#### ROCK PAPER SCISSOR GAME

#### PROJECT REPORT ON

### **ROCK PAPER SCISSOR GAME**

(UNDER THE PARTIAL FULFILLMENT OF THE UNIVERSITY FOR COURSE OF T.Y.BSC COMPUTER SCIENCE)

#### SUBMITTED BY:

Mr. DARSHAN AJAY CHAUDHARY

#### **GUIDED BY:**

MS. PRATIKSHA HARWALKAR

DEPARTMENT OF COMPUTER SCIENCE

PARLE TILAK VIDYALAYAASSOCIATION'S

MULUND COLLEGE OF COMMERCE S.N.ROAD,

MULUND (WEST), MUMBAI-80

UNIVERSITY OF MUMBAI 2022-2023

# **INDEX**

SR. NO.	TOPIC	PAGE NO.
1.	TITLE	01
2.	INTRODUCTION	02
3.	REQUIREMENT SPECIFICATION	03-05
4.	SYSTEM DESIGN DETAILS	06-24
5.	SYSTEM IMPLEMENTATION	25-136
6.	RESULTS	137-144
7.	CONCLUSION AND FUTURE ENHANCEMENTS	145-146
8.	REFERENCES	147-148
9.	ANNEXURE	149-151

## **ACKNOWLEDGEMENT**

I have a great pleasure in representing this project report entitled "ROCK PAPER SCISSOR GAME" and I grab this opportunity to convey my immense regards towards all the distinguished people who have their valuable contribution in the hour of need.

I like to extend my gratitude to our beloved Principal Dr. Sonali Pednekar for her timely and prestigious guidance.

I take this opportunity to thank Dr. Reena Nagda, Coordinator of the Department and all the faculty members of the Department of Computer Science of Mulund College of Commerce, for giving me an opportunity to complete this project and the most needed guidance throughout the duration of the programme.

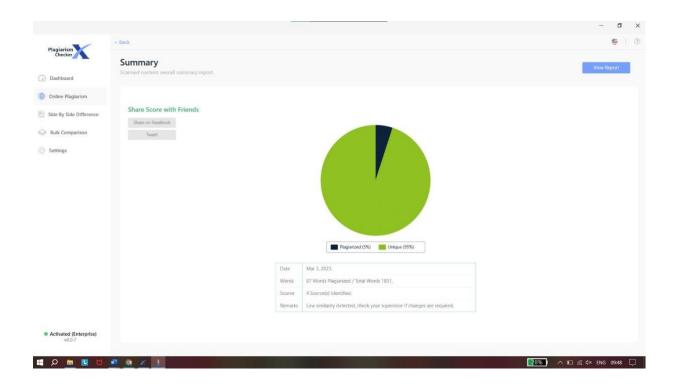
I am extremely grateful to my project guide Ms. Pratiksha Harwalkar for her valuable guidance and necessary support during each phase of the project. She was the source of continuous encouragement as each milestone was crossed.

A special thanks to the University of Mumbai for having prescribed this project work to me as a part of the academic requirement in the Final year of Bachelor of Science in Computer Science.

Finally, I also owe to my fellow friends who have been a constant source of help to solve the problems that cropped up during the project development process.

Darshan Chaudhary

## **PLAGARISM REPORT**





# Plagiarism Checker X - Report

**Originality Assessment** 

5%

**Overall Similarity** 

	ROCK PAPER SCISSOR GAME
<u>TITLE</u>	
ROCK PAPER SCISSOR GAI	<u>ME</u>

#### INTRODUCTION

The Rock Paper Scissor Game is a hand game usually played between two people in which each player simultaneously forms one of three shapes with an outstretched hand. These shapes are "rock" (a closed fist), "paper" (a flat hand), and "scissors" (a fist with the index finger and middle finger extended, forming a V).

This crazy Rock, Paper, Scissor fight challenge is an advanced version of the game for the new generation that likes to spend more time on electronic devices. Rock Paper Scissors on a desktop app will do exactly what it will do in a game with your friend, here you can play with friends or with the computer.

## 2.1 Features:

- High reliability, scalability and high load support.
- No additional software is needed.
- Quick and easy to use.
- Simple user interface.
- Single and Multiplayer Mode
- Real-time play
- Background Music

## 2.2 Advantages:

- Improves attention and concentration.
- Improve Social Skill
- Can be played without internet
- Improve your decision making skill

### REQUIREMENT SPECIFICATIONS

## 3.1 Software Requirement

- Operating System: Microsoft Windows
- Front End :- Python
- Back End :- MySql

## 3.2 Hardware Requirement

- Minimum Storage space (ROM) of 2 GB or more
- Minimum RAM of 2 GB or more
- Internet access, Keyboard

### 3.3 Data Requirement

Nickname

## 3.4 Fact Finding Ouestion

- Why do you want a Rock Paper Scissor game app?
- Will you be able to compensate with new technology?
- Do you have any specific feature in it?
- What type of hardware and software will the system require?
- Will it have any future scope

# **4.SYSTEM DESIGN DETAILS**

## **4.1 Event Table**

No.	Event	Trigger	Source	Activity	Response	Destination
1.	To Play Game	Play Game	Player	Go to Play game Window	Play Game Window	Main.py
2.	To play Offline	Offline	Player	Go to Offline Game Window	Offline Game Window	Main.py
3.	To play Online	Online	Player	Go to Online Game Window	Online Game Window	Main.py
4.	To go Options	Options	Player	Go to Options Window	Options Window	Main.py
5.	To check Score	Score	Player	Go to Score window	Score Window	Main.py
6.	To select Rock	Rock	Player	Game Window	Rock Selected	Main.py
7.	To select Paper	Paper	Player	Game Window	Paper Selected	Main.py
8.	To select Scissor	Scissor	Player	Game Window	Scissor Selected	Main.py

**Table 4.1 Event table for Rock Paper Scissor Game** 

# 4.2 Class Diagram:

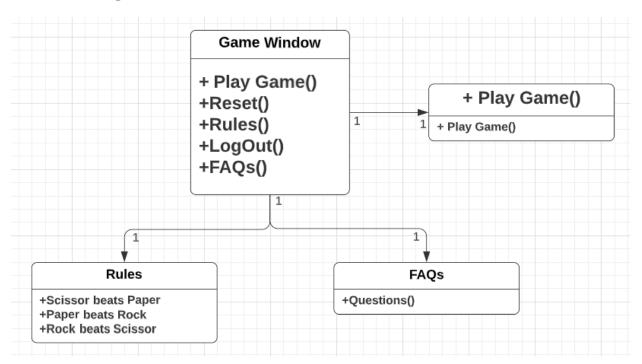


Figure 4.2: Class diagram for Rock Paper Scissor Game.

