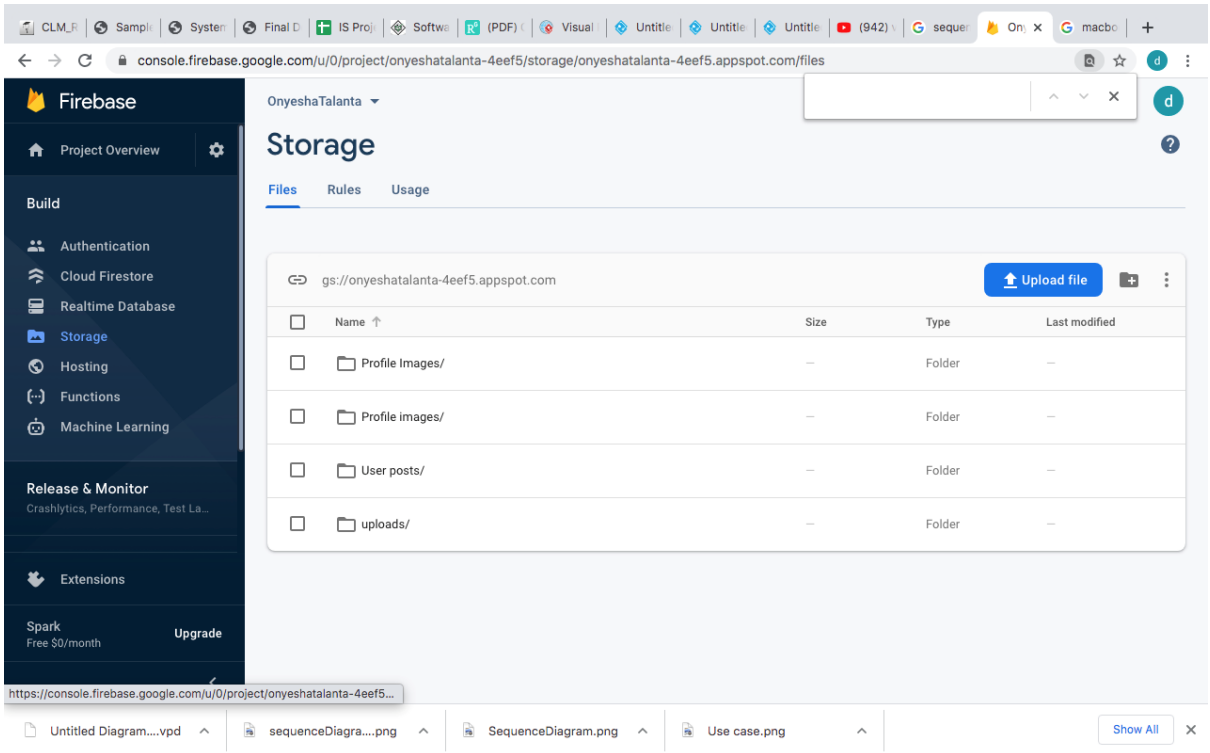

Figure 4.5.4.4 Firebase Storage

This module was helpful in storing data that are of very large sizes such as video. This Made it easier and more efficient to load and upload large size files.

4.6 System Mockups

4.6.1 Opportunities Mockup

Figure 4.6.1 Opportunities Mockup

The figure above represents the Opportunities mockup. This is a module that is only accessed by the opportunity providers. Once the opportunity provider clicks on the red fragment button with a plus sign, the post Opportunity activity will be launched and the user will be able to post an opportunity after which the opportunities will be retrieved from the firebase database and displayed in the opportunities mockup as shown above.

4.6.2 Home Activity Mockup

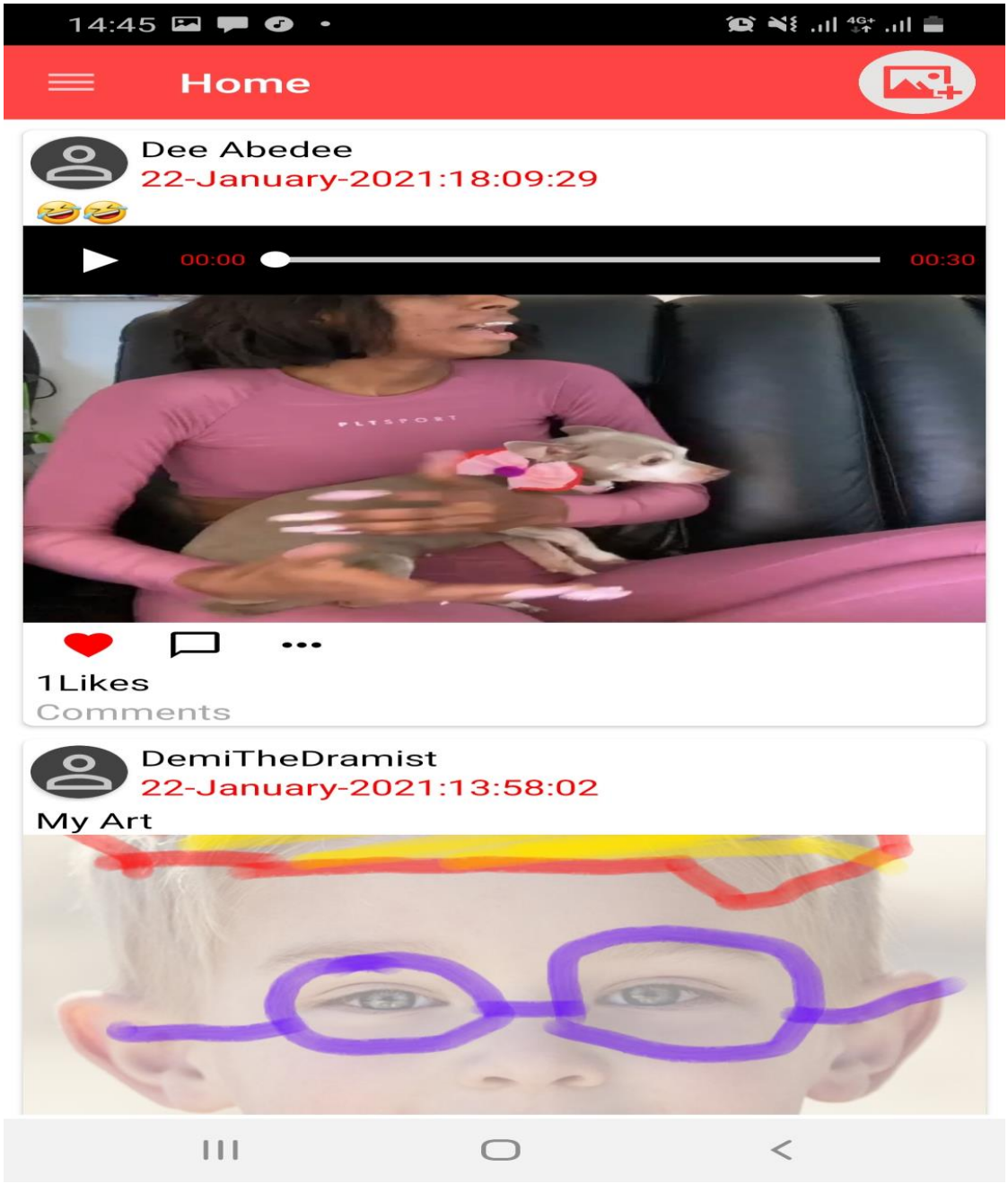

Figure 4.6.2 home activity mockup

The above mockup represents the home Activity mockup where users are able to view talents posted and react on them by liking, commenting and even downloading.

