VISVESVARAYA TECHNOLOGICAL UNIVERSITY
JNANASANGAMA, BELAGAVI - 590018

Mobile Application Development Mini Project Report
on
VENDOR-CUSTOMER APP

Submitted in partial fulfillment for the award of degree of

Bachelor of Engineering
in
Computer Science and Engineering

Submitted by

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Vidyaya Amrutham Ashnuthe

B.N.M. Institute of Technology

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All UG branches – CSE, ECE, EEE, ISE & Mech.E accredited by NBA for academic years 2018-19 to 2020-21 & valid upto 30.06.2021
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Department of Computer Science and Engineering

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Vidyayāmruthamashnuthe

CERTIFICATE

Certified that the mini project report entitled **Customer-Vendor App** carried out by Mr. **Rajdeep Chauhan** USN **1BG18CS091**, Ms. **Smitha Maganti** USN **1BG18CS110**, Ms. **Shravanthi Madhugiri** USN **1BG18CS108**, bonafide students of VI Semester B.E ., **B.N.M Institute of Technology** in partial fulfillment for the Bachelor of Engineering in COMPUTER SCIENCE AND ENGINEERING of the **Visvesvaraya Technological University**, Belagavi during the year 2020-21. It is certified that all corrections / suggestions indicated for Internal Assessment have been incorporated in the report. . The Project report has been approved as it satisfies the academic requirements in respect of Mobile Application Development with Mini Project Laboratory prescribed for the said Degree.

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Rajdeep Chauhan
Smitha Maganti
Shravanthi Madhugiri

ABSTRACT

Ever since the Covoid-19 pandemic struck the world in 2019, several businesses were affected.

It has changed how all of us view the world. Every part of people's lives in India has been affected, as well as the economy, politics, culture, and society. In addition to the substantial burden on healthcare systems, COVID-19 has had major economic consequences for the affected countries. It has caused direct impacts on income due to premature deaths, workplace absenteeism, and reduction in productivity and has created a negative supply shock, with manufacturing productive activity slowing down due to global supply chain disruptions and closures of factories.

It is important to understand how the owners of small businesses, start-ups, and the self-employed are faring amidst this lockdown. Most of these economic ventures navigate the boundaries of the formal and informal sectors. The people working in these sectors have been generally excluded from debates on the economic impact of the COVID-19 pandemic.

Especially in a country like India, where thousands of people set up their small-scale businesses out on the roads, the imposition of lockdown had severely impacted their income.Almost 95% of the self-employed belong to the informal unorganised sector, who may not have savings to go back to.

This was what inspired us to come up with the idea of making an app that would benefit the people who run these small-scale businesses.

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Chapter 1

INTRODUCTION

1.1 Overview

Mobile application development is the set of processes and procedures involved in writing software for small, wireless computing devices, such as smartphones and other hand-held devices. Today, the two most prominent mobile platforms are iOS from Apple and Android from Google. It is the process to making software for smartphones and digital assistants, most commonly for Android and iOS.The software can be preinstalled on the device, downloaded from a mobile app store or accessed through a mobile web browser. The programming and markup languages used for this kind of software development include Java, Swift, C# and HTML5. Modern cross-platform tools use common languages to share code across projects; more importantly, they integrate well with application lifecycle management tools.

1.2 Problem Statement

The aim of this project is to make an effort to bridge the gap between vendors and customers, which came into existence due to the global pandemic. It has been implemented using XML and Java languages. The objective of the application is to connect the vendors to customers living nearby, through an app which allows the vendor to display his/her items. The customers will be able to see the vendors who have set up their business in their location, as the app will display the shops based on the customer's pincode.

1.3 Motivation

In a country like India, where thousands of people set up their small-scale businesses out on the roads, the imposition of lockdown had severely impacted their income.Almost 95% of the self-employed belong to the informal unorganised sector, who may not have savings to go back to. It is important to understand how the owners of small businesses, start-ups, and the self-employed are faring amidst this lockdown. Most of these economic ventures navigate the boundaries of the formal and informal.

sectors. This was what inspired us to come up with the idea of making an app that would benefit the people who run these small-scale businesses.

1.4 Mobile Application Development – Need & Importance

Successful mobile app development services require a smart methodology where the market, product and users work greatly to give exceptional user experience. When you choose the right tools, you can be assured that your application is built well and perfectly fitted into your niche market. Deciding on android as the app development platform makes it as the excellent choice for businesses those who look to expand their reach in global markets. This is because android is the leading platform in growing countries and is estimated with around 1.4 billion unique users, and of course the number is growing over the time. Hence with an android app, you can grasp the opportunity of easy access to a massive global market.

- **Ease of Development and Customization** - Android software is an open ecosystem which allows developers of android mobile app development companies to freely access desired sections of the android code they might need for their apps. Android mobile applications emerged as a potentially profitable deal because it created highly marketable mobile applications products which will reach a larger group of audiences than it might have on smartphone platforms.
- **Branding -** Android mobile app development services can help businesses to catch the mind share and heart share of the customers to build brand loyalty. In this social media era, even big brands encounter difficulty to maintain brand loyalty. Android mobile applications engage customers through personalized communication and provide effective customer service on customer's fingertips. Android apps can help to compete with the brand experience -associated with a particular brand.
- **Reduce Your On-Premise Costs** - Most of the services that you provide at your business premises can be provided through android mobile applications. This would put you in a position where you do not need to pay workers to do that particular job.

1.5 Android Studio

Android Studio is the official Integrated Development Environment (IDE) for Android app development, based on IntelliJ IDEA. On top of IntelliJ's powerful code editor and developer tools, Android Studio offers even more features that enhance your productivity when building Android apps, such as:

1. A flexible Gradle-based build system
2. A fast and feature-rich emulator
3. A unified environment where you can develop for all Android devices
4. Apply Changes to push code and resource changes to your running app without restarting your app
5. Code templates and GitHub integration to help you build common app features and import sample code
6. Extensive testing tools and frameworks
7. Lint tools to catch performance, usability, version compatibility, and other problems
8. C++ and NDK support

Chapter 2

SYSTEM REQUIREMENTS

2.1 Software Requirements

Software requirements deal with defining software resource requirements and prerequisites that need to be installed on a computer to provide optimal functioning of an application.

The following are the software requirements for the application:

- Operating System: 64-bit Windows 10
- Development Environment: Android Studio

2.2 Hardware Requirements

The most common set of requirements defined by any operating system or software application is the physical computer resources, also known as hardware.