# 4.3 Use Case Diagram:

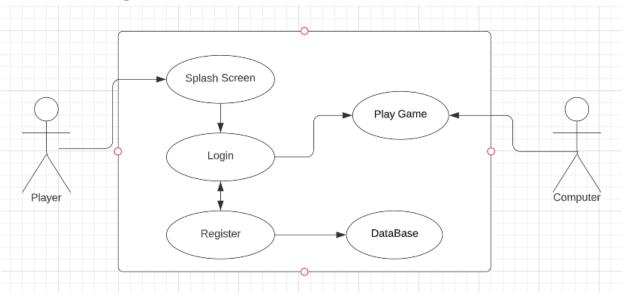


Figure 4.3: Use Case Diagram of Rock Paper Scissor Game.

# 4.4 Sequence Diagram:

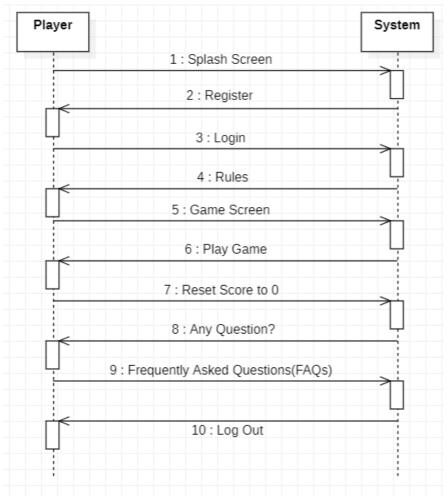


Figure 4.4: Sequence diagram for Rock Paper Scissor Game.

# 4.5 Activity Diagram

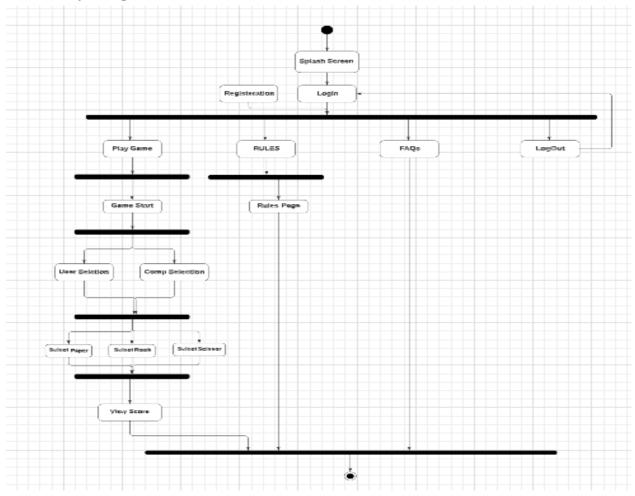
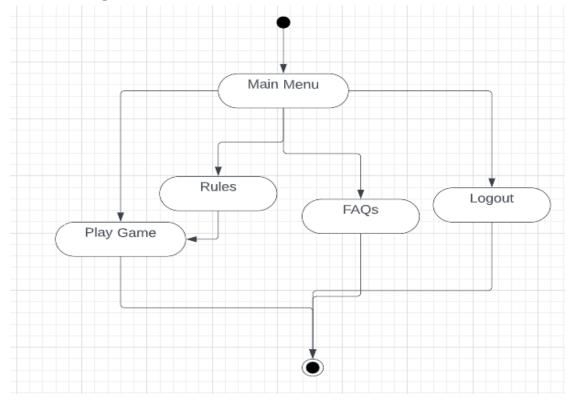


Figure 4.5: Activity diagram for Rock Paper Scissor Game.

# 4.6 State Diagram



**Figure 4.6 State Diagram For Rock Paper Scissor** 

# 4.7 Package Diagram

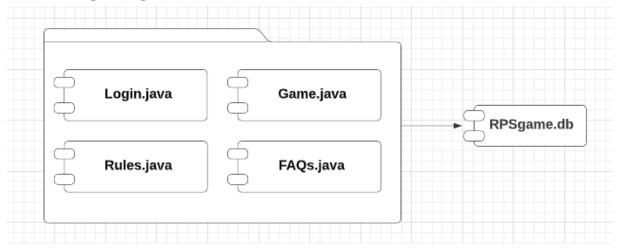


Figure 4.7 Package Diagram For Rock Paper Scissor

# 4.8 Component Diagram

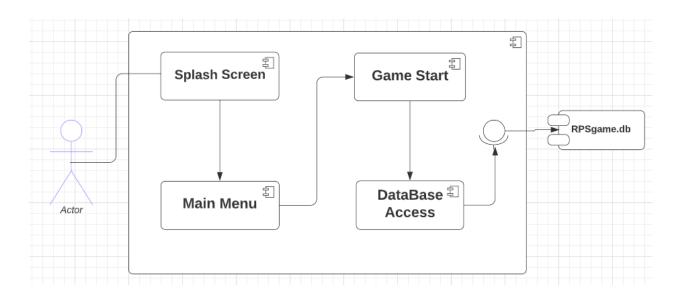


Figure 4.8 Component Diagram For Rock Paper Scissor

# 4.9 Deployment Diagram

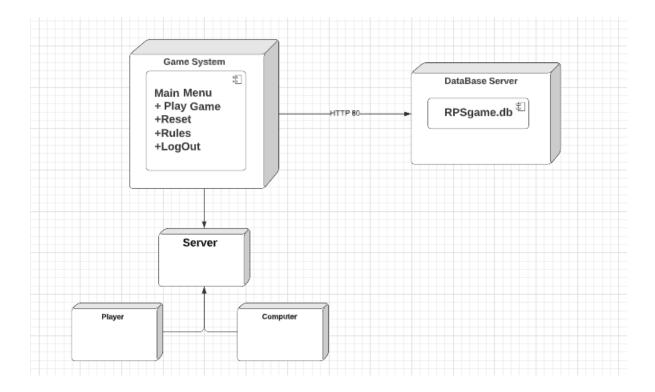
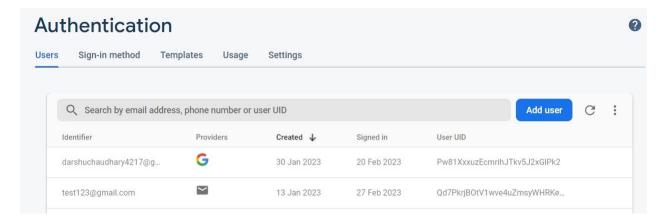
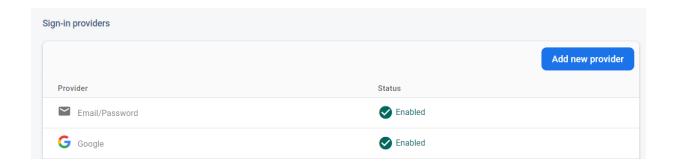