4.6.3 Talented User Navigation View Mockup

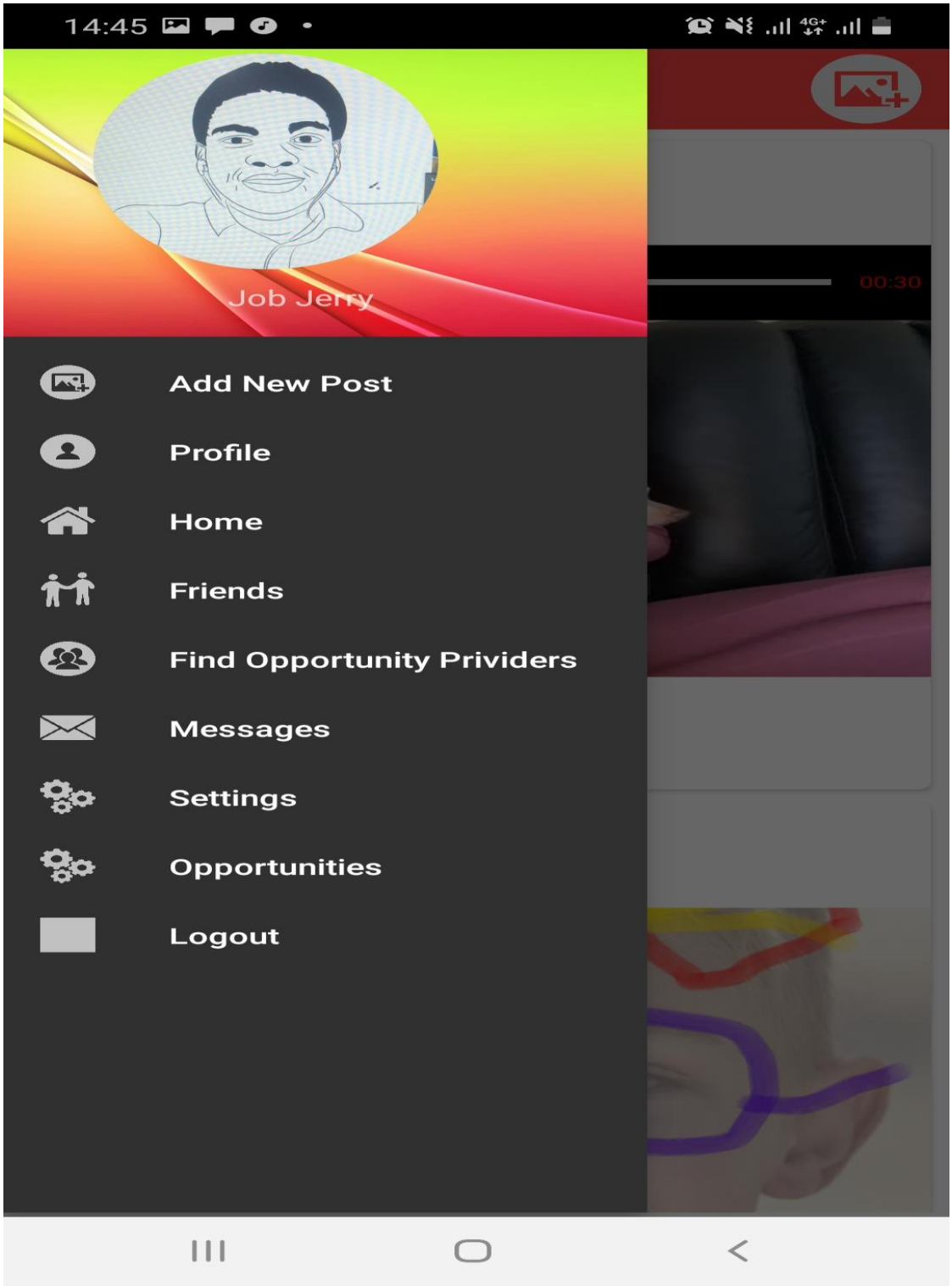

Figure 4.6.3 Navigation view

The mockup above contains navigation options. Talented users are able to view their profile photos, they can navigate to AddNewPost Activity, ProfileActivity, HomeActivity, MessagesActivity, SettingsActivity, OpportunitiesActivity as well as Logout functionality. This mockup basically contains a visual model of the basic Talented User modules.

4.6.4 Opportunityprovider profile Mockup

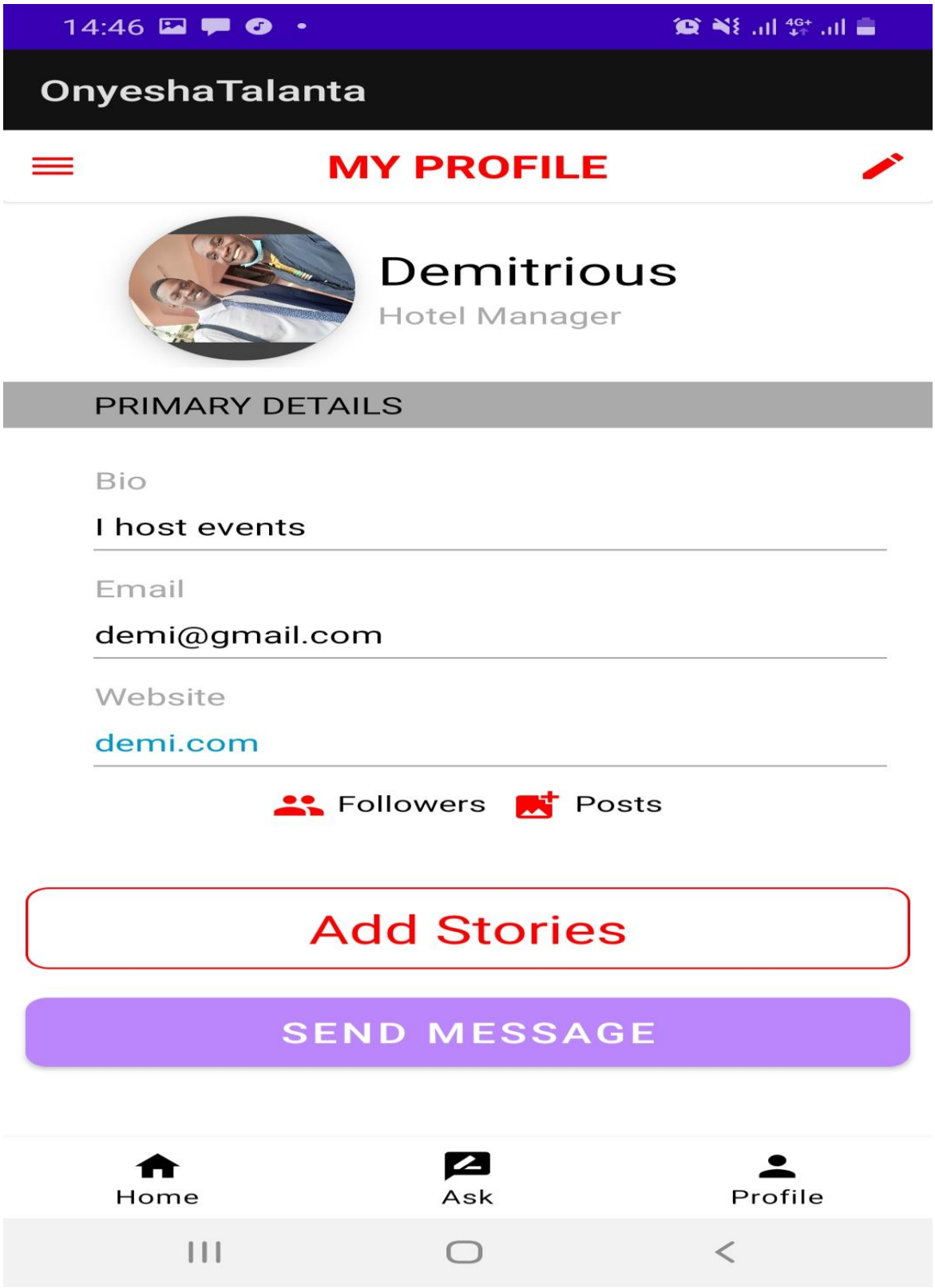

Figure 4.3.4 profile mockup

The mockup above shows a view of the profile details of opportunity providers. This mockup is accessible to both opportunity providers and Talented Users.

