Name	**:**	Prachi Aggarwal
Course	**:**	B.Sc.(H) Computer Science
Roll no	**:**	21570015
Year	**:**	2nd
Semester	**:**	4th
Subject Name	**:**	Android Programming
Submitted to	**:**	Ms. Kanishka

Practical Questions

Q1. Create “Hello World” application. That will display “Hello World” in the middle of the screen in the emulator. Also display “Hello World” in the middle of the screen in the Android Phone.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    tools:context=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        />

</LinearLayout>
```

MainActivity.java

```
package com.example.helloworld;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

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

Output in Emulator

Output in Android Phone

Q2. Create an application with three buttons (increment, decrement and reset) and a textView aligned vertically. On clicking, increment/decrement button, the value of the textview should increment/decrement by 1while selecting reset button, the value of textview should become zero.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:text="Counter App"
        android:textSize="64dp"/>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/result"
        android:layout_gravity="center"
        android:text="0"
        android:textSize="48dp"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/increment"
        android:layout_gravity="center"
        android:onClick="onIncrement"
        android:layout_marginTop="16dp"
        android:text="Increment"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/decrement"
        android:onClick="onDecrement"
        android:layout_gravity="center"
        android:layout_marginTop="16dp"
        android:text="Decrement"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/reset"
        android:onClick="onReset"
```

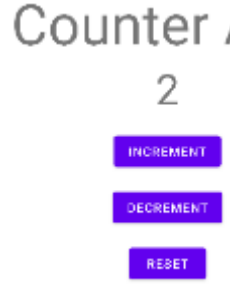
```
        android:layout_gravity="center"
        android:layout_marginTop="16dp"
        android:text="RESET"/>

</LinearLayout>
```

MainActivity.java

```
package com.example.practical2;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
    TextView res;
    Button inc;
    Button dec;
    Button reset;
    int counter=0;

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

        inc = findViewById(R.id.increment);
        res= findViewById(R.id.result);
        dec = findViewById(R.id.decrement);
        reset = findViewById(R.id.reset);

        inc.setOnClickListener(new View.OnClickListener(){
            public void onClick(View view){
                res.setText(""+onIncrement());
            }
        });
        reset.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                res.setText(""+onReset());
            }
        });
        dec.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                res.setText(""+onDecrement());
            }
        });
    }
    public int onReset(){
        counter=0;
        return 0;
    }
    public int onIncrement(){
        return ++counter;
    }
```

```
    public int onDecrement(){
        return --counter;
    }
}
```

Output

Increment	Decrement
Reset	**Again Increment**
	

Q3. Create an application with login module.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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=".MainActivity">

   <TextView
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_gravity="center"
       android:text="Enter LogIn Details"
       android:layout_margin="64sp"
       android:textSize="32sp"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Email-Id"
        android:layout_marginLeft="16sp"
        android:textSize="16sp"/>

    <EditText
        android:id="@+id/email"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter your Email-Id"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Password"
        android:layout_marginLeft="16sp"
        android:layout_marginTop="32sp"
        android:textSize="16sp"/>

    <EditText
        android:id="@+id/password"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter the password"/>

    <Button
        android:id="@+id/login"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="32sp"
        android:onClick="onSubmit"
        android:text="LogIn"/>


</LinearLayout>
```

MainActivity.java

```
package com.example.practical3;
```

```
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;

public class MainActivity extends AppCompatActivity {

    String idd = "abc@gmail.com";
    String secure = "12345";

    EditText email, password;
    Button submit;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onSubmit(View view)
    {
        email = findViewById(R.id.email);
        password =findViewById(R.id.password);
        submit = findViewById(R.id.login);
        String msgEmail = email.getText().toString();
        String msgPassword = password.getText().toString();
        if(msgEmail.equals(idd) && msgPassword.equals(secure)){
            Intent intent = new Intent(this,RecieveCredentials.class);
            intent.putExtra("EMAIL_MSG",msgEmail);
            intent.putExtra("PASSWORD_MSG", msgPassword);
            startActivity(intent);
        }
        else{
            Toast.makeText(MainActivity.this,"Wrong Email Id and Password
",Toast.LENGTH_LONG).show();
        }

    }
}
```