Figure 4.9 Deployment Diagram For Rock Paper Scissor

## 4.10 <u>DataBase Design</u>





#### <u>5.</u> <u>SYSTEM IMPLEMENTATION</u>

# A] activity splash.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"</pre>
  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"
  android:background="@drawable/magic"
  tools:context=".splash">
  <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginBottom="110dp"
    android:fontFamily="@font/bangers"
    android:text="Rock Paper Scissor"
    android:textColor="@color/black"
    android:textSize="35sp"/>
  <TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_centerHorizontal="true"
    android:layout_marginBottom="40dp"
    android:fontFamily="@font/bangers"
    android:text="Play With Fun"
    android:textColor="#0E0E0E"
    android:textSize="35sp"/>
```

#### </RelativeLayout>

## B] 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=".Login"</pre>
```

```
android:background="@drawable/magic">
<View
  android:id="@+id/view"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:background="#1B000000" />
<androidx.constraintlayout.widget.ConstraintLayout
  android:layout_width="match_parent"
  android:layout height="match parent"
  tools:layout_editor_absoluteX="49dp"
  tools:layout_editor_absoluteY="-109dp">
  <TextView
    android:id="@+id/textView"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout_marginTop="132dp"
    android:fontFamily="@font/aldrich"
    android:text="Login"
    android:textColor="@color/white"
    android:textSize="50sp"
    android:textStyle="bold"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.498"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <EditText
    android:id="@+id/inputEmail"
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_marginStart="24dp"
    android:layout_marginTop="32dp"
    android:layout_marginEnd="24dp"
    android:background="@drawable/input_bg"
    android:drawableLeft="@drawable/ic_baseline_email_24"
    android:drawablePadding="10dp"
    android:ems="10"
    android:hint="Email"
    android:inputType="textEmailAddress"
    android:paddingLeft="20dp"
    android:paddingTop="13dp"
    android:paddingRight="20dp"
    android:paddingBottom="13dp"
    android:textColor="@color/white"
```

```
android:textColorHint="@color/white"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintHorizontal_bias="1.0"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/textView"
  app:layout_editor_absoluteX="97dp"
  app:layout_editor_absoluteY="248dp" />
<EditText
  android:id="@+id/inputPassword"
  android:layout_width="0dp"
  android:layout_height="wrap_content"
  android:layout_marginStart="24dp"
  android:layout_marginTop="16dp"
  android:layout_marginEnd="24dp"
  android:background="@drawable/input_bg"
  android:drawableLeft="@drawable/ic_baseline_security_24"
  android:drawablePadding="10dp"
  android:ems="10"
  android:hint="Password"
  android:inputType="textPassword"
  android:paddingLeft="20dp"
  android:paddingTop="13dp"
  android:paddingRight="20dp"
  android:paddingBottom="13dp"
  android:textColor="@color/white"
  android:textColorHint="@color/white"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/inputEmail"
  app:layout_editor_absoluteX="98dp"
  app:layout_editor_absoluteY="359dp" />
<TextView
  android:id="@+id/forgetPassword"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="16dp"
  android:text="Forget Password?"
  android:textColor="@color/white"
  android:textSize="20sp"
  app:layout_constraintEnd_toEndOf="@+id/inputPassword"
  app:layout_constraintTop_toBottomOf="@id/inputPassword" />
```

<Button

```
android:id="@+id/btnLogin"
  android:layout_width="0dp"
  android:layout_height="wrap_content"
  android:layout_marginTop="16dp"
  android:background="@drawable/input_bg"
  android:text="Login"
  android:textColor="@color/white"
  app:layout_constraintEnd_toEndOf="@+id/forgetPassword"
  app:layout_constraintStart_toStartOf="@id/inputPassword"
  app:layout_constraintTop_toBottomOf="@id/forgetPassword"/>
<TextView
  android:id="@+id/createNewAccount"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="16dp"
  android:text="Create New Account?"
  android:textColor="@color/white"
  android:textSize="20sp"
  app:layout_constraintEnd_toEndOf="@id/btnLogin"
  app:layout_constraintStart_toStartOf="@id/btnLogin"
  app:layout_constraintTop_toBottomOf="@id/btnLogin"/>
<TextView
  android:id="@+id/textView2"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="36dp"
  android:text="OR"
  android:textColor="@color/white"
  android:textSize="20sp"
  android:textStyle="bold"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintHorizontal_bias="0.498"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/createNewAccount"/>
<View
  android:id="@+id/view3"
  android:layout_width="0dp"
  android:layout_height="2dp"
  android:layout_marginStart="16dp"
  android:layout_marginBottom="12dp"
  android:background="@color/white"
  app:layout_constraintBottom_toBottomOf="@+id/textView2"
  app:layout_constraintEnd_toEndOf="@+id/btnLogin"
```

```
app:layout_constraintHorizontal_bias="0.0"
  app:layout_constraintStart_toEndOf="@+id/textView2"/>
<View
  android:id="@+id/view4"
  android:layout_width="0dp"
  android:layout_height="2dp"
  android:layout_marginEnd="16dp"
  android:layout_marginBottom="12dp"
  android:background="@color/white"
  app:layout_constraintBottom_toBottomOf="@+id/textView2"
  app:layout_constraintEnd_toStartOf="@+id/textView2"
  app:layout_constraintHorizontal_bias="0.0"
  app:layout_constraintStart_toStartOf="@+id/btnLogin" />
<ImageView
  android:id="@+id/btnGoogle"
  android:layout_width="50dp"
  android:layout_height="50dp"
  android:layout_marginTop="16dp"
  android:layout_marginEnd="16dp"
  app:layout_constraintEnd_toStartOf="@+id/imageView2"
  app:layout_constraintTop_toBottomOf="@+id/textView2"
  app:srcCompat="@drawable/google_logo"
  tools:ignore="MissingConstraints" />
<ImageView
  android:id="@+id/imageView2"
  android:layout_width="50dp"
  android:layout_height="50dp"
  android:layout_marginTop="16dp"
  app:layout_constraintStart_toStartOf="@+id/textView2"
  app:layout_constraintTop_toBottomOf="@+id/textView2"
  app:srcCompat="@drawable/fb_logo"
  tools:ignore="MissingConstraints" />
<ImageView
  android:id="@+id/btngithub"
  android:layout_width="58dp"
  android:layout_height="54dp"
  android:layout_marginStart="16dp"
  android:layout_marginTop="16dp"
  app:layout_constraintStart_toEndOf="@+id/imageView2"
  app:layout_constraintTop_toBottomOf="@+id/textView2"
  app:srcCompat="@drawable/github_logo"
  tools:ignore="MissingConstraints" />
```