- CPU: Intel or AMD processor, x86_64 CPU architecture
- Cores: 2nd generation Intel Core or newer, or AMD CPU with support for a Windows Hypervisor
- RAM: minimum 8GB (>8GB recommended)
- Graphics: Intel Integrated Graphics or AMD Equivalent
- Secondary Storage: 250GB
- Display Resolution: 1280 x 800 minimum screen resolution

Chapter 3

SYSTEM DESIGN

3.1 XML Design

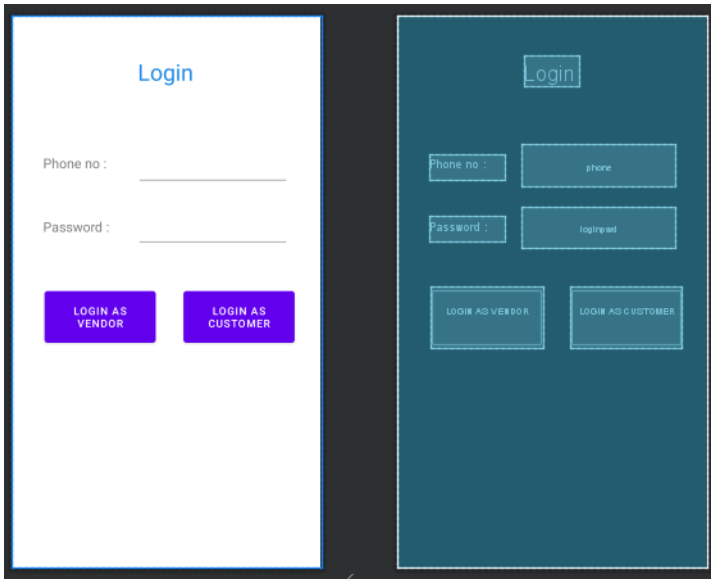

Figure 3.1 XML design of signup page

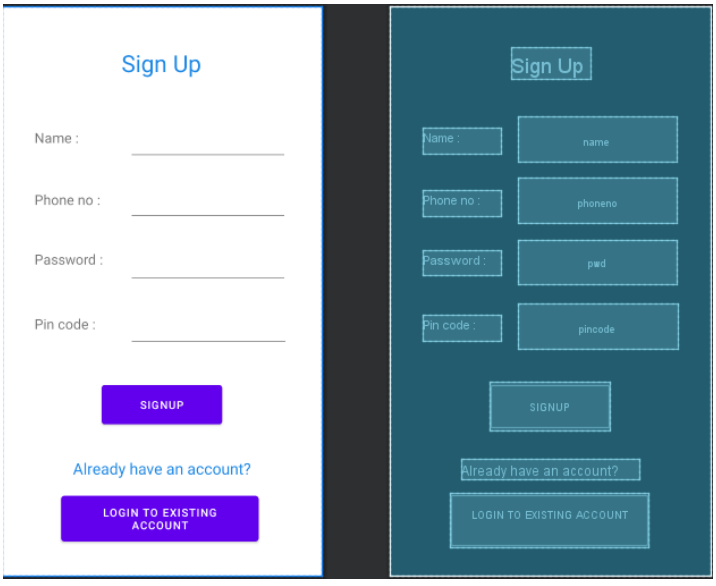

Figure 3.2 XML design of ActivityMain

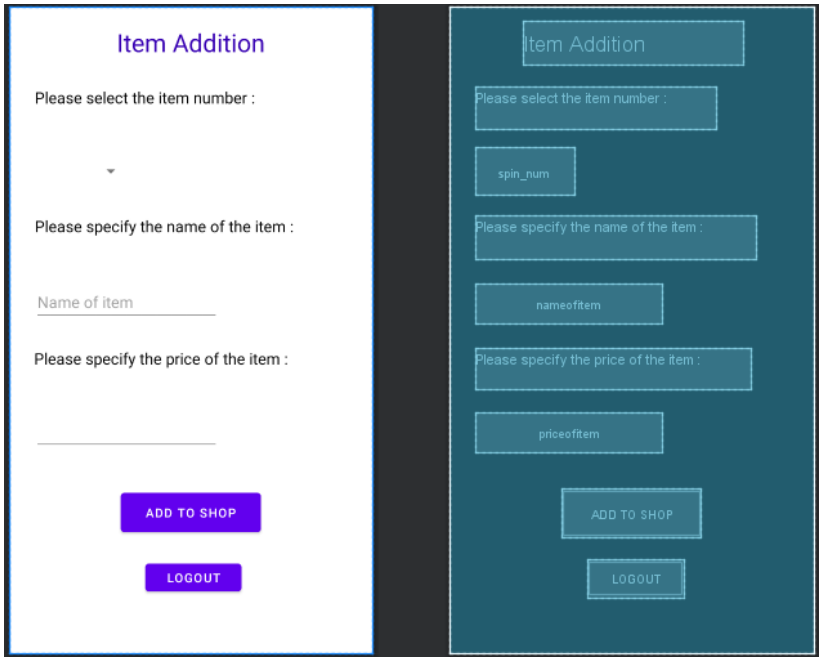

Figure 3.3 XML design of add_items activity

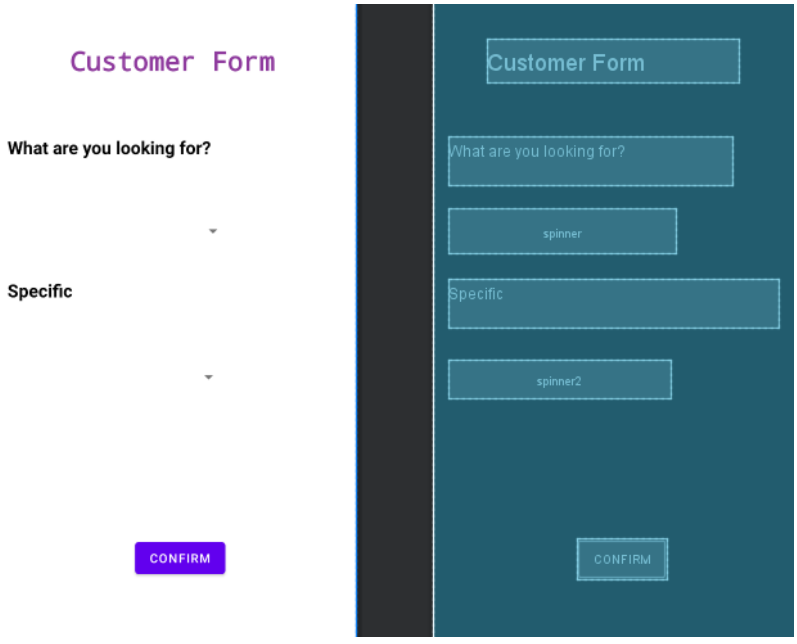

Figure 3.4 XML design of customer activity

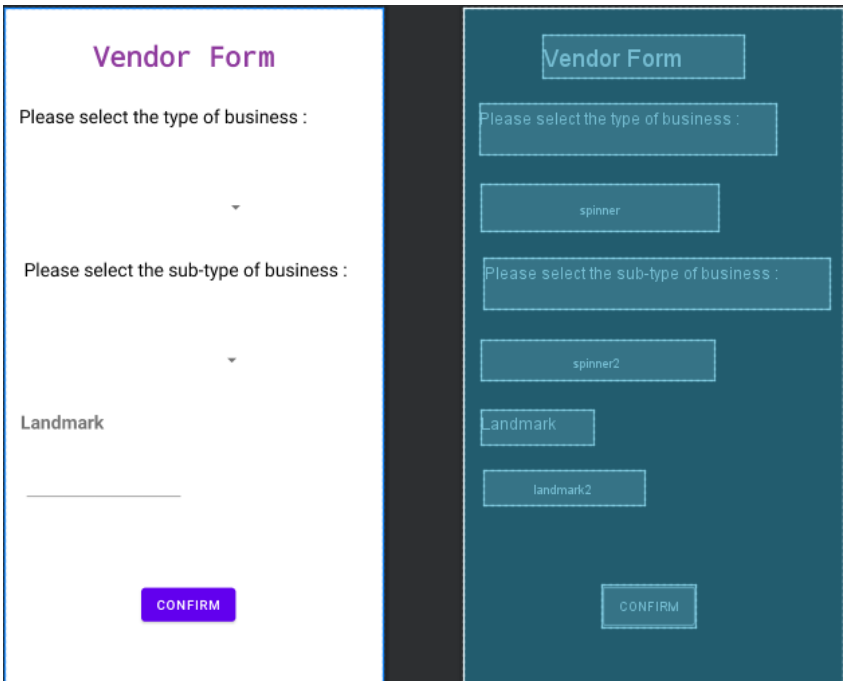

Figure 3.5 XML design of vendor form

3.2 XML Code

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <TextView
        android:id="@+id/name2"
        android:layout_width="100dp"
        android:layout_height="33dp"
        android:text="Name"
        android:textSize="18sp"
        app:layout_constraintBottom_toBottomOf="parent"
```

```
    app:layout_constraintHorizontal_bias="0.135"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.224" />

  <TextView
    android:id="@+id/alreadyacc"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_marginBottom="124dp"
    android:text="Already have an account?"
    android:textColor="#1E88E5"
    android:textSize="20sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent" />

  <TextView
    android:id="@+id/pin"
    android:layout_width="100dp"
    android:layout_height="33dp"
    android:text="Pin code : "
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintHorizontal_bias="0.135"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.567" />

  <TextView
    android:id="@+id/Phone"
    android:layout_width="100dp"
    android:layout_height="33dp"
    android:text="Phone no : "
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintHorizontal_bias="0.135"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
```

```
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.338" />

  <TextView
    android:id="@+id/password"
    android:layout_width="100dp"
    android:layout_height="33dp"
    android:text="Password : "
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintHorizontal_bias="0.135"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.448" />

  <EditText
    android:id="@+id/pwd"
    android:layout_width="204dp"
    android:layout_height="57dp"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.787"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.445" />

  <Button
    android:id="@+id/signup"
    android:layout_width="155dp"
    android:layout_height="62dp"
    android:text="SignUP"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.718" />

  <TextView
```

```
    android:id="@+id/textView2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Sign Up"
    android:textColor="#1E88E5"
    android:textSize="30sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.076" />

<EditText
    android:id="@+id/phoneno"
    android:layout_width="204dp"
    android:layout_height="58dp"
    android:ems="10"
    android:inputType="phone"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.787"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.326" />

<EditText
    android:id="@+id/name"
    android:layout_width="204dp"
    android:layout_height="58dp"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.787"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.21" />

<EditText
    android:id="@+id/pincode"
```

```
        android:layout_width="205dp"
        android:layout_height="58dp"
        android:ems="10"
        android:inputType="number"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.791"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.566" />

    <Button
        android:id="@+id/loginbtn"
        android:layout_width="254dp"
        android:layout_height="70dp"
        android:layout_marginStart="76dp"
        android:layout_marginLeft="76dp"
        android:layout_marginTop="16dp"