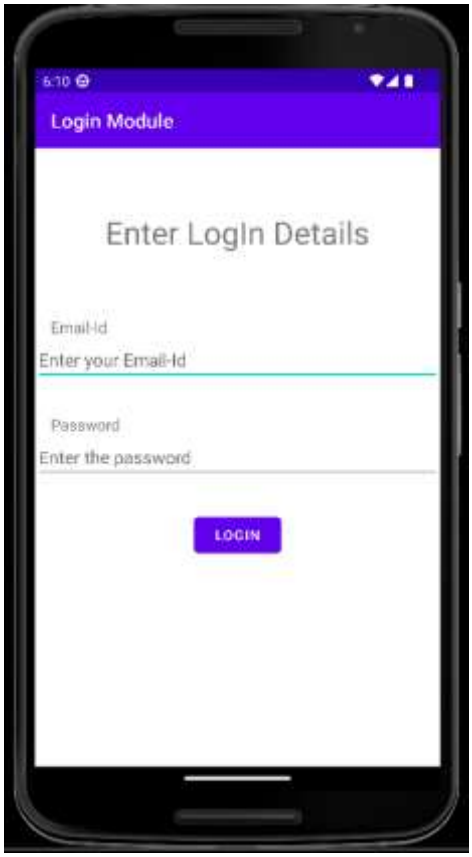
activity_recieve_credentials.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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"
    android:gravity="center"
    tools:context=".RecieveCredentials">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

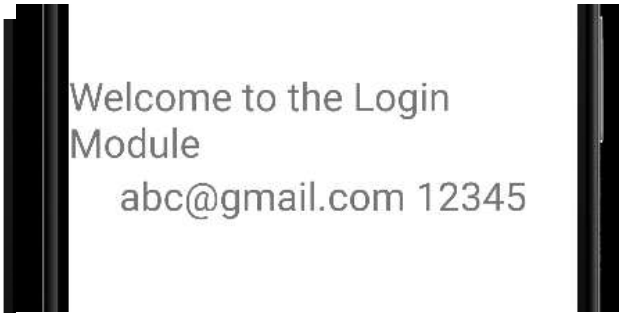
```
        android:text="Welcome to the Login Module"
        android:textSize="32sp"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id= "@+id/finale"
        android:textSize="32sp"
        />

</LinearLayout>
```

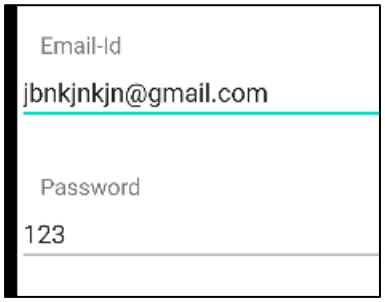
RecieveCredentials.java

```
package com.example.practical3;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.widget.TextView;

public class RecieveCredentials extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstan
ceState);
        setContentView(R.layout.activity_recieve_credentials);
        Intent intent = getIntent();
        String emailId = intent.getStringExtra("EMAIL_MSG");
        String pass = intent.getStringExtra("PASSWORD_MSG");
        TextView message = findViewById(R.id.finale);
        message.setText(emailId+" "+pass);
    }
}
```


Login Module
Enter LogIn Details
Email-Id
Enter your Email-Id
Password
Enter the password
LOGIN

Email-Id
abc@gmail.com
Password
12345


Welcome to the Login Module
abc@gmail.com 12345


Email-Id
jbnkjnkjn@gmail.com
Password
123

LOGIN
Wrong Email Id and Password

Q4. Create spinner with strings taken from resource folder (res >> value folder) and on changing the spinner value, Image will change.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/heading"
        android:layout_gravity="center"
        android:textSize="32sp"/>

    <Spinner
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/option"
        android:layout_gravity="center"
        android:layout_marginTop="16sp"
        android:entries="@array/options"/>

    <ImageView
        android:layout_width="200dp"
        android:layout_height="200dp"
        android:layout_gravity="center"
        android:layout_marginTop="16sp"
        android:layout_marginBottom="16sp"
        android:id="@+id/img"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/choose"
        android:layout_gravity="center"
        android:text="@string/button"
        android:onClick="onClickMenu"/>


</LinearLayout>
```

MainActivity.java

```
package com.example.practical4imageview;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.ImageView;
```

```
import android.widget.Spinner;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onClickMenu(View view){
        ImageView img = findViewById(R.id.img);
        Spinner spn = findViewById(R.id.option);
        String appType = String.valueOf(spn.getSelectedItem());
        switch (appType){
            case "Whatsapp": img.setImageResource(R.drawable.chat);
            break;
            case "Facebook": img.setImageResource(R.drawable.facebook);
            break;
            case "Instagram": img.setImageResource(R.drawable.insta);
            break;
        }
    }
}
```

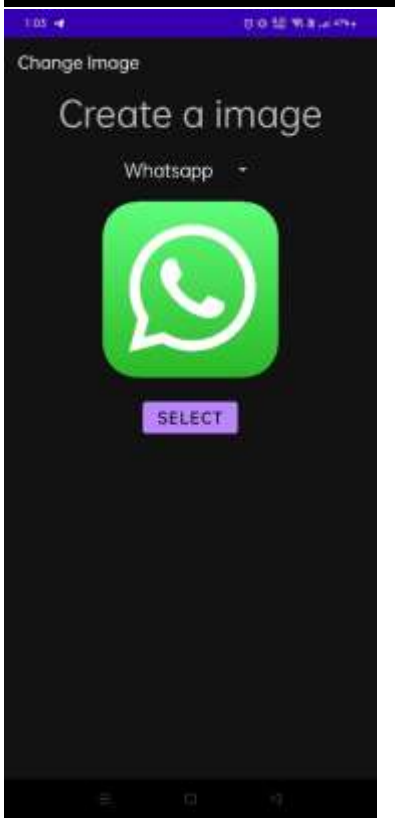
strings.xml