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

### C] activity register.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=".Register"
  android:background="@drawable/magic">
  <View
     android:id="@+id/view"
     android:layout_width="match_parent"
     android:layout_height="match_parent"
    android:background="#1B000000" />
  <androidx.constraintlayout.widget.ConstraintLayout
     android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:layout_editor_absoluteX="16dp"
    tools:layout_editor_absoluteY="16dp">
     <TextView
       android:id="@+id/textView"
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_marginTop="132dp"
       android:fontFamily="@font/aldrich"
       android:text="Register"
       android:textColor="@color/white"
       android:textSize="50sp"
       android:textStyle="bold"
       app: layout\_constraintEnd\_toEndOf = "parent"
       app:layout_constraintHorizontal_bias="0.498"
       app:layout_constraintStart_toStartOf="parent"
       app:layout_constraintTop_toTopOf="parent" />
     <EditText
       android:id="@+id/inputEmail"
       android:layout_width="0dp"
       android:layout_height="wrap_content"
       android:layout_marginStart="24dp"
```

```
android:layout_marginTop="70dp"
  android:layout_marginEnd="24dp"
  android:background="@drawable/input_bg"
  android:drawableLeft="@drawable/ic_baseline_email_24"
  android:drawablePadding="10dp"
  android:ems="10"
  android:hint="Email"
  android:inputType="textEmailAddress"
  android:paddingLeft="20dp"
  android:paddingTop="13dp"
  android:paddingRight="20dp"
  android:paddingBottom="13dp"
  android:textColor="@color/white"
  android:textColorHint="@color/white"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintHorizontal_bias="1.0"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/textView"
  app:layout_editor_absoluteX="97dp"
  app:layout_editor_absoluteY="248dp" />
<EditText
  android:id="@+id/inputPassword"
  android:layout_width="0dp"
  android:layout_height="wrap_content"
  android:layout_marginStart="24dp"
  android:layout_marginTop="16dp"
  android:layout_marginEnd="24dp"
  android:background="@drawable/input_bg"
  android:drawableLeft="@drawable/ic baseline security 24"
  android:drawablePadding="10dp"
  android:ems="10"
  android:hint="Password"
  android:inputType="textPassword"
  android:paddingLeft="20dp"
  android:paddingTop="13dp"
  android:paddingRight="20dp"
  android:paddingBottom="13dp"
  android:textColor="@color/white"
  android:textColorHint="@color/white"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/inputEmail"
  app:layout_editor_absoluteX="98dp"
  app:layout_editor_absoluteY="359dp" />
```

```
<EditText
  android:id="@+id/inputConfirm"
  android:layout_width="0dp"
  android:layout_height="wrap_content"
  android:layout_marginStart="24dp"
  android:layout_marginTop="16dp"
  android:layout_marginEnd="24dp"
  android:background="@drawable/input_bg"
  android:drawableLeft="@drawable/ic_baseline_security_24"
  android:drawablePadding="10dp"
  android:ems="10"
  android:hint="Confirm Password"
  android:inputType="textPassword"
  android:paddingLeft="20dp"
  android:paddingTop="13dp"
  android:paddingRight="20dp"
  android:paddingBottom="13dp"
  android:textColor="@color/white"
  android:textColorHint="@color/white"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintHorizontal_bias="0.0"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/inputPassword"
  app:layout_editor_absoluteX="98dp"
  app:layout_editor_absoluteY="359dp" />
<Button
  android:id="@+id/btnRegister"
  android:layout_width="0dp"
  android:layout_height="wrap_content"
  android:layout_marginTop="16dp"
  android:background="@drawable/input_bg"
  android:text="Register"
  android:textColor="@color/white"
  app:layout_constraintEnd_toEndOf="@+id/inputPassword"
  app:layout_constraintHorizontal_bias="1.0"
  app:layout_constraintStart_toStartOf="@id/inputPassword"
  app:layout constraintTop toBottomOf="@+id/inputConfirm"/>
<TextView
  android:id="@+id/AlreadyHaveAccount"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="24dp"
  android:text="Already Have a Account?"
  android:textColor="@color/white"
```

```
android:textSize="20sp"
       app:layout_constraintEnd_toEndOf="@id/inputConfirm"
       app:layout_constraintHorizontal_bias="0.51"
       app:layout_constraintStart_toStartOf="@id/inputConfirm"
       app:layout_constraintTop_toBottomOf="@id/btnRegister"/>
  </androidx.constraintlayout.widget.ConstraintLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
D] activity game.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"
  android:orientation="vertical"
  tools:context=".game">
  <ImageButton
    android:id="@+id/imageButton2"
    android:layout_width="120dp"
    android:layout_height="120dp"
    android:backgroundTint="#2196F3"
    android:onClick="rpsButtonSelected"
    android:scaleType="fitCenter"
    android:tag="3"
    app:layout_constraintBottom_toBottomOf="@+id/imageButton1"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/imageButton1"
    app:srcCompat="@drawable/scissor"/>
  <ImageButton
    android:id="@+id/imageButton1"
    android:layout_width="120dp"
    android:layout_height="120dp"
    android:backgroundTint="#F44336"
    android:onClick="rpsButtonSelected"
    android:scaleType="fitCenter"
    android:tag="2"
    app:layout_constraintBottom_toBottomOf="@+id/imageButton"
    app:layout_constraintEnd_toStartOf="@+id/imageButton2"
    app:layout_constraintHorizontal_bias="0.5"
    app:layout_constraintStart_toEndOf="@+id/imageButton"
```

app:layout\_constraintTop\_toTopOf="@+id/imageButton"