        android:text="Login to existing account"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/alreadyacc" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_login.xml

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".signup">
    <TextView
        android:id="@+id/password2"
        android:layout_width="100dp"
        android:layout_height="33dp"
        android:text="Password : "
        android:textSize="18sp"
        app:layout_constraintBottom_toBottomOf="parent"
```

```
    app:layout_constraintHorizontal_bias="0.135"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.381" />

  <TextView
    android:id="@+id/Phone2"
    android:layout_width="100dp"
    android:layout_height="33dp"
    android:text="Phone no : "
    android:textSize="18sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintHorizontal_bias="0.135"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.26" />

  <Button
    android:id="@+id/vendorbtn"
    android:layout_width="148dp"
    android:layout_height="80dp"
    android:text="Login as Vendor"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.167"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.549" />

  <Button
    android:id="@+id/custbtn"
    android:layout_width="148dp"
    android:layout_height="80dp"
    android:text="Login as Customer"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.87"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
```

```
    app:layout_constraintVertical_bias="0.549" />

  <EditText
    android:id="@+id/loginpwd"
    android:layout_width="203dp"
    android:layout_height="55dp"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.798"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.372" />

  <EditText
    android:id="@+id/phone"
    android:layout_width="203dp"
    android:layout_height="55dp"
    android:ems="10"
    android:inputType="textPersonName"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.798"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.251" />

  <TextView
    android:id="@+id/login"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Login"
    android:textColor="#1E88E5"
    android:textSize="30sp"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent"
    app:layout_constraintVertical_bias="0.076"/>
```

```
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_vendor.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<androidx.constraintlayout.widget.ConstraintLayout tools:context=".vendor"
android:layout_height="match_parent" android:layout_width="match_parent"
xmlns:tools="http://schemas.android.com/tools"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:android="http://schemas.android.com/apk/res/android"><TextView
android:layout_height="47dp" android:layout_width="217dp"
app:layout_constraintVertical_bias="1.0" app:layout_constraintTop_toTopOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintBottom_toTopOf="@+id/bustype" android:textStyle="bold"
android:textSize="30sp" android:textColor="#8F3B9E" android:text="Vendor Form"
android:gravity="center" android:fontFamily="monospace"
android:layout_marginBottom="28dp" android:layout_marginEnd="108dp"
android:id="@+id/VendorForm"/><TextView android:layout_height="55dp"
android:layout_width="321dp" app:layout_constraintTop_toTopOf="parent"
app:layout_constraintEnd_toEndOf="parent" android:textSize="20sp"
android:textColor="@color/black" android:text="Please select the type of business :"
android:id="@+id/bustype" app:layout_constraintStart_toStartOf="parent"
app:layout_constraintHorizontal_bias="0.177" android:layout_marginTop="104dp"/><TextView
android:layout_height="54dp" android:layout_width="374dp"
app:layout_constraintEnd_toEndOf="parent" android:textSize="20sp"
android:textColor="@color/black" android:text="Please select the sub-type of business :"
android:layout_marginEnd="16dp" android:id="@+id/subtype"
android:layout_marginTop="28dp"
app:layout_constraintTop_toBottomOf="@+id/spinner"/><Spinner
android:layout_height="51dp" android:layout_width="257dp"
app:layout_constraintEnd_toEndOf="parent" android:layout_marginEnd="136dp"
android:id="@+id/spinner" android:layout_marginTop="32dp"
app:layout_constraintTop_toBottomOf="@+id/bustype"/><Spinner
```