4.6.5 CreateAccount Activity Mockup

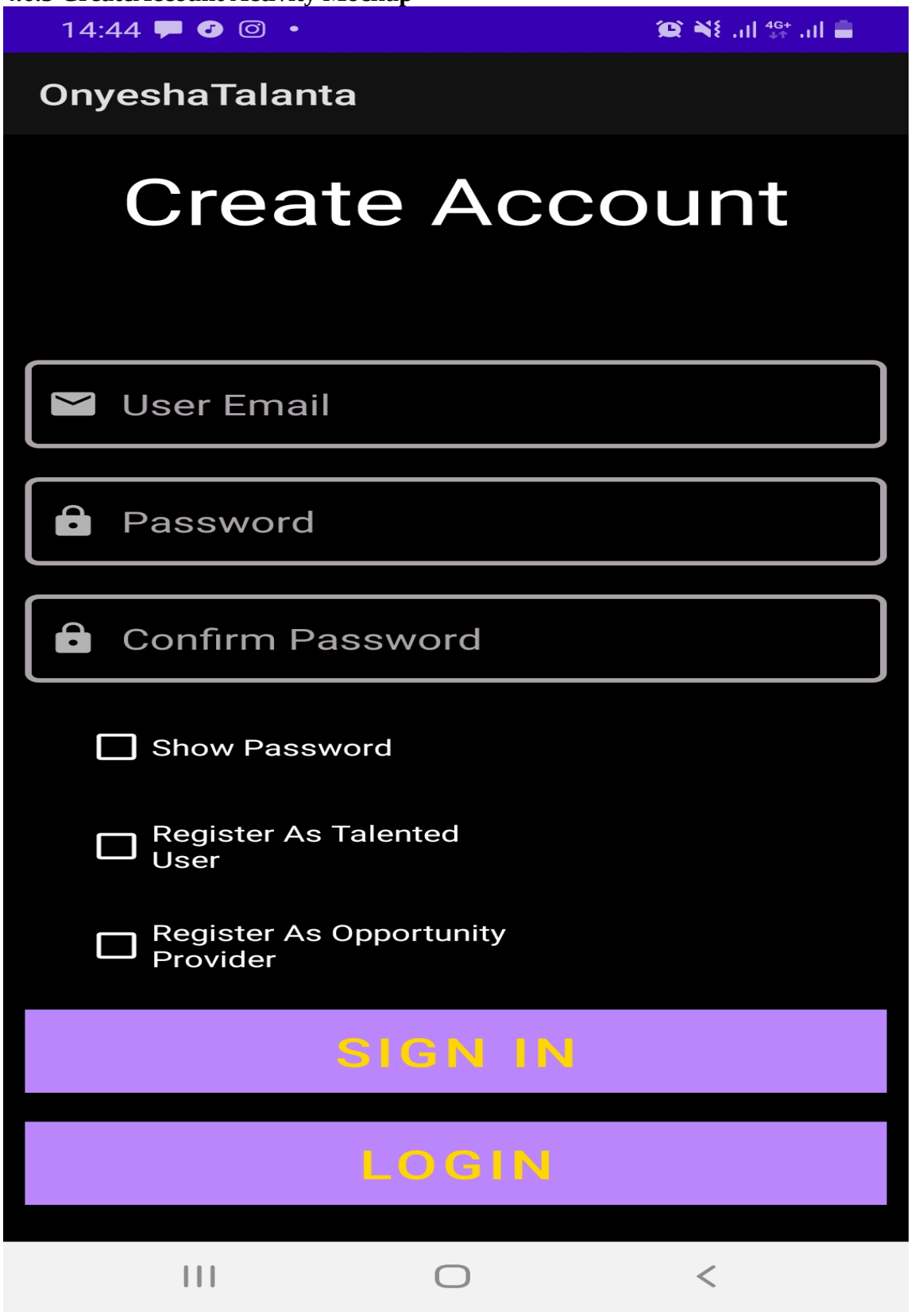

Figure 4.6.5 CreateAccount Mockup

This mockup shows the RegisterActivity. It allows users to choose their roles (Opportunity Providers and Talented Users).

4.6.6 LoginActivity Mockup

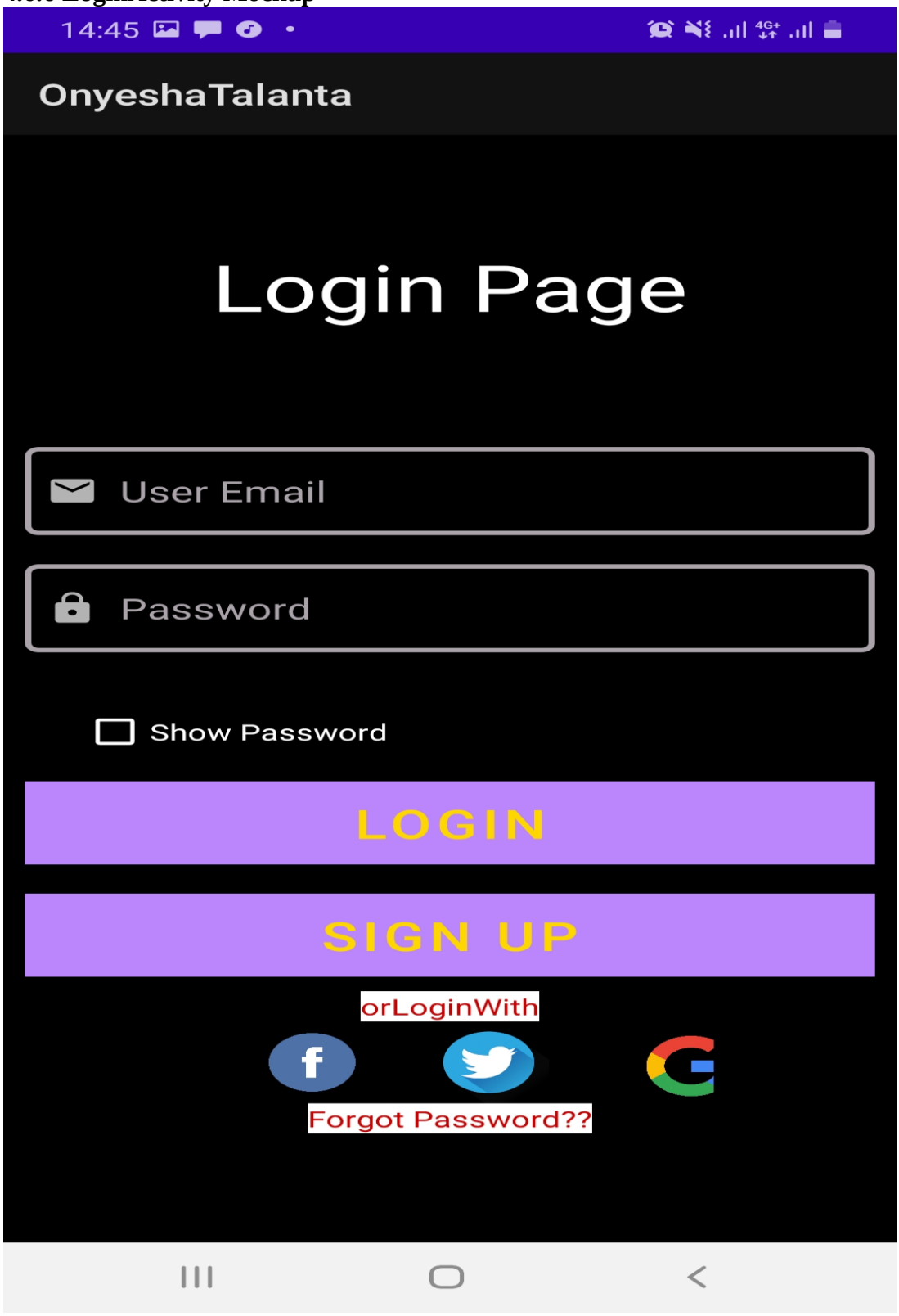

Figure 4.6.6 LoginActivity mockup

This mockup shows the login visual model of the application where users are able to login to the system.

4.6.7 EditProfile Activity mockup

The mockup below shows the Edit profile module where users are able to change and update there profile details.