```
<resources>
    <string name="app_name">Change Image</string>
    <string name="heading">Create a image</string>
    <string name="button">Select</string>
    <string-array name="options">
        <item>Whatsapp</item>
        <item>Facebook</item>
        <item>Instagram</item>
    </string-array>
</resources>
```

Change Image
Create a image
Facebook
SELECT

Change Image
Create a image
Instagram
SELECT

Change Image
Create a image
Whatsapp
SELECT


Change Image
Create a image
Whatsapp
SELECT

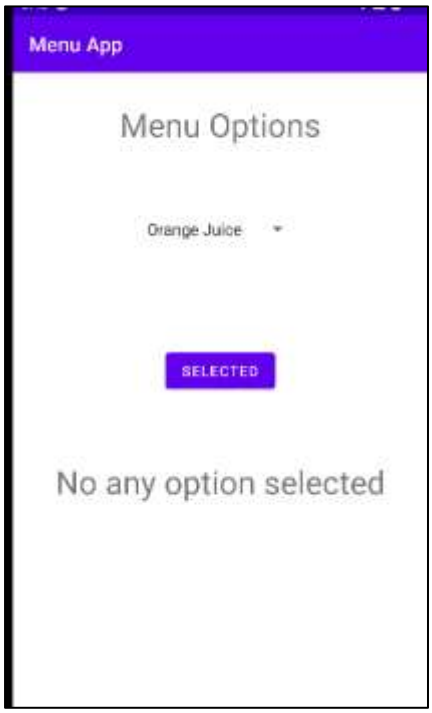
Q5. Create a menu with 5 options and selected option should appear in text box.

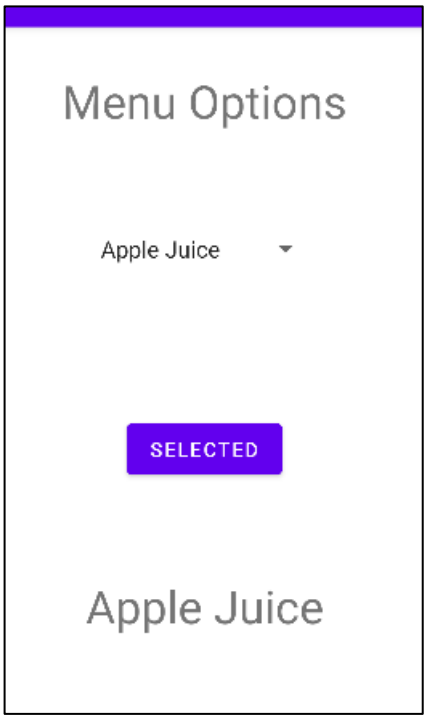
activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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=".MainActivity">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Menu Options"
        android:layout_gravity="center"
        android:layout_margin="30sp"
        android:textSize="32sp"/>

    <Spinner
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/menu"
        android:entries="@array/options"
        android:layout_margin="40sp"
        android:layout_gravity="center"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/choose"
        android:layout_margin="64sp"
        android:layout_gravity="center"
        android:text="Selected"
        android:onClick="onClickMenu"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/selected_option"
        android:layout_gravity="center"
        android:text="No any option selected"
        android:textSize="32sp"/>

</LinearLayout>
```

MainActivity.java

```
package com.example.practical4;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Spinner;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onClickMenu(View view){
        TextView juice = findViewById(R.id.selected_option);
        Spinner menu = findViewById(R.id.menu);
        String juiceType = String.valueOf(menu.getSelectedItem());
        juice.setText(juiceType);
    }
}
```





Q6. Create a list of all courses in your college and on selecting a particular course teacher-in charge of that course should appear at the bottom of the screen.