```
app:srcCompat="@drawable/paper" />
<TextView
  android:id="@+id/textView"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="84dp"
  android:text="Rock Paper Scissor"
  and roid: text Appearance = "@style/Text Appearance. App Compat. Display 1"
  app:layout constraintEnd toEndOf="parent"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toTopOf="parent" />
<Button
  android:id="@+id/button"
  android:layout width="wrap content"
  android:layout_height="wrap_content"
  android:layout_marginTop="32dp"
  android:onClick="resetButton"
  android:text="RESET"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintHorizontal_bias="0.498"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/textView"
  app:strokeColor="#A50000" />
<TextView
  android:id="@+id/scoreTextVIEW"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="16dp"
  android:text="0:0"
  android:textAppearance="@style/TextAppearance.AppCompat.Display1"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintHorizontal_bias="0.5"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/button" />
<TextView
  android:id="@+id/textView3"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginEnd="32dp"
  android:layout_marginBottom="8dp"
  android:text="You"
  android:textAppearance="@style/TextAppearance.AppCompat.Large"
```

```
app:layout_constraintBottom_toBottomOf="@+id/scoreTextVIEW"
  app:layout_constraintEnd_toStartOf="@+id/scoreTextVIEW" />
<TextView
  android:id="@+id/textView4"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginStart="32dp"
  android:layout_marginBottom="8dp"
  android:text="Comp"
  android:textAppearance="@style/TextAppearance.AppCompat.Large"
  app:layout_constraintBottom_toBottomOf="@+id/scoreTextVIEW"
  app:layout_constraintStart_toEndOf="@+id/scoreTextVIEW" />
<TextView
  android:id="@+id/userSelectionTextView"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginEnd="8dp"
  android:text="Rock"
  android:textAppearance="@style/TextAppearance.AppCompat.Large"
  app:layout_constraintEnd_toStartOf="@+id/textView3"
  app:layout_constraintTop_toBottomOf="@+id/textView3" />
<TextView
  android:id="@+id/compSelectionTextView"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginStart="8dp"
  android:text="Paper"
  android:textAppearance="@style/TextAppearance.AppCompat.Large"
  app:layout_constraintStart_toEndOf="@+id/textView4"
  app:layout_constraintTop_toBottomOf="@+id/textView4" />
<TextView
  android:id="@+id/wonLostTieTextView"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="64dp"
  android:text="wonLostTieTextView"
  android:textAppearance="@style/TextAppearance.AppCompat.Display1"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintHorizontal_bias="0.5"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/scoreTextVIEW" />
```

```
<ImageButton
  android:id="@+id/imageButton"
  android:layout_width="120dp"
  android:layout_height="120dp"
  android:layout_marginTop="64dp"
  android:backgroundTint="#3CEC44"
  android:onClick="rpsButtonSelected"
  android:scaleType="fitCenter"
  android:tag="1"
  app:layout_constraintEnd_toStartOf="@+id/imageButton1"
  app:layout_constraintHorizontal_bias="0.5"
  app:layout_constraintStart_toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/wonLostTieTextView"
  app:srcCompat="@drawable/stone"/>
<Button
  android:id="@+id/Logout"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout marginTop="16dp"
  android:layout_marginEnd="15dp"
  android:onClick="resetButton"
  android:text="LogOut"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintHorizontal_bias="0.954"
  app:layout_constraintStart_toEndOf="@+id/textView"
  app:layout_constraintTop_toTopOf="parent" />
<Button
  android:id="@+id/rules"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginStart="60dp"
  android:layout_marginTop="48dp"
  android:text="RULES"
  app:layout_constraintStart_toStartOf="@+id/imageButton"
  app:layout_constraintTop_toBottomOf="@+id/imageButton"
  app:strokeColor="#00838F" />
<Button
  android:id="@+id/faq"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginStart="70dp"
  android:layout_marginTop="48dp"
  android:text="FAQs"
```

```
app:layout_constraintStart_toEndOf="@+id/rules" app:layout_constraintTop_toBottomOf="@+id/imageButton2" app:strokeColor="#00695C" />
```

</androidx.constraintlayout.widget.ConstraintLayout>

### E] activity forget password.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=".ForgetPassword"
  android:background="@drawable/magic">
  <View
    android:id="@+id/view"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#1B000000" />
  <androidx.constraintlayout.widget.ConstraintLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:layout_editor_absoluteX="-145dp"
    tools:layout_editor_absoluteY="29dp">
    <TextView
       android:id="@+id/textView"
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_marginTop="132dp"
       android:fontFamily="@font/aldrich"
       android:text="Forget Password"
       android:textColor="@color/white"
       android:textSize="40sp"
       android:textStyle="bold"
       app:layout_constraintEnd_toEndOf="parent"
       app:layout_constraintHorizontal_bias="0.498"
       app:layout_constraintStart_toStartOf="parent"
       app:layout_constraintTop_toTopOf="parent" />
    <EditText
       android:id="@+id/forEmail"
```

```
android:layout_width="0dp"
  android:layout_height="wrap_content"
  android:layout_marginStart="24dp"
  android:layout_marginTop="32dp"
  android:layout_marginEnd="24dp"
  android:background="@drawable/input_bg"
  android:drawableLeft="@drawable/ic_baseline_email_24"
  android:drawablePadding="10dp"
  android:ems="10"
  android:hint="Email"
  android:inputType="textEmailAddress"
  android:paddingLeft="20dp"
  android:paddingTop="13dp"
  android:paddingRight="20dp"
  android:paddingBottom="13dp"
  android:textColor="@color/white"
  android:textColorHint="@color/white"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintHorizontal_bias="1.0"
  app:layout constraintStart toStartOf="parent"
  app:layout_constraintTop_toBottomOf="@+id/textView"
  app:layout_editor_absoluteX="97dp"
  app:layout_editor_absoluteY="248dp" />
<TextView
  android:id="@+id/login"
  android:layout_width="wrap_content"
  android:layout_height="wrap_content"
  android:layout_marginTop="16dp"
  android:text="Back to Login"
  android:textColor="@color/white"
  android:textSize="20sp"
  app:layout_constraintEnd_toEndOf="@+id/forEmail"
  app:layout_constraintTop_toBottomOf="@id/forEmail" />
<Button
  android:id="@+id/forgetBtn"
  android:layout_width="0dp"
  android:layout_height="wrap_content"
  android:layout_marginTop="64dp"
  android:background="@drawable/input_bg"
  android:text="Forget Password"
  android:textColor="@color/white"
  app:layout_constraintEnd_toEndOf="@+id/forEmail"
  app:layout_constraintStart_toStartOf="@+id/forEmail"
```

```
app:layout_constraintTop_toBottomOf="@+id/forEmail" />
  </androidx.constraintlayout.widget.ConstraintLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
F] activity_google_sign_in.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=".GoogleSignInActivity">
</androidx.constraintlayout.widget.ConstraintLayout>
G] Login.java
package com.example.rpsgame;
import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.app.ProgressDialog;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.ImageView;
import android.widget.TextView;
import android.widget.Toast;
import com.google.android.gms.tasks.OnCompleteListener;
import com.google.android.gms.tasks.Task;
import com.google.firebase.auth.AuthResult;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.auth.FirebaseUser;
public class Login extends AppCompatActivity {
  TextView createnewAccount;
  EditText inputEmail,inputPassword;
  Button btnLogin;
  String emailPattern = [a-zA-Z0-9._-]+@[a-z]+\\\.+[a-z]+";
  ProgressDialog pd;
  TextView forgetpassword;
```