```
android:layout_height="43dp" android:layout_width="252dp"
app:layout_constraintVertical_bias="0.0" app:layout_constraintEnd_toEndOf="parent"
android:layout_marginEnd="140dp" android:id="@+id/spinner2"
android:layout_marginTop="36dp" app:layout_constraintTop_toBottomOf="@+id/subtype"
app:layout_constraintBottom_toBottomOf="parent"/><Button
android:layout_height="wrap_content" android:layout_width="wrap_content"
app:layout_constraintEnd_toEndOf="parent" android:text="CONFIRM"
android:layout_marginBottom="60dp" android:layout_marginEnd="160dp"
android:id="@+id/button2" app:layout_constraintBottom_toBottomOf="parent"/><TextView
android:layout_height="38dp" android:layout_width="122dp"
app:layout_constraintEnd_toEndOf="parent" android:textStyle="bold" android:textSize="20dp"
android:text="Landmark" android:layout_marginEnd="272dp" android:id="@+id/landmark"
android:layout_marginTop="32dp"
app:layout_constraintTop_toBottomOf="@+id/spinner2"/><EditText
android:layout_height="38dp" android:layout_width="175dp"
app:layout_constraintVertical_bias="0.306" app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintBottom_toTopOf="@+id/button2" android:layout_marginBottom="24dp"
android:layout_marginEnd="216dp" android:id="@+id/landmark2"
app:layout_constraintTop_toBottomOf="@+id/landmark"
android:inputType="textPersonName"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_add_items.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<androidx.constraintlayout.widget.ConstraintLayout tools:context=".AddItems"
android:layout_height="match_parent" android:layout_width="match_parent"
xmlns:tools="http://schemas.android.com/tools"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:android="http://schemas.android.com/apk/res/android"><TextView
android:layout_height="0dp" android:layout_width="0dp"
```

app:layout_constraintTop_toBottomOf="@+id/itemadd"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toEndOf="@+id/itemadd"
app:layout_constraintBottom_toTopOf="@+id/itemname" android:textSize="18sp"
android:textColor="#000000" android:text="Please select the item number :"
android:layout_marginBottom="97dp" android:layout_marginEnd="30dp"
android:layout_marginStart="29dp" android:id="@+id/itemno"/><Spinner
android:layout_height="54dp" android:layout_width="111dp"
app:layout_constraintTop_toBottomOf="@+id/itemno"
app:layout_constraintStart_toStartOf="parent" android:layout_marginStart="28dp"
android:id="@+id/spin_num" android:layout_marginTop="20dp"/><TextView
android:layout_height="0dp" android:layout_width="317dp"
app:layout_constraintTop_toBottomOf="@+id/itemno"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintBottom_toTopOf="@+id/nameofitem" android:textSize="18sp"
android:textColor="@color/black" android:text="Please specify the name of the item :"
android:layout_marginBottom="27dp" android:layout_marginStart="29dp"
android:id="@+id/itemname"/><TextView android:layout_height="0dp"
android:layout_width="310dp" app:layout_constraintTop_toBottomOf="@+id/nameofitem"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintBottom_toTopOf="@+id/priceofitem" android:textSize="18sp"
android:textColor="@color/black" android:text="Please specify the price of the item :"
android:layout_marginBottom="24dp" android:layout_marginStart="28dp"
android:id="@+id/itemprice"/><TextView android:layout_height="0dp"
android:layout_width="249dp" app:layout_constraintStart_toStartOf="parent"
app:layout_constraintEnd_toEndOf="parent"
app:layout_constraintBottom_toTopOf="@+id/itemno" android:textSize="28sp"
android:textColor="@color/purple_700" android:text="Item Addition"
android:layout_marginBottom="26dp" android:id="@+id/itemadd"
android:layout_marginTop="16dp" app:layout_constraintTop_toTopOf="parent"
android:gravity="center"/><EditText android:layout_height="wrap_content"
android:layout_width="wrap_content"

```
app:layout_constraintTop_toBottomOf="@+id/itemname"
app:layout_constraintStart_toStartOf="parent"
app:layout_constraintBottom_toTopOf="@+id/itemprice"
android:layout_marginBottom="29dp" android:layout_marginStart="28dp"
android:id="@+id/nameofitem" android:inputType="textPersonName" android:hint="Name of
item" android:ems="10"/><EditText android:layout_height="wrap_content"
android:layout_width="wrap_content" app:layout_constraintTop_toBottomOf="@+id/itemprice"
app:layout_constraintStart_toStartOf="parent" android:layout_marginBottom="228dp"
android:layout_marginStart="28dp" android:id="@+id/priceofitem"
android:inputType="number" android:ems="10"
app:layout_constraintBottom_toBottomOf="parent"/><Button android:layout_height="56dp"
android:layout_width="159dp" app:layout_constraintTop_toBottomOf="@+id/priceofitem"
app:layout_constraintStart_toStartOf="parent" app:layout_constraintEnd_toEndOf="parent"
android:text="Add to Shop" android:layout_marginBottom="120dp"
android:id="@+id/addtoshop" app:layout_constraintBottom_toBottomOf="parent"
app:layout_constraintVertical_bias="0.788"/><Button android:layout_height="43dp"
android:layout_width="109dp" app:layout_constraintEnd_toEndOf="parent"
android:text="Logout" android:layout_marginBottom="64dp"
android:layout_marginEnd="148dp" android:id="@+id/button3"
app:layout_constraintBottom_toBottomOf="parent"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

activity_customer.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<androidx.constraintlayout.widget.ConstraintLayout tools:context=".vendor"
android:layout_height="match_parent" android:layout_width="match_parent"
xmlns:tools="http://schemas.android.com/tools"
xmlns:app="http://schemas.android.com/apk/res-auto"
xmlns:android="http://schemas.android.com/apk/res/android"><TextView
android:layout_height="49dp" android:layout_width="285dp"
```

```
app:layout_constraintTop_toTopOf="parent" app:layout_constraintStart_toStartOf="parent"
android:textStyle="bold" android:textSize="30sp" android:textColor="#8F3B9E"
android:text="Customer Form" android:gravity="center" android:fontFamily="monospace"
android:layout_marginTop="44dp" android:layout_marginStart="60dp"
android:id="@+id/VendorForm"/><TextView android:layout_height="55dp"
android:layout_width="321dp" app:layout_constraintStart_toStartOf="parent"
android:textStyle="bold" android:textSize="20sp" android:textColor="@color/black"
android:text="What are you looking for?" android:layout_marginTop="60dp"
android:layout_marginStart="16dp" android:id="@+id/bustype"
app:layout_constraintTop_toBottomOf="@+id/VendorForm"/><TextView
android:layout_height="54dp" android:layout_width="374dp"
app:layout_constraintStart_toStartOf="parent" android:textStyle="bold"
android:textSize="20sp" android:textColor="@color/black" android:text="Specific"
android:layout_marginTop="28dp" android:layout_marginStart="16dp"
android:id="@+id/subtype" app:layout_constraintTop_toBottomOf="@+id/spinner"/><Spinner
android:layout_height="51dp" android:layout_width="257dp"
app:layout_constraintStart_toStartOf="parent" android:layout_marginTop="28dp"
android:layout_marginStart="16dp" android:id="@+id/spinner"
app:layout_constraintTop_toBottomOf="@+id/bustype"/><Spinner
android:layout_height="43dp" android:layout_width="252dp"
app:layout_constraintStart_toStartOf="parent" android:layout_marginTop="36dp"
android:layout_marginStart="16dp" android:id="@+id/spinner2"
app:layout_constraintTop_toBottomOf="@+id/subtype"
app:layout_constraintVertical_bias="0.0"
app:layout_constraintBottom_toBottomOf="parent"/><Button
android:layout_height="wrap_content" android:layout_width="wrap_content"
android:text="CONFIRM" android:layout_marginTop="160dp" android:id="@+id/button2"
app:layout_constraintTop_toBottomOf="@+id/spinner2"
tools:layout_editor_absoluteX="161dp"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

Chapter 4

IMPLEMENTATION

4.1 Description

- **MainActivity.java**

  It used to display the sign up page which lets the user sign up to the app by providing their information.