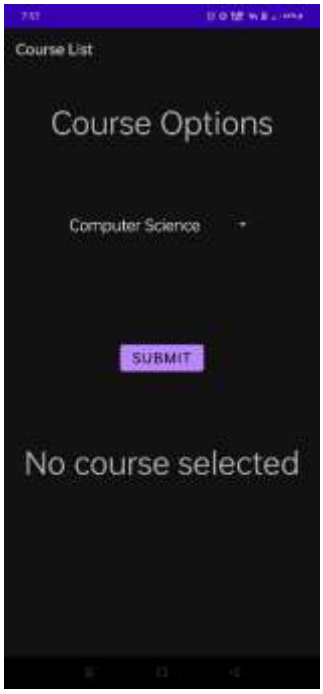
activity_main.xml

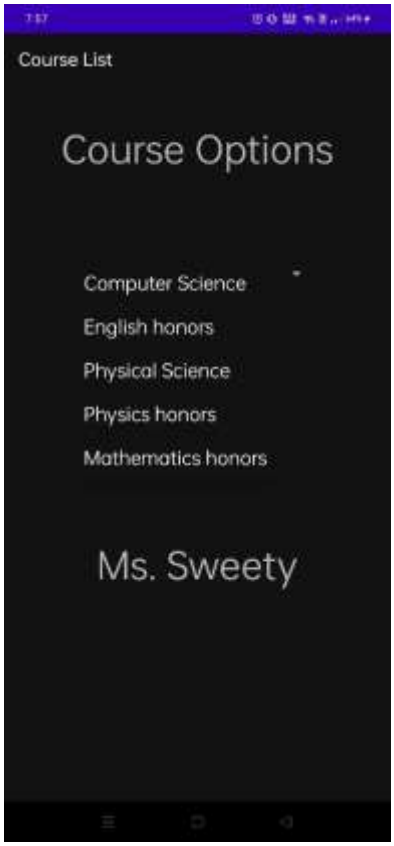
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"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

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Course Options"
        android:layout_gravity="center"
        android:layout_margin="30sp"
        android:textSize="32sp"/>


    <Spinner
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/menu"
        android:entries="@array/options"
        android:layout_margin="40sp"
        android:layout_gravity="center"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/submit"
        android:layout_margin="64sp"
        android:layout_gravity="center"
        android:text="Submit"
        android:onClick="onClickMenu"/>

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/selected_option"
        android:layout_gravity="center"
        android:text="No course selected"
        android:textSize="32sp"/>