ImageView btnGoogle;

```
FirebaseAuth mAuth:
FirebaseUser mUser:
@Override
protected void onCreate(Bundle savedInstanceState) {
  super.onCreate(savedInstanceState);
  setContentView(R.layout.activity_login);
  createnewAccount = findViewById(R.id.createNewAccount);
  inputEmail=findViewById(R.id.inputEmail);
  inputPassword=findViewById(R.id.inputPassword);
  btnLogin=findViewById(R.id.btnLogin);
  btnGoogle=findViewById(R.id.btnGoogle);
  forgetpassword = findViewById(R.id.forgetPassword);
  pd = new ProgressDialog(this);
  mAuth = FirebaseAuth.getInstance();
  mUser = mAuth.getCurrentUser();
  forgetpassword.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
       startActivity(new Intent(Login.this,ForgetPassword.class));
  });
  createnewAccount.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
      startActivity(new Intent(Login.this,Register.class));
  });
  btnLogin.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
       perforLogin();
  });
  btnGoogle.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
       Intent intent=new Intent(Login.this,GoogleSignInActivity.class);
       startActivity(intent);
```

```
});
  private void perforLogin() {
    String email = inputEmail.getText().toString();
    String password = inputPassword.getText().toString();
    if(email.matches(emailPattern)){
       inputEmail.setError("Enter Correct Email");
       inputEmail.requestFocus();
    else if(password.isEmpty() || password.length()<6){
       inputPassword.setError("Enter Proper Password");
    else{
       pd.setMessage("Loading...");
       pd.setTitle("Login");
       pd.setCanceledOnTouchOutside(false);
       pd.show();
       mAuth.signInWithEmailAndPassword(email,password).addOnCompleteListener(new
OnCompleteListener<AuthResult>() {
         @Override
         public void onComplete(@NonNull Task<AuthResult> task) {
           if (task.isSuccessful()){
              pd.dismiss();
              sendUserToNextActivity();
              Toast.makeText(Login.this, "Login Successful",
Toast.LENGTH_SHORT).show();
           else{
              pd.dismiss();
              Toast.makeText(Login.this, ""+task.getException(),
Toast.LENGTH_SHORT).show();
       });
  private void sendUserToNextActivity() {
    Intent intent=new Intent(Login.this,game.class);
 intent.setFlags(Intent.FLAG_ACTIVITY_CLEAR_TASK|Intent.FLAG_ACTIVITY_NEW_TASK);
    startActivity(intent);
  }
H] Register.java
```

```
package com.example.rpsgame;
import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.app.ProgressDialog;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;
import com.google.android.gms.tasks.OnCompleteListener;
import com.google.android.gms.tasks.Task;
import com.google.firebase.auth.AuthResult;
import com.google.firebase.auth.FirebaseAuth;
import com.google.firebase.auth.FirebaseUser;
public class Register extends AppCompatActivity {
  TextView AlreadyHaveAccount;
  EditText inputEmail,inputPassword,inputConfirm;
  Button btnRegister;
  String emailPattern = [a-zA-Z0-9._-]+@[a-z]+\...+[a-z]+";
  ProgressDialog pd;
  FirebaseAuth mAuth;
  FirebaseUser mUser:
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
     setContentView(R.layout.activity_register);
     AlreadyHaveAccount=findViewById(R.id.AlreadyHaveAccount);
    inputEmail=findViewById(R.id.inputEmail);
    inputPassword=findViewById(R.id.inputPassword);
     inputConfirm=findViewById(R.id.inputConfirm);
     btnRegister=findViewById(R.id.btnRegister);
     pd = new ProgressDialog(this);
    mAuth = FirebaseAuth.getInstance();
     mUser = mAuth.getCurrentUser();
     AlreadyHaveAccount.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View view) {
         startActivity(new Intent(Register.this,Login.class));
```

```
}
    });
    btnRegister.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View view) {
         perforAuth();
    });
  private void perforAuth() {
    String email = inputEmail.getText().toString();
    String password = inputPassword.getText().toString();
    String ConfirmPassword = inputConfirm.getText().toString();
    if(email.matches(emailPattern)){
       inputEmail.setError("Enter Correct Email");
       inputEmail.requestFocus();
    else if(password.isEmpty() || password.length()<6){
       inputPassword.setError("Enter Proper Password");
    else if(!password.equals(ConfirmPassword))
       inputConfirm.setError("Password and ConfirmPassword Doesn't Match");
    else{
       pd.setMessage("Please wait while Registration...");
       pd.setTitle("Registration");
       pd.setCanceledOnTouchOutside(false);
       pd.show();
mAuth.createUserWithEmailAndPassword(email,password).addOnCompleteListener(new
OnCompleteListener<AuthResult>() {
         @Override
         public void onComplete(@NonNull Task<AuthResult> task) {
           if(task.isSuccessful()){
              pd.dismiss();
              sendUserToNextActivity();
              Toast.makeText(Register.this,"Registration
Successful", Toast. LENGTH_SHORT). show();
            }
           else{
              pd.dismiss();
```

```
Toast.makeText(Register.this,""+task.getException(),Toast.LENGTH_SHORT).show();
       });
  private void sendUserToNextActivity() {
    Intent intent=new Intent(Register.this,game.class);
intent.setFlags(Intent.FLAG_ACTIVITY_CLEAR_TASK|Intent.FLAG_ACTIVITY_NEW_TASK);
    startActivity(intent);
  }
}
I] splash.java
package com.example.rpsgame;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Intent;
import android.os.Bundle;
import android.os.Handler;
import android.view.WindowManager;
public class splash extends AppCompatActivity {
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
getWindow().setFlags(WindowManager.LayoutParams.FLAG_FULLSCREEN,WindowManager
.LayoutParams.FLAG_FULLSCREEN);
    setContentView(R.layout.activity_splash);
    new Handler().postDelayed(new Runnable() {
       @Override
       public void run() {
         Intent intent = new Intent(splash.this,Login.class);
         startActivity(intent);
    },3000);
```