- **Login.java**

  It allows the user to login to the app with their account.

- **Vendor.java**

  It is used to allow the vendor to select which type of business and sub-type of business they run. It also allows them to specify a landmark, near which their business is set up.

- **AddItems.java**

  It is used by the vendor to add items to the shop, which will be displayed to the customer.

- **Customer.java**

  It is used by the customer to specify which type of business they are looking to locate, and the sub-type of business.

4.2 Java Code

MainActivity.java

```
package com.example.vendorproject;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
importandroid.widget.Toast;
```

```
import com.google.firebase.database.DataSnapshot;
import com.google.firebase.database.DatabaseError;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.database.ValueEventListener;

import java.util.regex.Matcher;
import java.util.regex.Pattern;
public class MainActivity extends AppCompatActivity implements View.OnClickListener{
    private EditText username, pwd, pc, ph;
    private Button signup, login;
    DatabaseReference reff;
    userinfo info;
    String regex="^(?=.[A-Za-z])(?=.\\d)(?=.[@$!%#?&])[A-Za-z\\d@$!%*#?&]{8,}$";
    String regexph="^[2-9]{1}[0-9]{9}$";
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        username=(EditText)findViewById(R.id.name);
        ph=(EditText)findViewById(R.id.phoneno);
        pc=(EditText)findViewById(R.id.pincode);
        pwd=(EditText)findViewById(R.id.pwd);
        signup=(Button)findViewById(R.id.signup);
        login=(Button)findViewById(R.id.loginbtn);
        signup.setOnClickListener(this);
        login.setOnClickListener(this);
        info = new userinfo();
        reff = FirebaseDatabase.getInstance().getReference().child("userinfo");
    }

    @Override
    public void onClick(View view) {
        if(view.equals(signup)) {
            String name = username.getText().toString();
            String pass = pwd.getText().toString();
            Long phone = Long.parseLong(ph.getText().toString());
            Long pin = Long.parseLong(pc.getText().toString());
            if (!(name.equals("") && pass.equals("") && phone.equals("") && pin.equals("")))
            {
                if (validate(pass) && validateph(Long.toString(phone)))
```

```
            {

                info.setName(name);
                info.setPassword(pass);
                //info.setPh(phone);
                info.setPincode(pin);
                reff.child(Long.toString(phone)).setValue(info);
                Toast.makeText(getBaseContext(), "Successfully signed up",
Toast.LENGTH_LONG).show();
                Intent i = new Intent(this, signup.class);
                startActivity(i);

            }
            else if(!validate(pass))
            {
                Toast.makeText(getBaseContext(), "Invalid Password",
Toast.LENGTH_LONG).show();
            }
            else if(!validateph(Long.toString(phone)))
            {
                Toast.makeText(getBaseContext(), "Invalid Phone Number",
Toast.LENGTH_LONG).show();
            }
        }
        else
        {
            Toast.makeText(getBaseContext(), "Enter details", Toast.LENGTH_LONG).show();
        }
    }
    else{
        Intent i = new Intent(this, signup.class);
        startActivity(i);
    }
  }
  public boolean validate(String p)
  {
    Pattern pat= Pattern.compile(regex);
    Matcher m=pat.matcher(p);
    return m.matches();
  }
  public boolean validateph(String p)
```

```
    {
        Pattern pat= Pattern.compile(regexph);
        Matcher m=pat.matcher(p);
        return m.matches();
    }
}
```

Login.java

```
package com.example.vendorproject;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;

import com.google.firebase.database.DataSnapshot;
import com.google.firebase.database.DatabaseError;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.database.ValueEventListener;

import java.security.KeyStore;

import static java.lang.Thread.sleep;

public class signup extends AppCompatActivity implements View.OnClickListener{
    private EditText phoneno, pwd;
    private Button vendorlogin, custlogin;
    boolean b;
    String pass;
    DatabaseReference reff;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_signup);
        phoneno=(EditText)findViewById(R.id.phone);
```

```
        pwd=(EditText)findViewById(R.id.loginpwd);
        vendorlogin=(Button)findViewById(R.id.vendorbtn);
        custlogin=(Button)findViewById(R.id.custbtn);
        vendorlogin.setOnClickListener(this);
        custlogin.setOnClickListener(this);
    }
    @Override
    public void onClick(View view){
        String inputno=phoneno.getText().toString();
        String inputpwd=pwd.getText().toString();
        reff = FirebaseDatabase.getInstance().getReference().child("userinfo").child(inputno);
        validate(inputno, inputpwd, view);
    }
    private void validate(String n, String p, View view)
    {
        reff = FirebaseDatabase.getInstance().getReference().child("userinfo").child(n);
        reff.addValueEventListener(new ValueEventListener() {
            @Override
            public void onDataChange(@NonNull DataSnapshot snapshot) {
                try {
                    pass = snapshot.child("password").getValue().toString();
                    if(p.equals(pass)){
                        Toast.makeText(signup.this,"Login
Successful",Toast.LENGTH_SHORT).show();
                        Bundle bundle = new Bundle();
                        bundle.putString("phone", n);
                        if(view.equals(vendorlogin)){
                            Intent i= new Intent(signup.this, vendor.class);
                            i.putExtra("data", bundle);
                            startActivity(i);
                            finish();
                        }
                        else{
                            Intent i= new Intent(signup.this, customer.class);
                            i.putExtra("data", bundle);
                            startActivity(i);
                            finish();
                        }
                    }
                    else if(!p.equals(pass)) {
                        Toast.makeText(signup.this, "Login Failed!", Toast.LENGTH_SHORT).show();
```

```
                }
            }
            catch (Exception e){
                pass = "null";
                Toast.makeText(signup.this, "Account does not exist",
Toast.LENGTH_SHORT).show();
                Intent i= new Intent(signup.this, MainActivity.class);
                startActivity(i);
            }
        }

        @Override
        public void onCancelled(@NonNull DatabaseError error) {
            Intent i= new Intent(signup.this, MainActivity.class);
            startActivity(i);
            Toast.makeText(signup.this, "Database error", Toast.LENGTH_SHORT).show();
        }
    });
  }
}
```