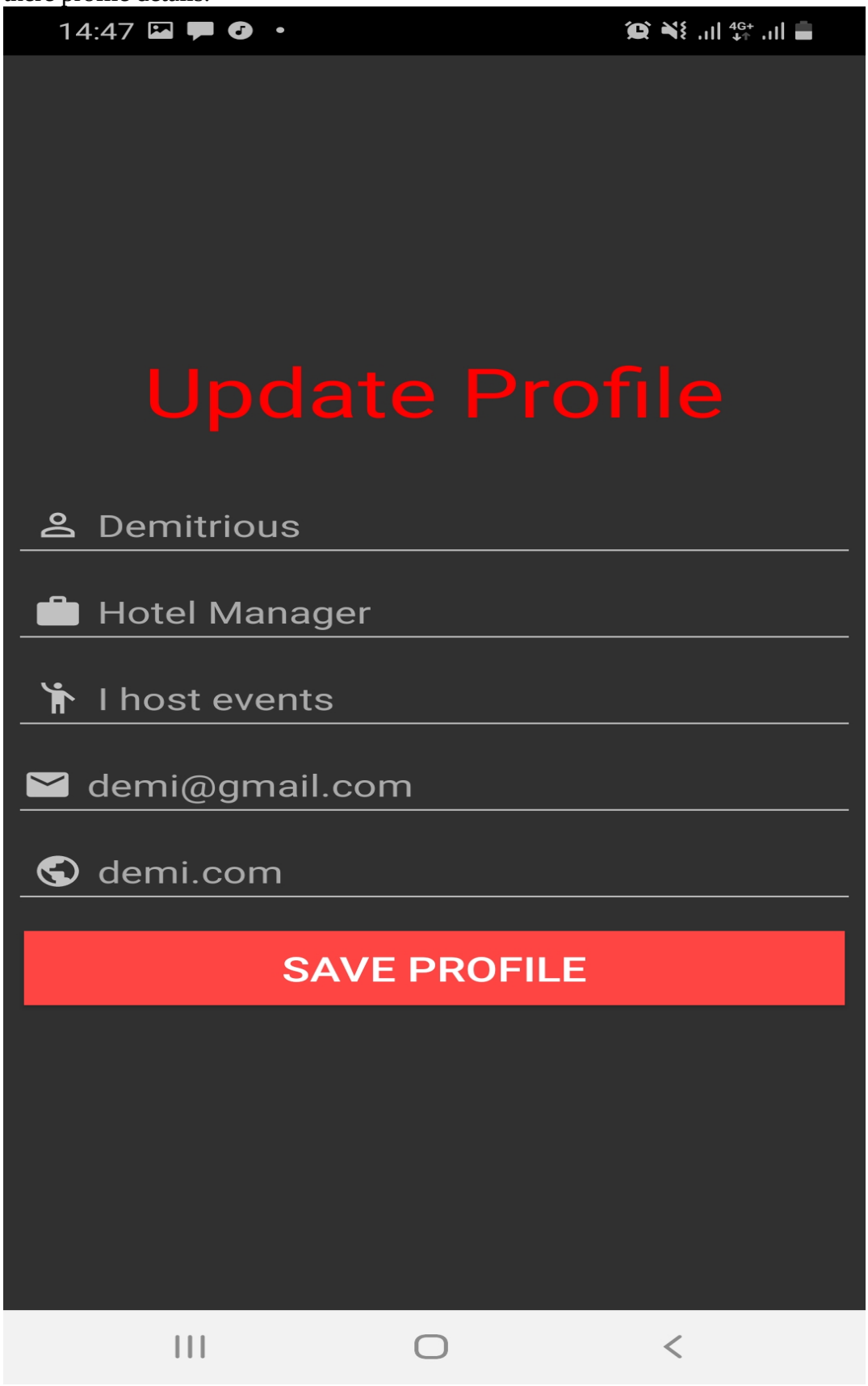

Figure 4.6.7 EditProfile mockup

4.6.8UploadTalentActivityMockup

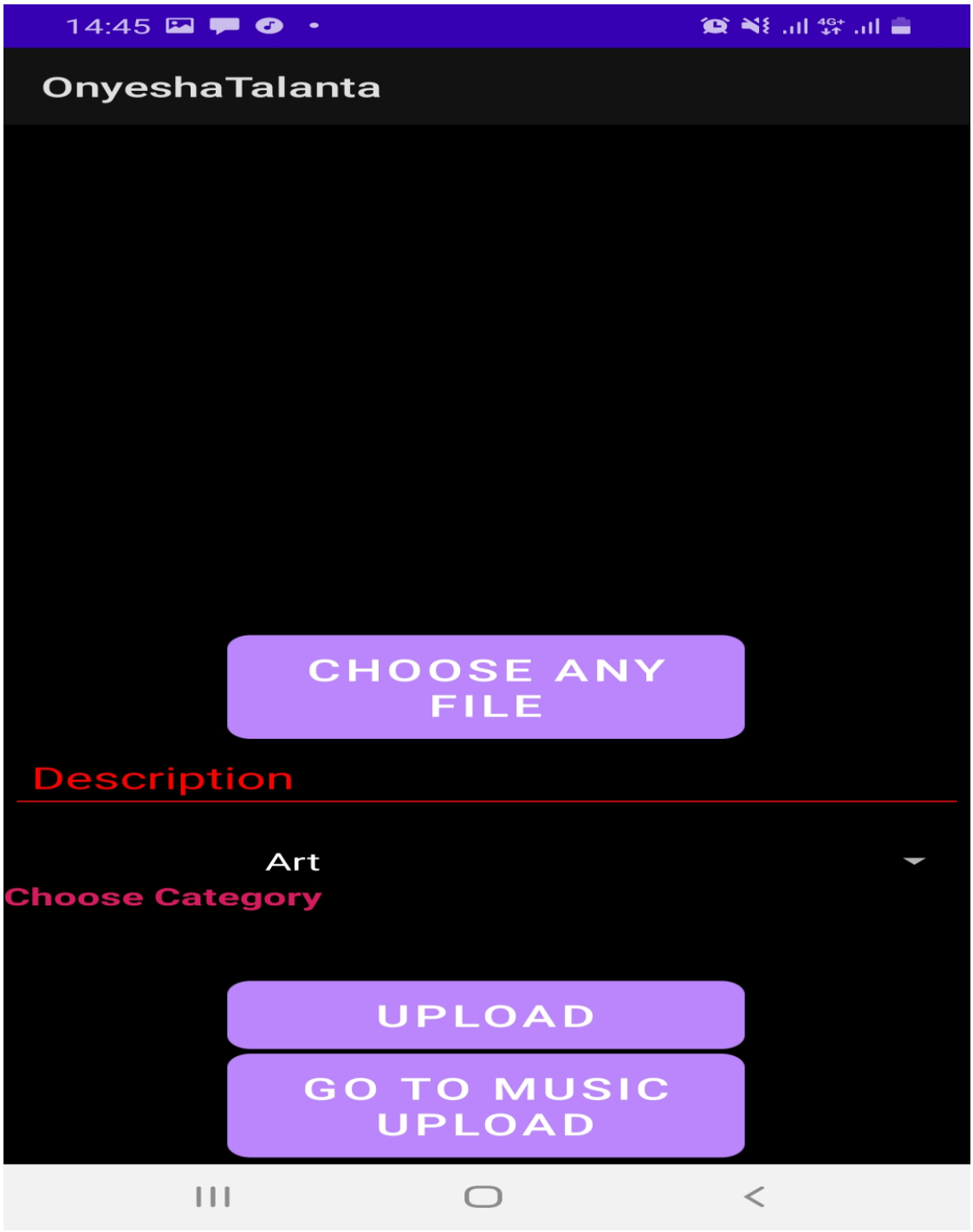

Figure 4.6.8 UploadTalentActivity

This mockup allows Talented users to choose their talent files from the gallery of their mobile phones and upload them to firebase database. Once the talents are uploaded successfully to firebase database, they are retried and displayed on the HomeActivity module where both opportunity providers and Talented users will be able to view the talents and react by either commenting, liking or both commenting and liking the talents.

Chapter 5: System Implementation and Testing

5.1 Introduction

This chapter focuses on describing how the system was developed; the systems modules and their integration. In addition to how the system was developed, this chapter also focuses on describing how the system was tested to ensure that it fulfilled specified requirements with the aim of achieving the systems objectives.

5.2 System Implementation

This segment contains the manner in which the system was built in regard to the system analysis and design approaches that have been highlighted in chapter three of this document.

5.2.1 Development Process (Coding)

The Development process which basically is the implementation stage of the information system can be viewed in two dimensions, that is; the front end and the backend. The frontend was basically done using XML markup language. The backend of the information system on the other hand was done using Core java and kotlin languages. Android studio was used as an IDE (Integrated Development Environment).

System Frontend Implementation Example

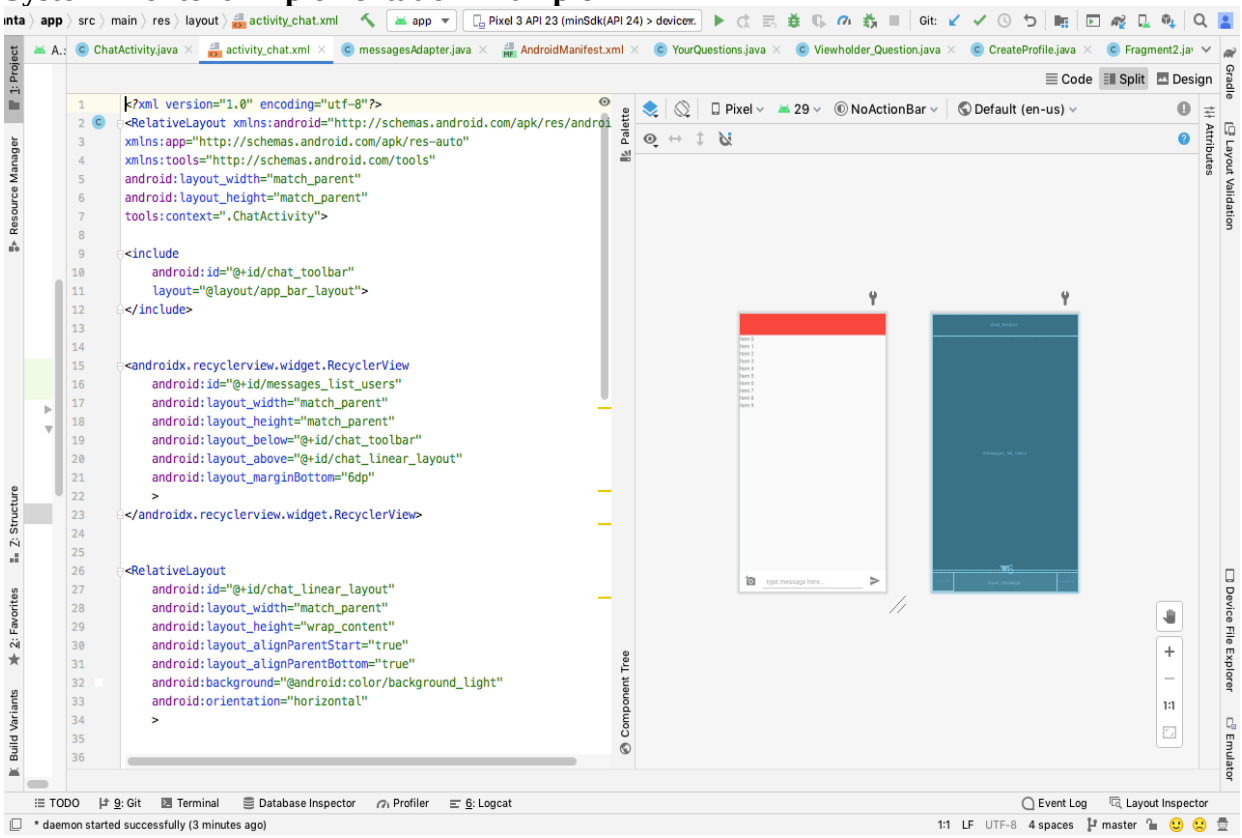

Figure 5.2.1.1 Frontend Representation

The figure above shows a basic XML file. The Xml file was basically responsible to the creation of the layout shown above. These files were useful during the implementation stage in creating layouts for the mobile application and styling the layouts as well.