</LinearLayout>
```

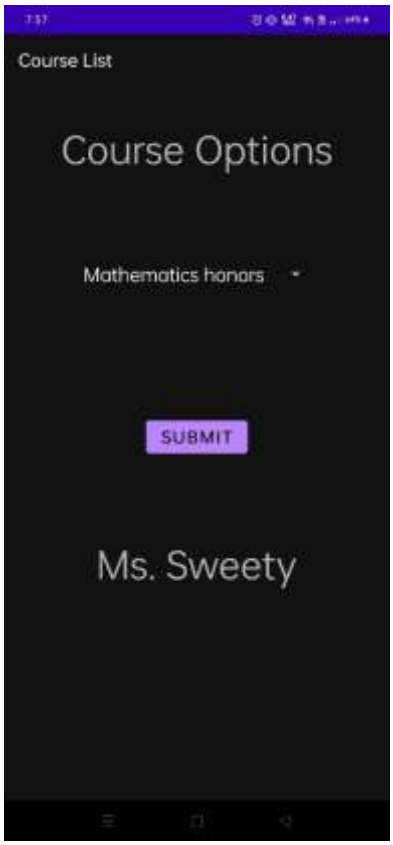
MainActivity.java

```
package com.example.practical6;
```

```java
import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.view.View;
import android.widget.Spinner;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onClickMenu(View view){
        TextView course = findViewById(R.id.selected_option);
        Spinner menu = findViewById(R.id.menu);
        String courseType = String.valueOf(menu.getSelectedItem());
        switch (courseType){
            case "Computer Science": course.setText("Ms. Sweety");
            break;
            case "Physical Science": course.setText("Ms. XYZ");
            break;
            case "Physics honors": course.setText("Ms. ABC");
            break;
            case "English honors": course.setText("Mr. UIBH");
            break;
            case "Mathematics honors": course.setText("Mr. Suresh");
            break;
        }
    }
}
```




Course List
Course Options
Computer Science
English honors
Physical Science
Physics honors
Mathematics honors
Ms. Sweety


Course List
Course Options
Mathematics honors
SUBMIT
Ms. Sweety

Q7. Create an application with three option buttons, on selecting a button colour of the screen will change.

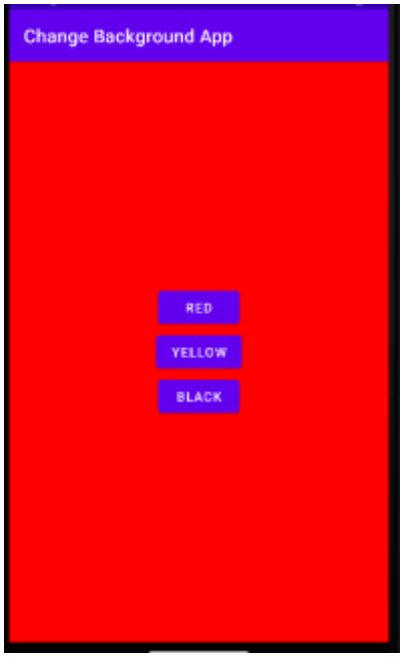
activity_main.xml

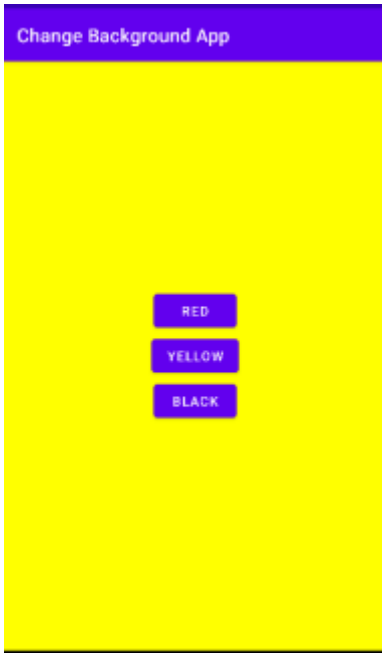
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/container"
    android:layout_width="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/red"
        android:text="Red"
        android:onClick="onClick"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/purple"
        android:text="Yellow"
        android:onClick="onClick"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/black"
        android:text="Black"
        android:onClick="onClick"/>
</LinearLayout>
```

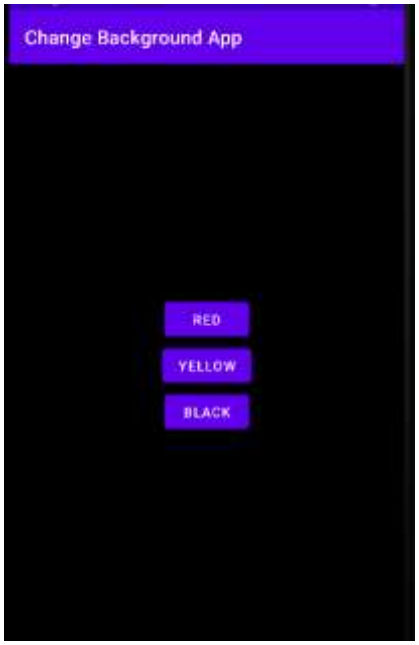
MainActivity.java

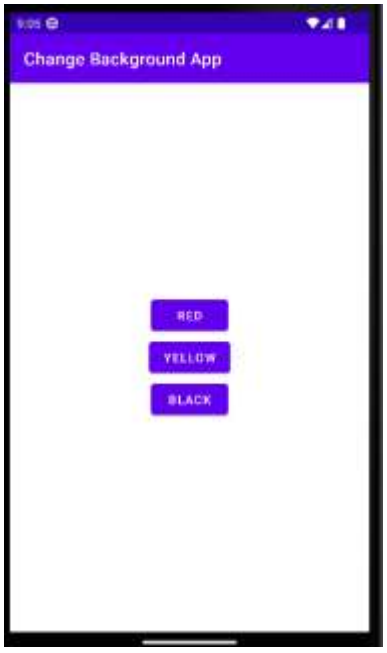
```
package com.example.practical7;

import androidx.appcompat.app.AppCompatActivity;

import android.graphics.Color;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.LinearLayout;

public class MainActivity extends AppCompatActivity {

    Button red,purple,black;
    LinearLayout background;
```

```
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        red = findViewById(R.id.red);
        purple = findViewById(R.id.purple);
        black = findViewById(R.id.black);
        background=findViewById(R.id.container);
        red.setOnClickListener(new View.OnClickListener(){
            public void onClick(View v){
                setRed();
            }
        });
        purple.setOnClickListener(new View.OnClickListener(){
            public void onClick(View v){
                setYellow();
            }
        });
        black.setOnClickListener(new View.OnClickListener(){
            public void onClick(View v){
                setBlack();
            }
        });
    }
    public void setRed(){
        background.setBackgroundColor(Color.RED);
    }
    public void setYellow(){
        background.setBackgroundColor(Color.YELLOW);
    }

    public void setBlack(){
        background.setBackgroundColor(Color.BLACK);
    }

}
```


Change Background App
RED
YELLOW
BLACK


Change Background App
RED
YELLOW
BLACK


Change Background App
RED
YELLOW
BLACK


Change Background App
RED
YELLOW
BLACK

Q8. Create an application to display various activity life cycle and fragment life cycle methods.