Vendor.java

```
package com.example.vendorproject;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.TextView;
import android.widget.Toast;

import com.google.firebase.database.DataSnapshot;
import com.google.firebase.database.DatabaseError;
```

```
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.database.ValueEventListener;

public class vendor extends AppCompatActivity implements
AdapterView.OnItemSelectedListener, View.OnClickListener {
    DatabaseReference reff, reff1, reff2, reff3, reff4, reff5, reff6, reff7;
    Button btn;
    String ss, phoneno;
    EditText lnd;
    Vegetables vegie;
    Fruits fru;
    userinfo info;
    Leafy_Vegetables leaf;
    Coconut_Water coco;
    Flower flo;
    Chaats chat;
    Dosa dosa;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_vendor);

        lnd = (EditText)findViewById(R.id.landmark2);
        btn = (Button)findViewById(R.id.button2);
        Spinner spinner = (Spinner) findViewById(R.id.spinner);
        ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,
                R.array.businesstypes, android.R.layout.simple_dropdown_item_1line);
        adapter.setDropDownViewResource(android.R.layout.simple_dropdown_item_1line);
        spinner.setAdapter(adapter);
        spinner.setOnItemSelectedListener(this);
        btn.setOnClickListener(this);
        info = new userinfo();
        reff = FirebaseDatabase.getInstance().getReference().child("userinfo");
        vegie = new Vegetables();
        reff1 = FirebaseDatabase.getInstance().getReference().child("Vegetables");
        fru = new Fruits();
        reff2 = FirebaseDatabase.getInstance().getReference().child("Fruits");
        leaf = new Leafy_Vegetables();
        reff3 = FirebaseDatabase.getInstance().getReference().child("Leafy_Vegetables");
```

```
        flo = new Flower();
        reff4 = FirebaseDatabase.getInstance().getReference().child("Flower");
        chat = new Chaats();
        reff5 = FirebaseDatabase.getInstance().getReference().child("Chaats");
        dosa = new Dosa();
        reff6 = FirebaseDatabase.getInstance().getReference().child("Dosa");
        coco = new Coconut_Water();
        reff7 = FirebaseDatabase.getInstance().getReference().child("Coconut_Water");

        Bundle bundle=getIntent().getBundleExtra("data");
        phoneno = bundle.getString("phone");
    }

    public void onItemSelected(AdapterView<?> parent, View view, int pos, long id) {
        Object selected = parent.getItemAtPosition(pos);
        ss = selected.toString();
        Spinner spinner2 = (Spinner) findViewById(R.id.spinner2);
        TextView tv = (TextView) findViewById(R.id.subtype);
        Toast.makeText(getBaseContext(), ss, Toast.LENGTH_SHORT).show();
        if(ss.equals("Groceries"))
        {
            ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,
                    R.array.grocerysubtypes, android.R.layout.simple_dropdown_item_1line);
            adapter.setDropDownViewResource(android.R.layout.simple_dropdown_item_1line);
            spinner2.setAdapter(adapter);
            spinner2.setOnItemSelectedListener(this);
        }
        else if(ss.equals("Food Truck"))
        {
            ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,
                    R.array.foodsubtypes, android.R.layout.simple_dropdown_item_1line);
            adapter.setDropDownViewResource(android.R.layout.simple_dropdown_item_1line);
            spinner2.setAdapter(adapter);
            spinner2.setOnItemSelectedListener(this);
        }
        else if(ss.equals("Flowers"))
        {
            ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,
                    R.array.flowersubtypes, android.R.layout.simple_dropdown_item_1line);
            adapter.setDropDownViewResource(android.R.layout.simple_dropdown_item_1line);
            spinner2.setAdapter(adapter);
```

```
        spinner2.setOnItemSelectedListener(this);
    }
}
@Override
public void onNothingSelected(AdapterView<?> parent) {

}

@Override
public void onClick(View v) {


    /*reff = FirebaseDatabase.getInstance().getReference().child("userinfo").child(phoneno);
    reff.addValueEventListener(new ValueEventListener() {
        @Override
        public void onDataChange(@NonNull DataSnapshot snapshot) {
            String pin = snapshot.child("pincode").getValue().toString();
            pincode = pin;
        }

        @Override
        public void onCancelled(@NonNull DatabaseError error) {

        }
    });*/
    Toast.makeText(getBaseContext(), ss, Toast.LENGTH_SHORT).show();
    switch(ss){
        case "Vegetables":
            vegie.setPhone(phoneno);
            reff1.push().setValue(vegie.phone);

            break;
        case "Fruits":
            fru.setPhone(phoneno);
            reff2.push().setValue(fru.phone);
            break;
        case "Leafy_Vegetables":
            leaf.setPhone(phoneno);
            reff3.push().setValue(leaf.phone);
            break;
        case "Flower":
```

```
            flo.setPhone(phoneno);
            reff4.push().setValue(flo.phone);
            break;
        case "Chaats":
            chat.setPhone(phoneno);
            reff5.push().setValue(chat.phone);
            break;
        case "Dosa":
            dosa.setPhone(phoneno);
            reff6.push().setValue(dosa.phone);
            break;
        case "Coconut_Water":
            coco.setPhone(phoneno);
            reff7.push().setValue(coco.phone);
            break;
        default:
            Toast.makeText(getBaseContext(), ss, Toast.LENGTH_SHORT).show();
            break;
    }

    Intent i = new Intent(this, AddItems.class);
    startActivity(i);
    finish();
  }
}
```

Additems.java

```
package com.example.vendorproject;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.TextView;
```

```
import android.widget.Toast;

import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;

public class AddItems extends AppCompatActivity implements
AdapterView.OnItemSelectedListener, View.OnClickListener{
    DatabaseReference reff;
    Shops shop;
    String ss, phone, land, types, goods, cost;
    //Bundle bundle;
    Spinner spinum;
    EditText goods1, cost1;
    Button b1, b2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_add_items);
        //bundle=getIntent().getBundleExtra("data");
        goods1 = (EditText)findViewById(R.id.nameofitem);
        cost1 = (EditText)findViewById(R.id.priceofitem);
        //land =bundle.getString("land");
        //phone = bundle.getString("phone");
        //types = bundle.getString("type");
        b1 = (Button)findViewById(R.id.addtoshop);
        b2 = (Button)findViewById(R.id.button3);
        b1.setOnClickListener(this);
        b2.setOnClickListener(this);
        spinum = (Spinner) findViewById(R.id.spin_num);
        ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,
                R.array.number, android.R.layout.simple_dropdown_item_1line);
        adapter.setDropDownViewResource(android.R.layout.simple_dropdown_item_1line);
        spinum.setAdapter(adapter);
        spinum.setOnItemSelectedListener(this);
        shop = new Shops();
        reff = FirebaseDatabase.getInstance().getReference().child("Shops");

    }
    public void onItemSelected(AdapterView<?> parent, View view, int pos, long id) {

        Object selected = parent.getItemAtPosition(pos);
```

```
        ss = selected.toString();
    }

    @Override
    public void onNothingSelected(AdapterView<?> parent) {

    }

    @Override
    public void onClick(View v) {
        if(v.equals(b1)){
            cost = cost1.getText().toString();
            goods = goods1.getText().toString();
            //shop.setType(types);
            //shop.setLandmark(land);
            shop.setPrice(cost);
            shop.setItem(goods);
            //shop.setPhone(Long.parseLong(phone));
            reff.push().setValue(shop);
            Toast.makeText(getBaseContext(), "Successfully added!",
Toast.LENGTH_SHORT).show();
            Intent i = new Intent(this, AddItems.class);
            startActivity(i);
        }
        else{
            Intent i = new Intent(this, MainActivity.class);
            startActivity(i);
        }
        finish();
    }
}
```