#### J] game.java

package com.example.rpsgame;

import androidx.appcompat.app.AppCompatActivity; import androidx.core.view.GravityCompat; import androidx.drawerlayout.widget.DrawerLayout; import androidx.fragment.app.Fragment; import androidx.fragment.app.FragmentManager; import androidx.fragment.app.FragmentTransaction; import android.app.AlertDialog; import android.content.DialogInterface; import android.content.Intent; import android.net.Uri; import android.os.Bundle; import android.util.Log; import android.view.Menu; import android.view.View; import android.widget.Button; import android.widget.ImageView; import android.widget.TextView; import android.widget.Toast; import java.net.URL; import java.util.Random; public class game extends AppCompatActivity { private static final String *TAG* = "MainActivity"; TextView userSelectionTextView, compSelectionTextView, wonLostTieTextView, scoreTextVIEW; Button logout; Button rules, FAQs; int userScore = 0, compScore = 0; Random random: @Override protected void onCreate(Bundle savedInstanceState) { super.onCreate(savedInstanceState); setContentView(R.layout.activity\_game); userSelectionTextView = findViewById(R.id.userSelectionTextView); compSelectionTextView = findViewById(R.id.compSelectionTextView); wonLostTieTextView = findViewById(R.id.wonLostTieTextView); scoreTextVIEW = findViewById(R.id.scoreTextVIEW); logout = findViewById(R.id.Logout); rules = findViewById(R.id.rules); FAQs = findViewById(R.id.faq);

```
userSelectionTextView.setText("");
    compSelectionTextView.setText("");
    wonLostTieTextView.setText("");
    random = new Random();
    rules.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View v) {
         Intent in = new Intent(game.this,Rules.class);
         startActivity(in);
         Toast.makeText(game.this,"RULES",Toast.LENGTH_SHORT).show();
       }
    });
    FAQs.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View v) {
         golink("https://www.paperrockscissor.com/frequently-asked-questions");
       }
    });
    logout.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View v) {
         Intent intent = new Intent(game.this,Login.class);
         startActivity(intent);
         finish();
         Toast.makeText(game.this, "Successfully Logged Out",
Toast.LENGTH_SHORT).show();
    });
  private void golink(String s) {
    Uri uri = Uri.parse(s);
    startActivity(new Intent(Intent.ACTION_VIEW,uri));
  public void resetButton(View view) {
    wonLostTieTextView.setText("");
    userSelectionTextView.setText("");
    compSelectionTextView.setText("");
    userScore = 0;
    compScore = 0;
    setScoreTextVIEW(userScore, compScore);
  public void rpsButtonSelected(View view) {
    int userSelection = Integer.parseInt(view.getTag().toString());
```

```
Log.i(TAG, "rpsButtonSelected: " + userSelection);
   matchGame(userSelection);
 private void matchGame(int userSelection){
   int low=1;
   int high=3;
   int compSelection = random.nextInt(high) + low;
   if (userSelection == compSelection){
     //Tie
     wonLostTieTextView.setText("It's a Tie!");
   else if ((userSelection - compSelection) \% 3 ==1){
     //User Win
     userScore++;
     wonLostTieTextView.setText("yay,you won!");
   else{
     //comp wins
     compScore++;
     wonLostTieTextView.setText("Oops,you Lost!");
   switch (userSelection){
     case 1:
        userSelectionTextView.setText("Rock");
        break;
     case 2:
        userSelectionTextView.setText("Paper");
        break:
     case 3:
        userSelectionTextView.setText("Scissor");
switch (compSelection){
     case 1:
        compSelectionTextView.setText("Rock");
        break:
     case 2:
        compSelectionTextView.setText("Paper");
        break;
     case 3:
        compSelectionTextView.setText("Scissor");
        break;
   setScoreTextVIEW(userScore,compScore);
```

```
private void setScoreTextVIEW(int userScore, int compScore){
    scoreTextVIEW.setText(String.valueOf(userScore)+ ":" + String.valueOf(compScore));
  @Override
  public void onBackPressed() {
    new AlertDialog.Builder(this)
         .setMessage("Are You Sure you want to end the game?")
         .setCancelable(false)
         .setPositiveButton("Yes", new DialogInterface.OnClickListener() {
           public void onClick(DialogInterface dialogInterface, int i) {
              finish();
         .setNegativeButton("No",null)
         .show();
  public void Logout(View v){
    moveTaskToBack(true);
    android.os.Process.killProcess(android.os.Process.myPid());
    System.exit(1);
  }
}
AndroidManifest.xml
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"</pre>
  xmlns:tools="http://schemas.android.com/tools">
  <uses-permission android:name="android.permission.INTERNET" />
  <application
    android:allowBackup="true"
    android:dataExtractionRules="@xml/data_extraction_rules"
    android:fullBackupContent="@xml/backup_rules"
    android:icon="@drawable/magic"
    android:label="@string/app_name"
    android:roundIcon="@drawable/image_launcher_round"
    android:supportsRtl="true"
    android:theme="@style/Theme.RPSgame">
    <activity
       android:name=".Rules"
       android:exported="false">
       <meta-data
         android:name="android.app.lib_name"
         android:value=""/>
    </activity>
    <activity
```

```
android:name=".ForgetPassword"
    android:exported="false">
    <meta-data
       android:name="android.app.lib_name"
       android:value=""/>
  </activity>
  <activity
    android:name=".GoogleSignInActivity"
    android:exported="false">
    <meta-data
       android:name="android.app.lib_name"
       android:value=""/>
  </activity>
  <activity
    android:name=".game"
    android:exported="false">
    <meta-data
       android:name="android.app.lib_name"
       android:value=""/>
  </activity>
  <activity
    android:name=".splash"
    android:exported="true">
    <intent-filter>
       <action android:name="android.intent.action.MAIN" />
       <category android:name="android.intent.category.LAUNCHER" />
    </intent-filter>
  </activity>
  <activity
    android:name=".Register"
    android:exported="true">
    <meta-data
       android:name="android.app.lib_name"
       android:value=""/>
  </activity>
  <activity
    android:name=".Login"
    android:exported="true">
    <meta-data
       android:name="android.app.lib_name"
       android:value=""/>
  </activity>
  <meta-data
    android:name="preloaded_fonts"
    android:resource="@array/preloaded_fonts" />
</application
```