activity_main.xml

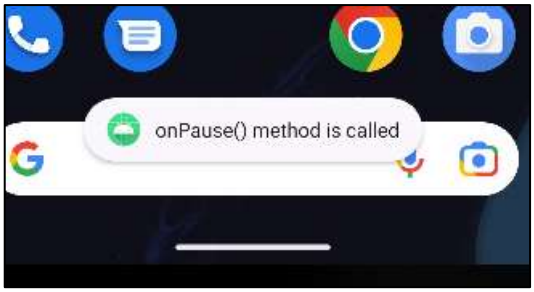
```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    tools:context=".MainActivity">

   <TextView
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:layout_gravity="center"
       android:text="Life cycle"
       android:textSize="48sp"
/>
</LinearLayout>
```

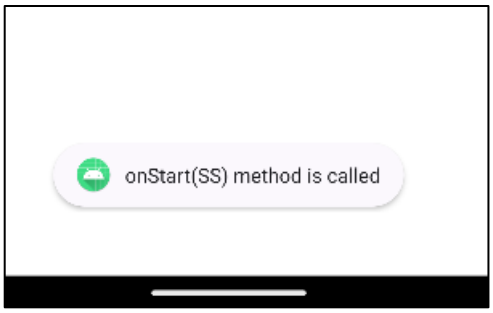
MainActivity.java

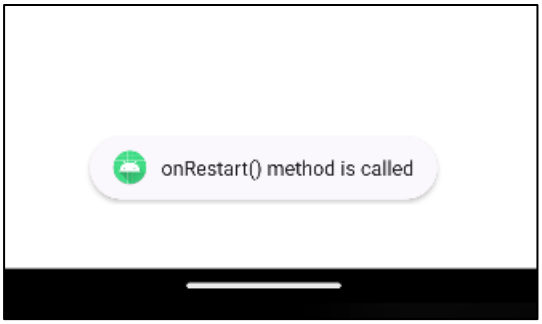
```
package com.example.lifecycleapp;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;
import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

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

        Toast.makeText(this, "onCreate() method is called",
Toast.LENGTH_LONG).show();
    }

    @Override
    protected void onStart() {
        super.onStart();
        Toast.makeText(this, "onStart() method is called",
```

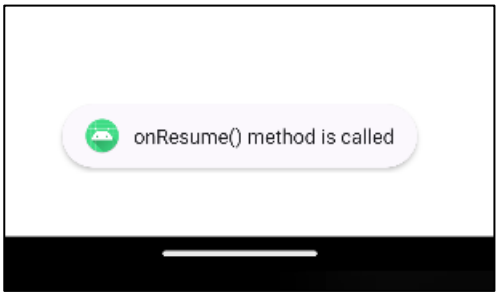
```
Toast.LENGTH_LONG).show();
    }

    @Override
    protected void onRestart() {
        super.onRestart();
        Toast.makeText(this, "onRestart() method is called",
Toast.LENGTH_LONG).show();
    }

    @Override
    protected void onResume() {
        super.onResume();
        Toast.makeText(this, "onResume() method is called",
Toast.LENGTH_LONG).show();
    }

    @Override
    protected void onStop() {
        super.onStop();
        Toast.makeText(this, "onStop() method is called",
Toast.LENGTH_LONG).show();
    }

    @Override
    protected void onDestroy() {
        super.onDestroy();
        Toast.makeText(this, "onDestroy() method is called",
Toast.LENGTH_LONG).show();
    }

    @Override
    protected void onPause() {
        super.onPause();
        Toast.makeText(this, "onPause() method is called",
Toast.LENGTH_LONG).show();
    }
}
```

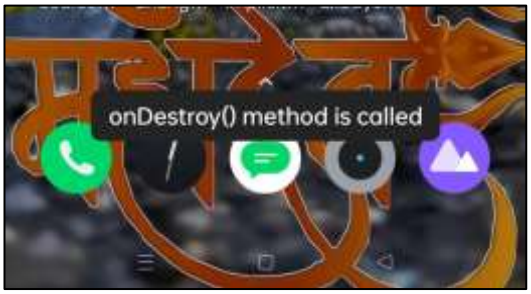
12:20
LifeCycleApp
Life cycle
onCreate() method is called

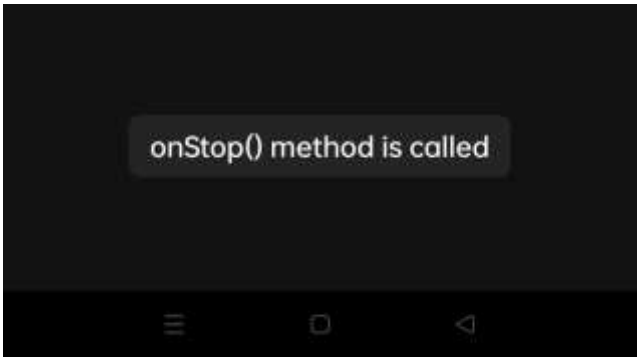

onPause() method is called


onStart(SS) method is called


onRestart() method is called


onResume() method is called


onDestroy() method is called


onStop() method is called

Q9. Create an application with 2 fragments, one to set the background and other to set the fore-color of the text.