Customer.java

```
package com.example.vendorproject;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
```

```
import android.widget.AdapterView;
import android.widget.ArrayAdapter;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Spinner;
import android.widget.TextView;
import android.widget.Toast;
import com.google.firebase.database.DataSnapshot;
import com.google.firebase.database.DatabaseError;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.database.ValueEventListener;

public class customer extends AppCompatActivity implements
AdapterView.OnItemSelectedListener, View.OnClickListener {
   //DatabaseReference reff, reff1, reff2, reff3, reff4, reff5, reff6, reff7;
   Button btn,btn2;
   String ss, phoneno;
   EditText lnd;

   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_customer);

      lnd = (EditText)findViewById(R.id.landmark2);
      btn = (Button)findViewById(R.id.button2);
      btn2 = (Button)findViewById(R.id.button4);
      Spinner spinner = (Spinner) findViewById(R.id.spinner);
      ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,
            R.array.businesstypes, android.R.layout.simple_dropdown_item_1line);
      adapter.setDropDownViewResource(android.R.layout.simple_dropdown_item_1line);
      spinner.setAdapter(adapter);
      spinner.setOnItemSelectedListener(this);
      btn.setOnClickListener(this);
      btn2.setOnClickListener(this);

      Bundle bundle=getIntent().getBundleExtra("data");
      phoneno = bundle.getString("phone");

   }
```

```
public void onItemSelected(AdapterView<?> parent, View view, int pos, long id) {
    Object selected = parent.getItemAtPosition(pos);
    ss = selected.toString();
    Spinner spinner2 = (Spinner) findViewById(R.id.spinner2);
    TextView tv = (TextView) findViewById(R.id.subtype);
    if(ss.equals("Groceries"))
    {
        ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,
                R.array.grocerysubtypes, android.R.layout.simple_dropdown_item_1line);
        adapter.setDropDownViewResource(android.R.layout.simple_dropdown_item_1line);
        spinner2.setAdapter(adapter);
        spinner2.setOnItemSelectedListener(this);
    }
    else if(ss.equals("Food Truck"))
    {
        ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,
                R.array.foodsubtypes, android.R.layout.simple_dropdown_item_1line);
        adapter.setDropDownViewResource(android.R.layout.simple_dropdown_item_1line);
        spinner2.setAdapter(adapter);
        spinner2.setOnItemSelectedListener(this);
    }
    else if(ss.equals("Flowers"))
    {
        ArrayAdapter<CharSequence> adapter = ArrayAdapter.createFromResource(this,
                R.array.flowersubtypes, android.R.layout.simple_dropdown_item_1line);
        adapter.setDropDownViewResource(android.R.layout.simple_dropdown_item_1line);
        spinner2.setAdapter(adapter);
        spinner2.setOnItemSelectedListener(this);
    }
}
@Override
public void onNothingSelected(AdapterView<?> parent) {

}


@Override
public void onClick(View v) {

    if(v.equals(btn)){
```

```
            Bundle bundle = new Bundle();
            bundle.putString("ss",ss);
            bundle.putString("phone",phoneno);
            Intent i = new Intent(this, customer2.class);
            i.putExtra("data", bundle);
            startActivity(i);
        }
        else{
            Intent i = new Intent(this, MainActivity.class);
            startActivity(i);
            finish();
        }

    }
}
```

Customer2.java

```
package com.example.vendorproject;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.widget.TextView;
import com.google.firebase.database.DataSnapshot;
import com.google.firebase.database.DatabaseError;
import com.google.firebase.database.DatabaseReference;
import com.google.firebase.database.FirebaseDatabase;
import com.google.firebase.database.ValueEventListener;
public class customer2 extends AppCompatActivity {
    String phoneno, types, var;
    TextView t1, t2, t3, t4, t5, t6, t7;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_customer2);
        t1 = (TextView) findViewById(R.id.textView10);
        t2 = (TextView) findViewById(R.id.textView6);
        t3 = (TextView) findViewById(R.id.textView11);
        t4 = (TextView) findViewById(R.id.textView);
        t5 = (TextView) findViewById(R.id.textView12);
        t6 = (TextView) findViewById(R.id.textView13);
```

```
        t7 = (TextView) findViewById(R.id.textView14);
        Bundle bundle = getIntent().getBundleExtra("data");
        phoneno = bundle.getString("phone");
        types = bundle.getString("ss");
        DatabaseReference ref = FirebaseDatabase.getInstance().getReference().child(types);
        ref.addValueEventListener(new ValueEventListener() {
            @Override
            public void onDataChange(@NonNull DataSnapshot snapshot) {
                String no = snapshot.getValue().toString();
                var = no;
                String[] a = var.split(",");
                int l = a.length;
                if (0 < l) {
                    t1.setText((a[0]));
                }
                if (1 < l) {
                    t2.setText((a[1]));
                }
                if (2 < l) {
                    t3.setText((a[2]));
                }
                if (3 < l) {
                    t4.setText((a[3]));
                }
                if (4 < l) {
                    t5.setText((a[4]));
                }
                if (5 < l) {
                    t6.setText((a[5]));
                }
                if (6 < l) {
                    t7.setText((a[6]));
                }
            }
            @Override
            public void onCancelled(@NonNull DatabaseError error) {
            }
        });
    }
}
```

Chapter 5

RESULTS

- **Sign up Page**

  It used to display the sign up page which lets the user sign up to the app by providing their information.

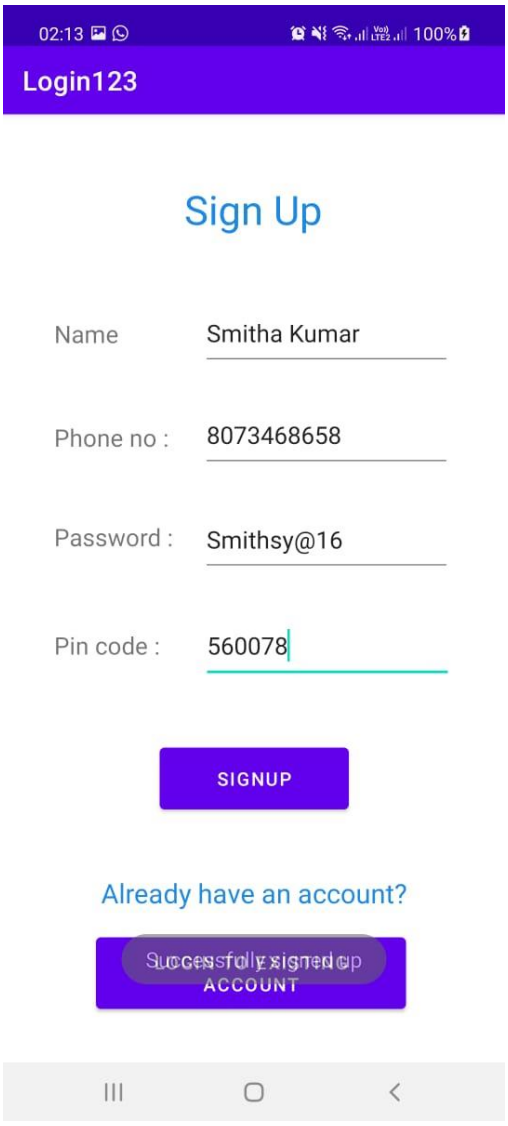

Fig. 5.1 Sign up page of the application

- **Login.java**

  It allows the user to login to the app with their account.