System Backend Implementation Example

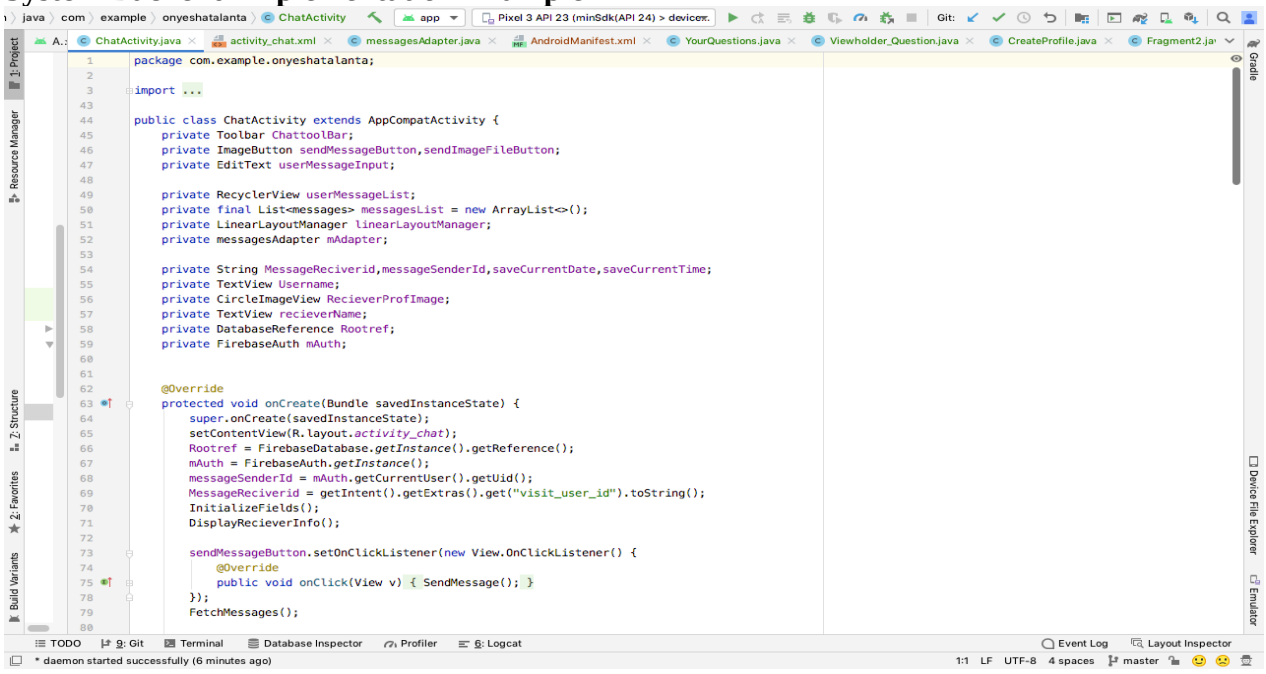

Figure 5.2.1.2 Backend Representation

The diagram above shows an example of a java file that was used to implement the backend of the system. The file contains firebase references that are useful in the implementation of firebase functionalities as well. Firebase was a backend segment that basically contained the database activities of the information system. The .java files were useful in implementing the database activities in firebase database.

App Installation procedure

The information system is an android mobile application that has not been published on google play store yet hence cannot be downloaded and installed directly from play store. However, there are two other ways of installing the application on an android phone, that is, the .apk(Android Application Package) installation procedure and the AVD(Android Virtual Device) manager installation procedure.

The .apk procedure

This procedure basically entails building a .apk file from android studio and running the file in an android mobile phone. To build a .apk file in android studio, go to; Build > Build Bundles/Apk > Build Apk. After the .apk file is built, locate it in your personal computer and copy it in an android device using a USB cable. Once the file is copied, run it on an android phone and install it.

The AVD manager procedure

This procedure basically entails downloading an android studio emulator in android studio and running the application on the emulator. The AVD manager installation can also be done using a laptop containing the android project, an android phone and a USB cable. To install the app on your phone, ensure that the developer options on the phone are enabled then connect your phone to the computer, android studio will recognize your phone after a few minutes after which you will run the project in your phone and it will be installed.

5.2.3 System Manual

Once the user has installed the application, they can open the application and the login activity will be launched as shown below.

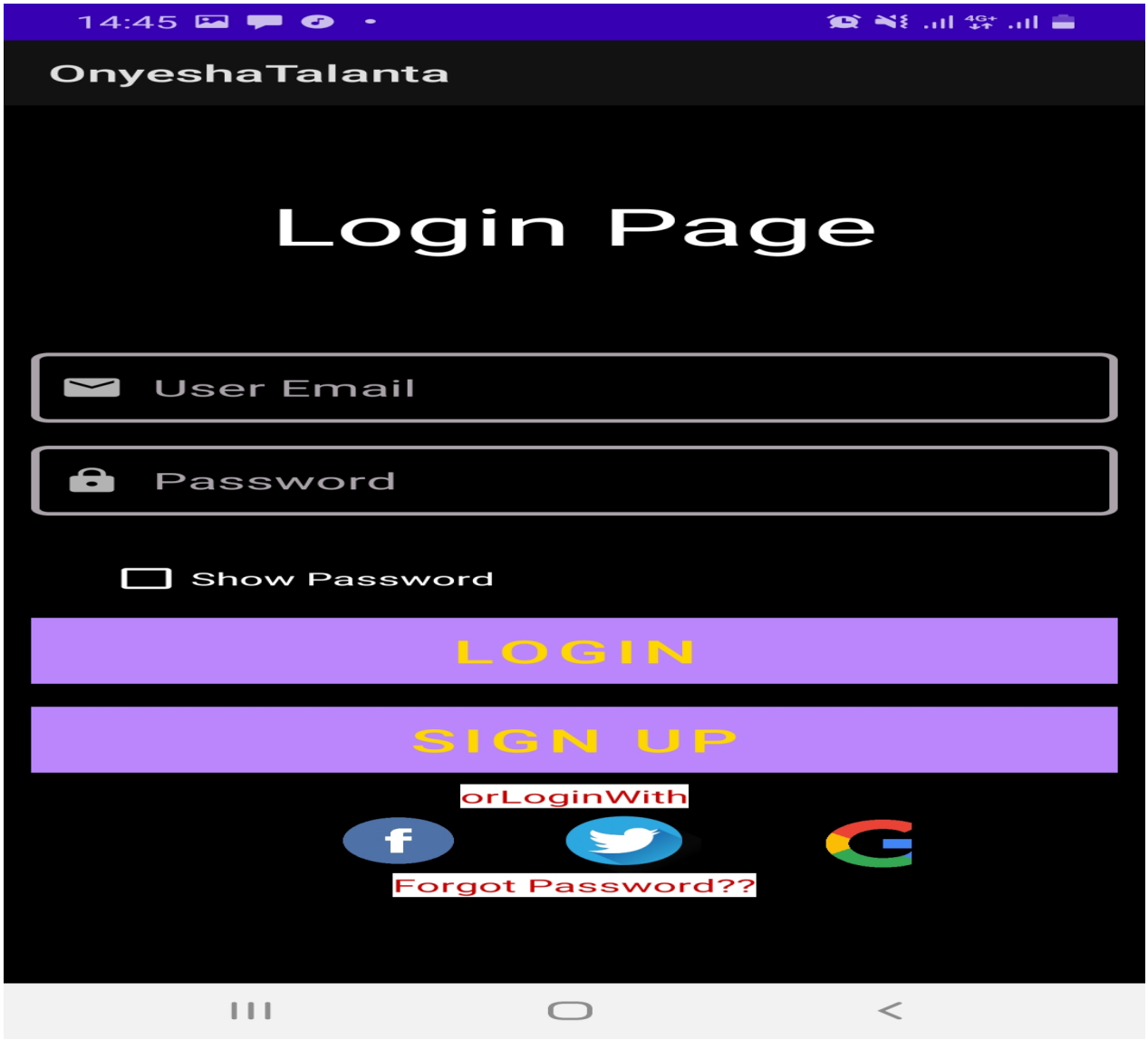

Figure 5.2.3.1 Login Interface

If the user already has an account, he or she can key in his or her login credentials and if they are correct the Home activity will be launched else, an error will be thrown. If the user doesn't have an account, he or she will click on the signup button will will then launch the RegisterActivity as shown below:

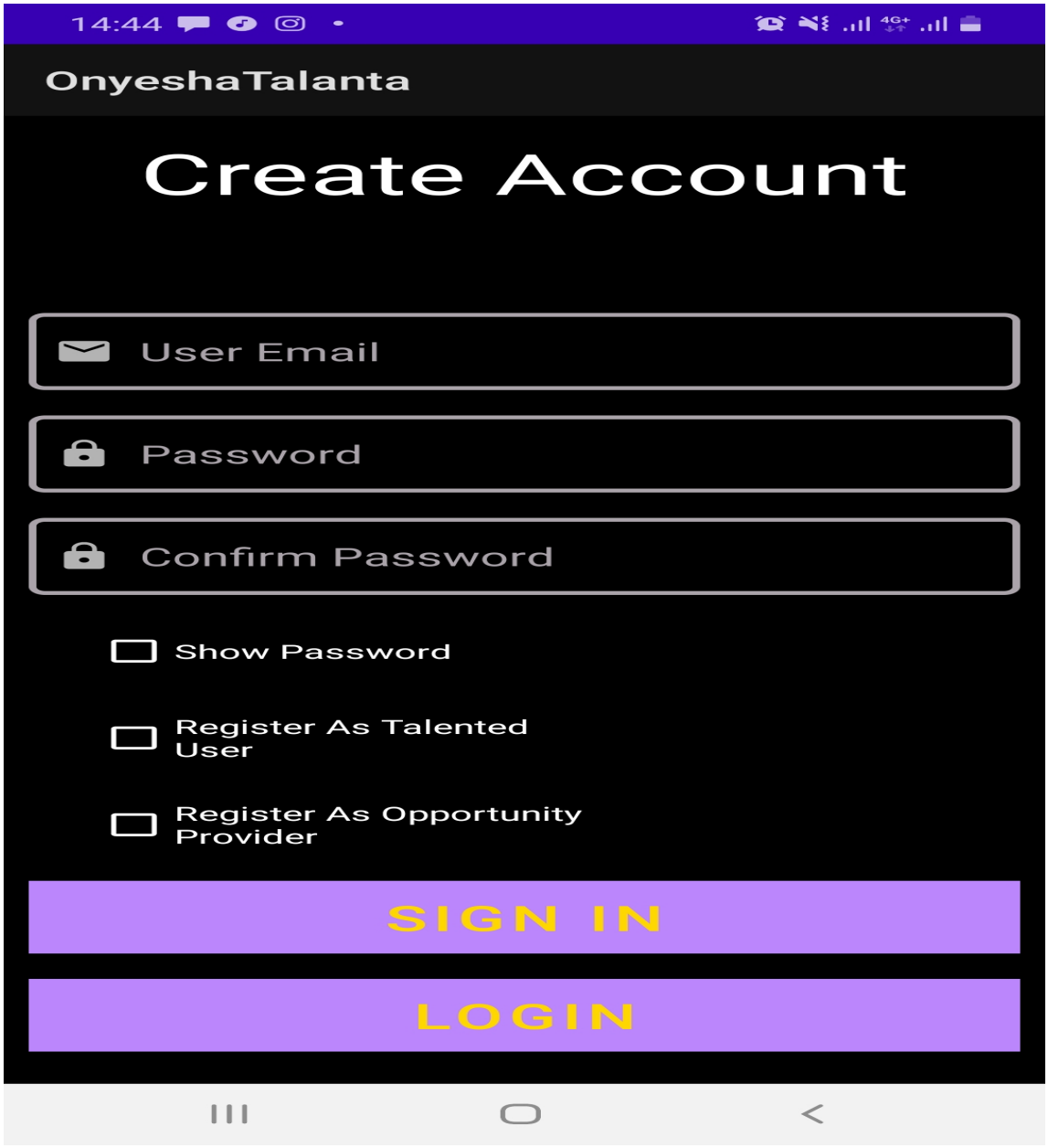

Figure 5.2.3.2 Register Interface

The register user activity allows users to create an account. Users are able to choose their roles (Talented or opportunity providers) in this activity. A unique email must be provided in and the password must contain at least six characters.

Once the user is registered, they are eligible to login and access the system, if the user is a talented user an interface as shown below will be launched upon logging in;

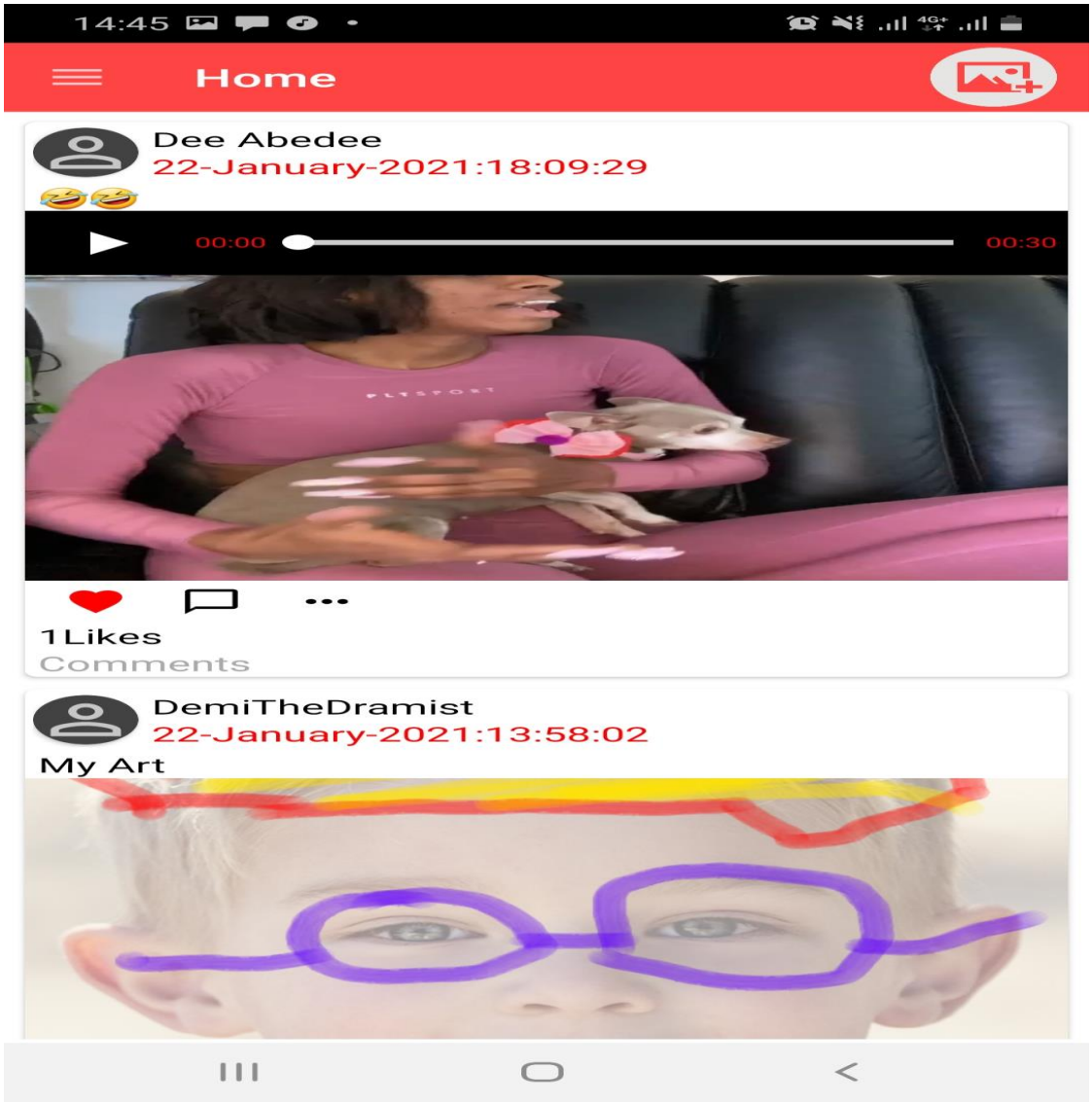

Figure 5.2.3.3 home Interface

This page is the Talented user homepage. On the top right section of the toolbar is an image button. Once a user clicks on the image button, the upload talent Activity will be launched to allow the talented user to key upload their talents to firebase database. Once the talents are uploaded, they will be displayed on real time as shown in the Homepage above. Displayed talents can be liked by simply clicking on the like button or commented on by simply clicking on the comment button where an editText will be launched to allow users to comment on the talent.

Talented users can also navigate to other activities such as the opportunities activities by clicking on the top left section of the home page that will launch an navigation view as shown below:

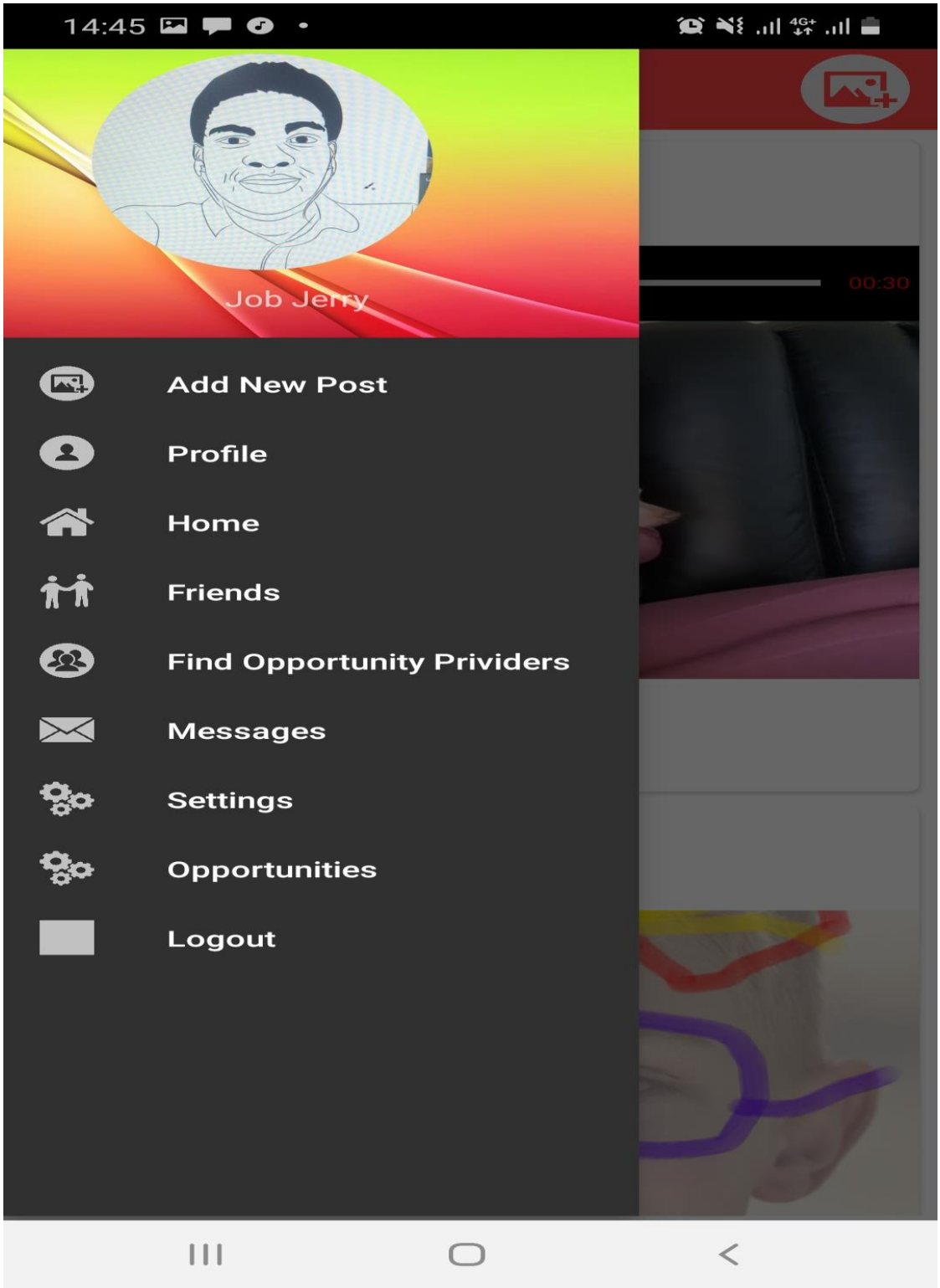

Figure 5.2.3.4 Navigation Interface

Talented user can navigate to opportunities posted by clicking on the opportunities option in the navigation view. This will launch the OpportunitiesActivity that will then display opportunities. If a talented user sees themselves feet and qualified for the opportunity, they can launce the chat activity and reply to the opportunity provider. Below is an interface showing a list of opportunities. Note that in the opportunities interface for talented users, users are not able to add opportunities.

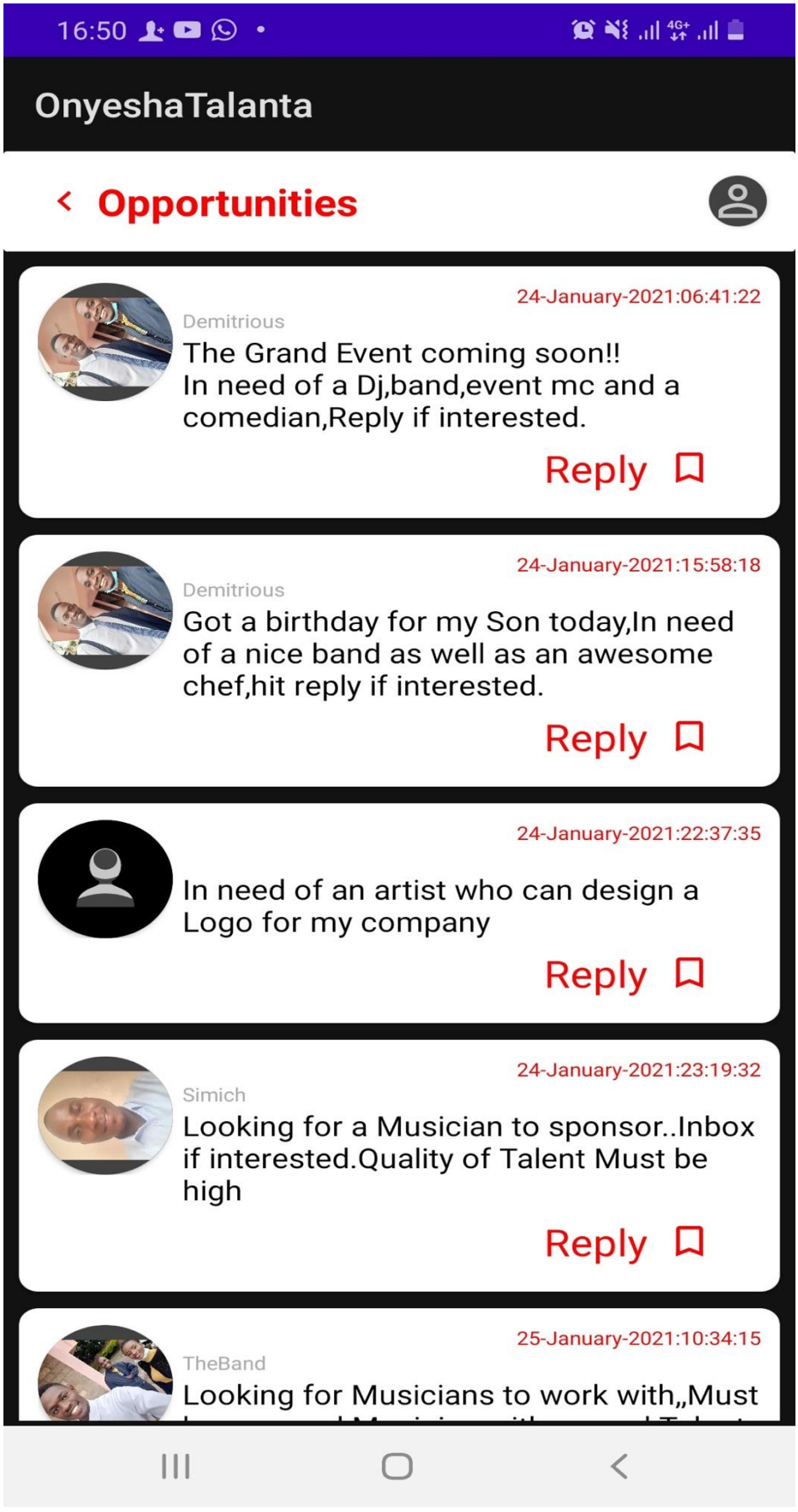

Figure 5.2.3.5 Opportunities Interface

once a talented user clicks on reply, the chat activity will be launched as shown below:

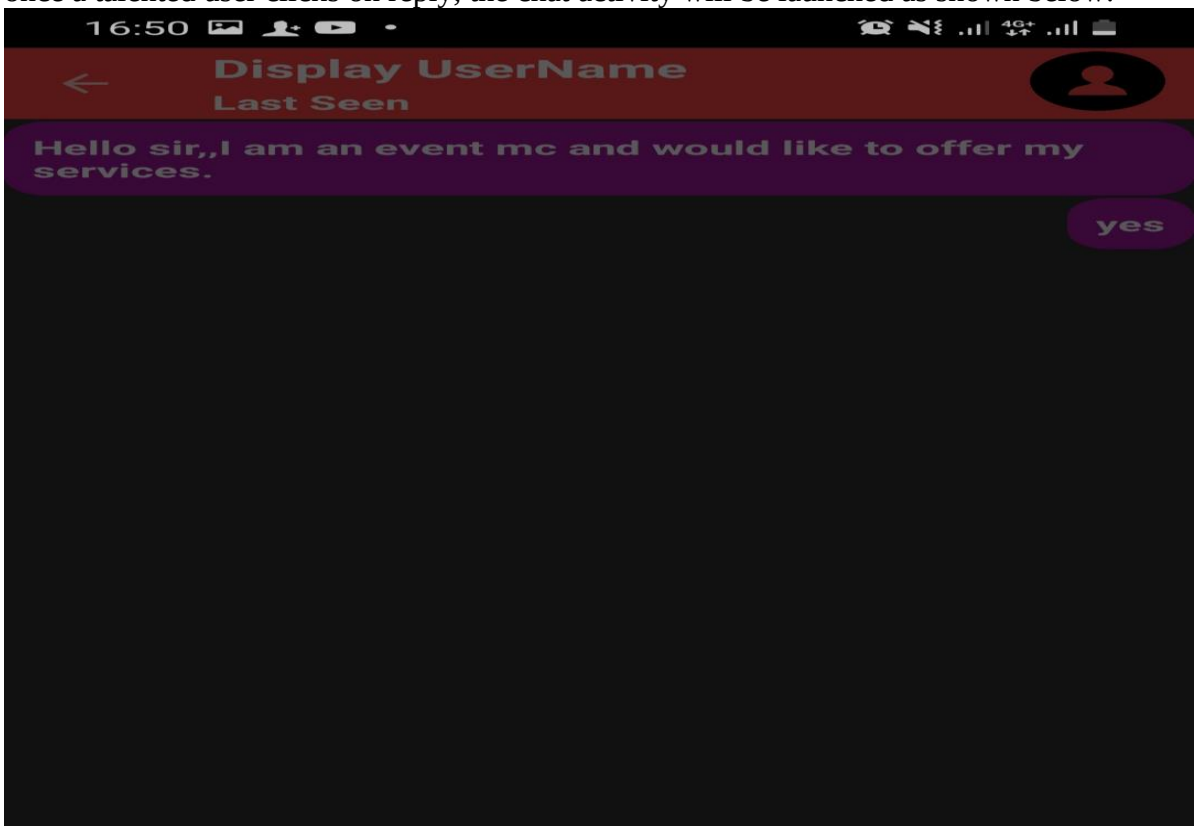

Figure 5.2.3.6 Chat Interface

This activity links Talented users to Opportunity providers.