fragment_1.xml

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    tools:context=".Fragment1">

    <TextView
        android:id="@+id/text2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Fragment 1"
        android:textColor="@color/teal_200"
        android:layout_gravity="center_horizontal"
        android:textAlignment="center"
        android:textSize="32sp"/>


</FrameLayout>
```

fragment_2.xml

```
<?xml version="1.0" encoding="utf-8"?>
<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:background="@color/purple_700"
    tools:context=".Fragment2">




</FrameLayout>
```

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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=".MainActivity">

    <TextView
        android:id="@+id/text"
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Fragment Activity"
        android:layout_gravity="center_horizontal"
        android:textAlignment="center"
        android:textSize="32sp"/>

    <Button
        android:id="@+id/btn1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:text="Change Text Colour"
        />

    <Button
        android:id="@+id/btn2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:text="Change Background Colour"
        />

    <FrameLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:id="@+id/frame"
        />

</LinearLayout>
```

Fragment1.java

```
package com.example.practical9final;

import android.os.Bundle;

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;


public class Fragment1 extends Fragment {

    @Override
    public View onCreateView(LayoutInflater inflater,ViewGroup container,
Bundle savedInstanceState){

        return inflater.inflate(R.layout.fragment_1,container,false);

    }
}
```

Fragment2.java

```
package com.example.practical9final;

import android.os.Bundle;

import androidx.fragment.app.Fragment;

import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;


public class Fragment2 extends Fragment {
    @Override
    public View onCreateView(LayoutInflater inflater,ViewGroup container,
Bundle savedInstanceState){
        View view = inflater.inflate(R.layout.fragment_2,container,false);
        return view;
    }
}
```

MainActivity.java

```
package com.example.practical9final;

import androidx.appcompat.app.AppCompatActivity;

import androidx.fragment.app.Fragment;
import androidx.fragment.app.FragmentManager;
import androidx.fragment.app.FragmentTransaction;

import android.os.Bundle;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {
    Button button1,button2;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        button1 = findViewById(R.id.btn1);
        button2 = findViewById(R.id.btn2);

        button1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                loadFrag(new Fragment1());

            }
        });
        button2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                loadFrag(new Fragment2());
            }
```

```
        });

    }
    public void loadFrag(Fragment fragment){
        FragmentManager fm = getSupportFragmentManager();
        FragmentTransaction ft = fm.beginTransaction();
        ft.replace(R.id.frame,fragment);
        ft.commit();
    }
}
```

Q10. Create an application with an activity having EditText and a button (with name “Send”). On clicking Send button, make use of implicit intent that uses a Send Action and let user select app from app chooser and navigate to that application.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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"
    android:gravity="center"
    tools:context=".MainActivity">

    <EditText
```

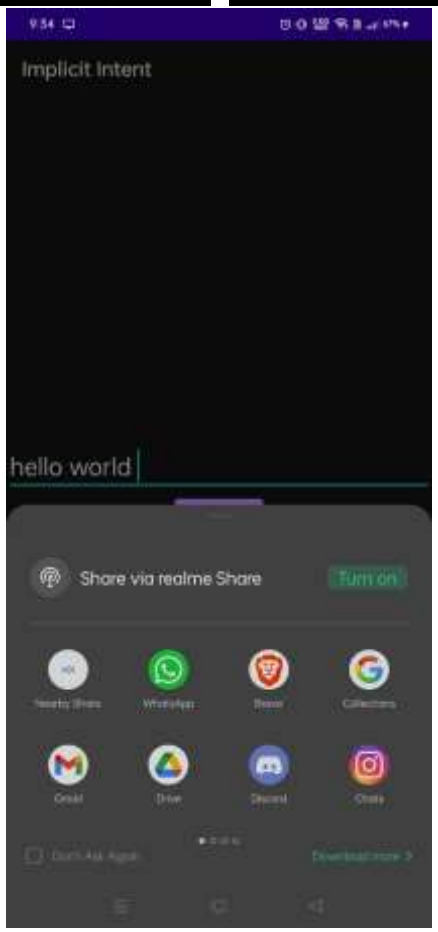
```
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter the message"
        android:id="@+id/msg"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Send"
        android:onClick="onSendMessage"/>