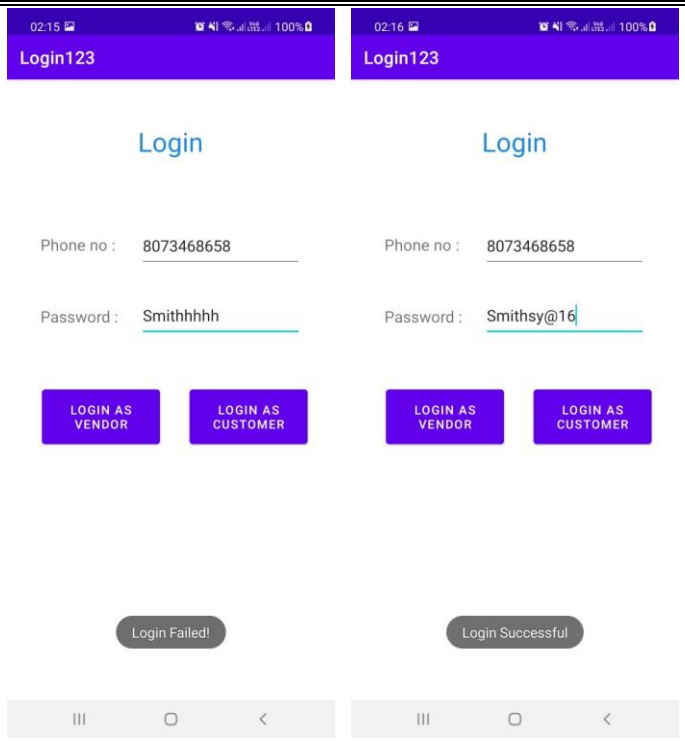

Fig 5.2 and 5.3 Login page of the application

- **Vendor.java**

  It is used to allow the vendor to select which type of business and sub-type of business they run. It also allows them to specify a landmark, near which their business is set up.

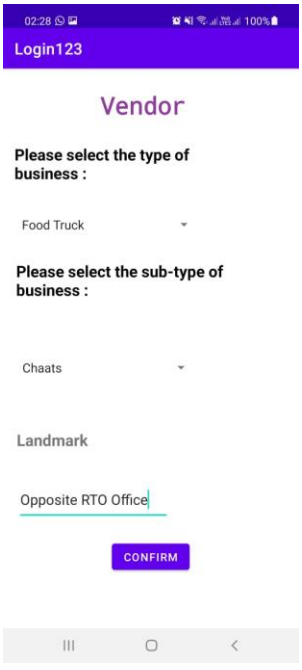

Fig 5.4 Vendor page of the application

- **AddItems.java**

  It is used by the vendor to add items to the shop, which will be displayed to the customer.

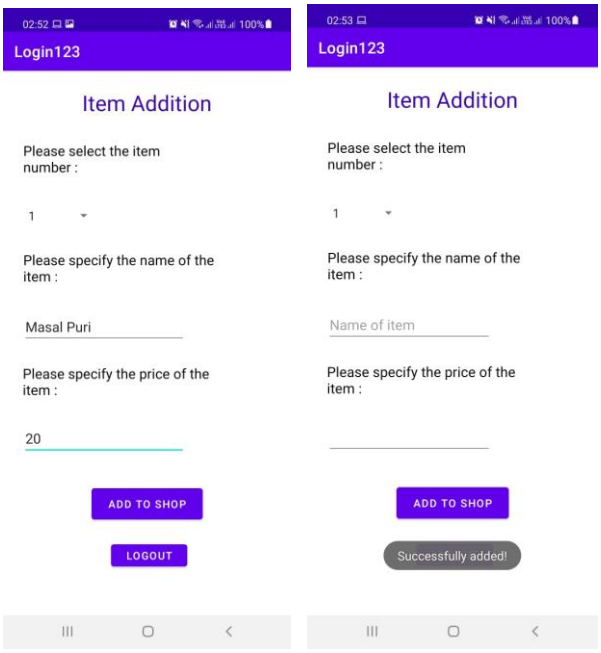

Fig 5.5 and 5.6 Item Addition page of the application

- **Customer.java**

  It is used by the customer to specify which type of business they are looking to locate, and the sub-type of business.

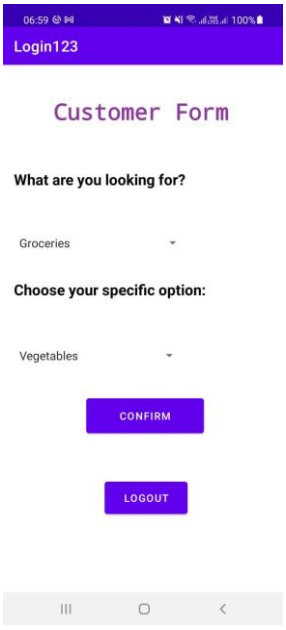

Fig 5.7 Customer Form page of the application

- **Customer2.java (Results page)**

  It displays the results that were searched for, by the customer.

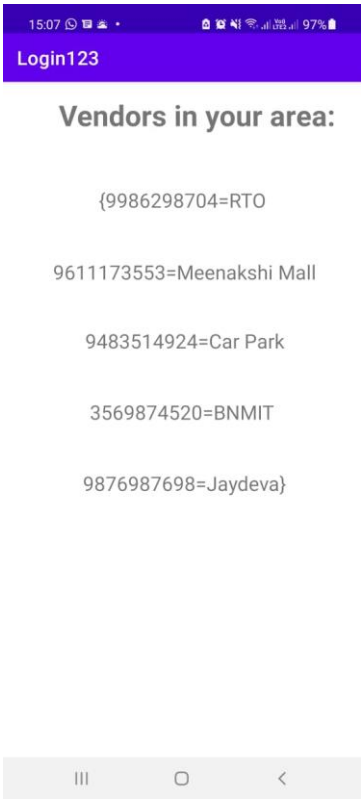

Fig 5.8 Vendors result page of the application

Chapter 6

CONCLUSION AND FUTURE ENHANCEMENTS

The vendor-customer app successfully bridges the gap between the customer and vendor, hence making it easier for the vendor to generate usual business revenue, without letting the pandemic get in the way. This helps the vendors sustain their living conditions, and prevents them from undergoing huge losses.

If developed along with future enhancements, this app can be a huge social help to people with small-scale businesses and give them a leg up among other established businesses.

It also helps customers satisfy their daily needs by displaying the nearest shops and lets them contact the vendor to make purchases.

The objective of our application has hence been satisfied.

Future enhancements of the application include an online shopping feature where the customer can view and buy items that the vendor has added, from the app directly. The customers will also be able to pre-order items and make online payments through the app. The items may be delivered to the customer, depending on whether the vendor employs delivery men.

A dynamic form can also be implemented in the application which allows the vendors to add and display as many items as they want. A wider range of sub-types of businesses can be included in the application as well, enabling more vendors to use the app.