If the person logged in is an opportunity provider, they will be able to see a postOpportunities activity upon logging in where they will also be able to post Opportunities. Once the opportunities are posted, talented users will be able to reply if interested via a private chat in which the opportunity provider will be notified.

5.3 System Testing

5.3.1 Functionality Testing

The upload talent functionality was correctly functional as talented users can be able to choose a file in image and video format and once they click on the upload button, the files are successfully uploaded to the database. A toast message is shown to give feedback upon successful uploading of the talent.

Uploaded talents can also be retrieved well and displayed in a recycler view that is in the homepage.

Opportunities can also be posted and viewed by both talented users and opportunity providers after which both of them can be able to link up via chat.

5.3.2 Usability Testing

The app is easy to use and all the interfaces are logically related to allow users to be able to easily flow when using the information system.

Chapter 6: Conclusion, Recommendations and Future works

The information system developed is intended to basically give young and upcoming talents an opportunity to grow and also to make a living out of their talents whether or not they have a huge following on social media. It also gives opportunity providers who would wish to give out opportunities to upcoming talents a chance to link up with them and give them a chance. This application in a way helps in creating partial employment for young talents.

This information system however is still a work in progress. With the help of Artificial intelligence as well as Machine learning, it will be possible to Authenticate the types of talents being uploaded. The application also will require a google maps API that will allow opportunity providers to filter search for talented users based on location.

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Club Yagamahoro

Interviewee: Kererane Velika

1. How often do you get a chance to showcase your talents?

a) Very often

b) often

c)I rarely get a chance

2.On what platforms do you showcase these talents?

Weddings, concerts, dance competitions but rarely in official opening of big national/regional/international events

3.Have you even had an opportunity to showcase your talent on a digital platform eg (TV program, YouTube or any other?

a) Yes

b) No

3.1 If Yes, kindly specify we have an Instagram and a Facebook accounts

3.2 If No, kindly highlight why?

4.How easy is it for you to find opportunities to showcase your talents?

a) not easy

b) very easy

c)neither easy nor hard

5.If not easy, highlight why?

6.In your own opinion, do you think a mobile application that allows you to show case your talent and find opportunities to link up with opportunity providers such as event Planners would make your work easier?

a) Yes

b) No

Club des jeunes Ngagara IX (Ngagara IX youth club)

Interviewee : Nahayo Lucky Chanelle

1. How often do you get a chance to showcase your talents?

a) Very often

b) often

c)I rarely get a chance

2.On what platforms do you showcase these talents?

Usually in traditional ceremonies like traditional weddings, white weddings, and church events.

3.Have you even had an opportunity to showcase your talent on a digital platform eg (TV program, YouTube or any other?

a) Yes

b) No

3.1 If Yes, kindly specify we have a Facebook account and on the Burundian National Radio and Television (RTNB)

3.2 If No, kindly highlight why?

4.How easy is it for you to find opportunities to showcase your talents?

a) not easy

b) very easy

c)neither easy nor hard

5.If not easy, highlight why?

6.In your own opinion, do you think a mobile application that allows you to show case your talent and find opportunities to link up with opportunity providers such as event Planners would make your work easier?

a) Yes
b) No

Club IndangaBurundi (IndangaBurundi dance group)

Interviewee: Sinzinkayo Liesse Arielle

1. How often do you get a chance to showcase your talents?

a) Very often
b) often
c)I rarely get a chance

2.On what platforms do you showcase these talents?

Usually in different events like weddings, anniversaries celebrations, Birthdays and Baptism celebrations

3.Have you even had an opportunity to showcase your talent on a digital platform eg (TV program, YouTube or any other?

a) Yes
b) No

3.1 If Yes, kindly specify we have a Facebook and Instagram accounts, a YouTube channel but also, we have ever a chance to pass on the Burundian National Radio and Television (RTNB)

3.2 If No, kindly highlight why?

4.How easy is it for you to find opportunities to showcase your talents?

a) not easy
b) very easy

c) Either easy nor hard

5.If not easy, highlight why?

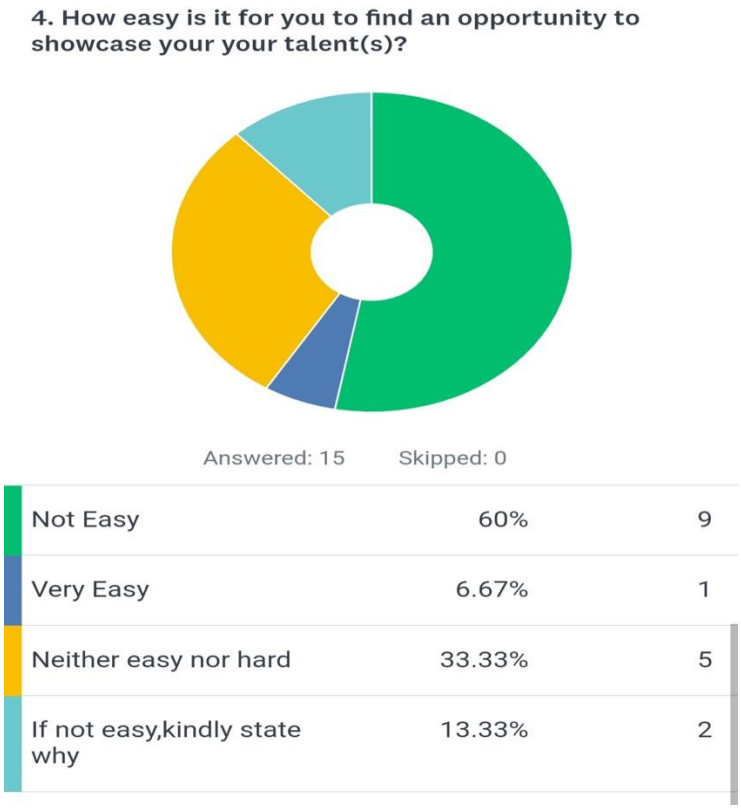
6.In your own opinion, do you think a mobile application that allows you to show case your talent and find opportunities to link up with opportunity providers such as event Planners would make your work easier?

a) Yes

b) No

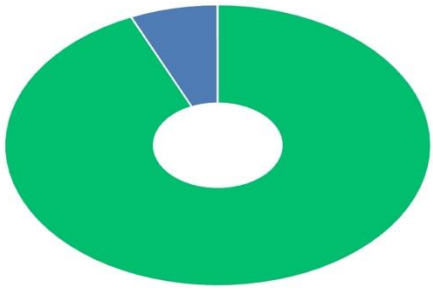
Appendix C: Results of a survey conducted to capture the gaps on talent showcasing.

Feedback on Ease of finding opportunity



Feedback on proposed system's feasibility

5. In your opinion,do you think a mobile application that allows you to showcase your talents digitally at any time and gives you an opportunity to connect with opportunity providers who are willing to hire your talent(s) would be helpful to you?



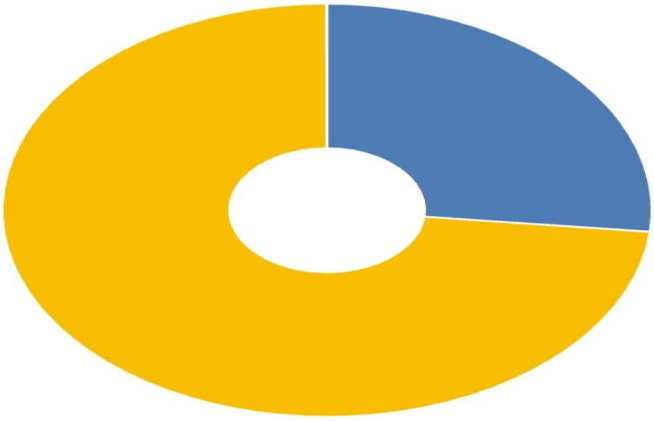
Answered: 15 Skipped: 0

Yes	93.33%	14
No	6.67%	1

Feedback On the scope of Talents being showcased.

PAGE 1

1. How often do you get a chance to showcase your talents



Answered: 15 Skipped: 0

Very often	0%	0
Often	26.67%	4
I rarely get a chance	73.33%	11
Other (please specify)	0%	0