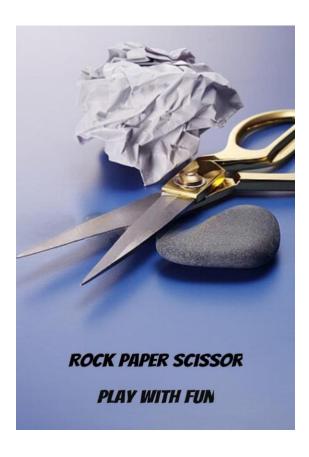
### **RESULT**

# **5.1 Validation and Naming Conventions**

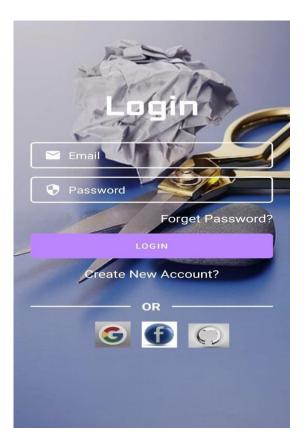
Sr. No.	Control ID	Validations Used	Reason
1.	Email	Required Field Validator,String index Of Validation	Email Cannot be empty. Invalid '@' and '.' Position
2.	Password	Required Field Validator, String Length Validator, Regular Expression Validator	Passsword cannot be empty.Password cannot be less than 6 characters.

# 5.2 Screenshots:

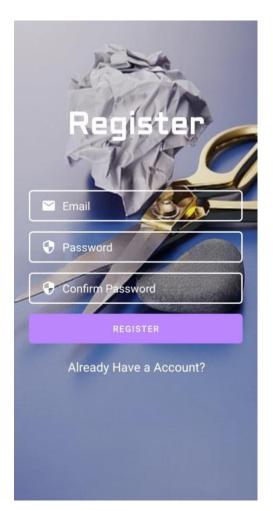
### 5.2.1 Splash Screen:



### 6.2.2 Login Page:



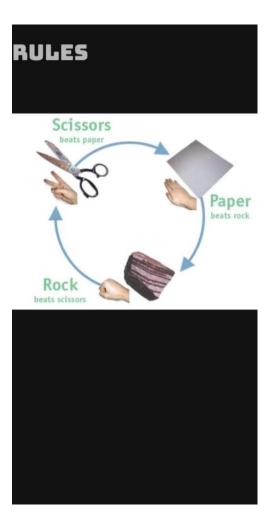
# 6.3.2 Register Page



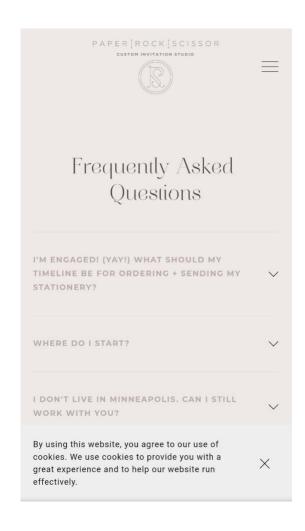
# **6.3.4 Forget Password Page:**



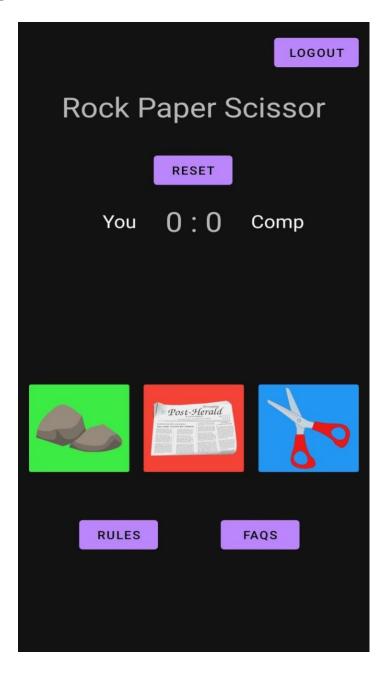
### 6.3.5 Rules Page:



### **6.3.7 Frequently Asked Questions Page:**



# 6.3.6 Game Page:



### 7 Future Enhancements & Conclusion

#### 7.1 Future Enhancements:

- Addition of More Activities.
- Adding Better UI.
- Connecting to the Social media option will be added in future.
- Feedback will be taken to make it better and more attractive and fun playing.
- Players will be able to see the top 10 online matches score.

#### 7.2 Conclusion:

This Document was created with the objective of providing a basic knowledge of Rock Paper Scissor Game. In this busy world when people take their free time off and really want to play a game just for fun then they can use it. It can be used by kids too.

In this game, players can play offline with the computer. Highest score gained by the player will be added to the database. Players can also play online with their friends and have fun.

I also think with the future updates I can turn it into one of the best Rock Paper Scissor Game where players will have lots of fun.

# 8 References

https://www.google.com https://www.youtube.com

https://www.stackoverflow.com

https://teachablemachine.withgoogle.com/

# 9 <u>Annexure</u>

# 9.1 Figures list:

Sr.No	Name of figure	Page number
4.2	Class Diagram	8
4.3	Use Case Diagram	9
4.4	Sequence Diagram	9
4.5	Activity Diagram	10
4.6	State Diagram	11
4.7	Package Diagram	12
4.8	Component Diagram	12
4.9	Deployment Diagram	13

### 9.2 <u>Table List</u>:

Sr.No	Name of figure	Page number
4.1	Event Table	8
4.10	Database Design	14
6.1	Validation & Naming Conventions	30