</LinearLayout>
```

MainActivity.java

```
package com.example.practical10;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onSendMessage(View view){
        EditText message = findViewById(R.id.msg);
        String msgText= message.getText().toString();
        Intent i= new Intent(Intent.ACTION_SEND);
        i.setType("text/plain");
        i.putExtra("mssg",msgText);
        Intent chooseIntent = Intent.createChooser(i,"send message
via....");
        startActivity(i);
    }
}
```

Implicit Intent
Enter the message
SEND

Implicit Intent
hello world
SEND


Implicit Intent
hello world
Share via realme Share
Turn on

11. Create a Login application. On successful login, use explicit intent to second activity displaying welcome message (Welcome Username) to the user and a logout button. When user presses logout button, a dialog box with a message ("Are you sure you want to exit?") and two buttons ("Yes" and "No") should appear to confirm logout. On "Yes" button click, go to login activity and on "No", stay on the same activity.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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"
    android:gravity="center"
    tools:context=".MainActivity">

    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter user name"
        android:id="@+id/username"/>
    <EditText
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Enter password"
        android:id="@+id/pass"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="LogIn"
        android:onClick="onLoginFunc"
        android:id="@+id/btnLogin"/>

</LinearLayout>
```

activity_logout_page.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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"
    android:gravity="center"
    tools:context=".LogoutPage">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/WelcomeMessage"
        android:textSize="32sp"/>
```

```
    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:id="@+id/btnLogout"
        android:text="LogOut"/>

</LinearLayout>
```

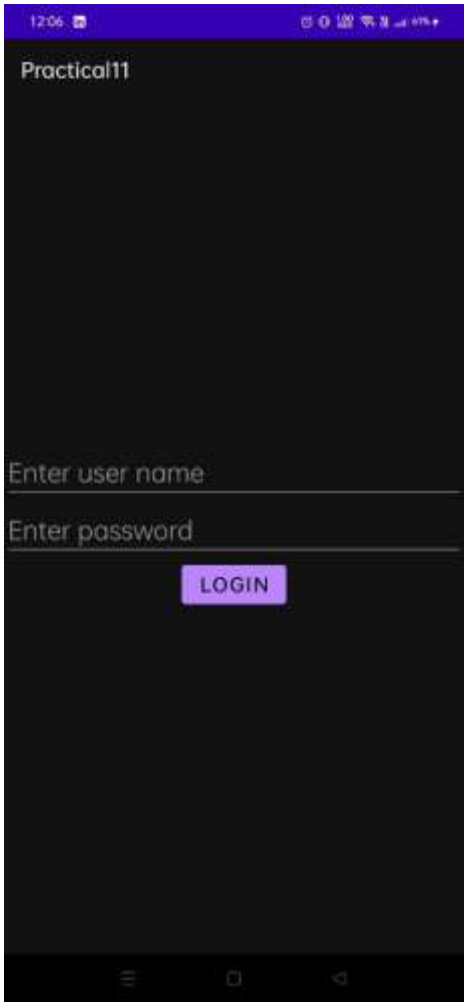
MainActivity.java

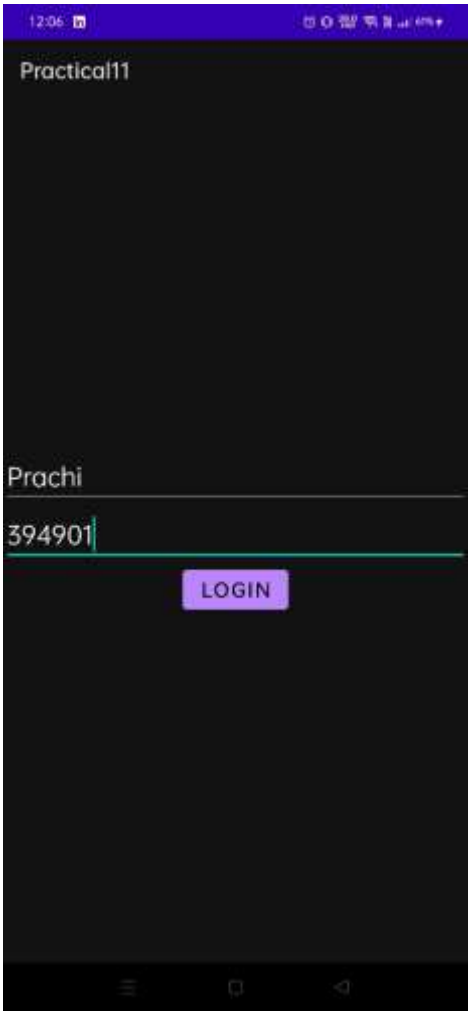
```
package com.example.practical11;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.EditText;

public class MainActivity extends AppCompatActivity {
    EditText name,password;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onLoginFunc(View view)
    {
        name=findViewById(R.id.username);
        password=findViewById(R.id.pass);
        String Uname = name.getText().toString();
        String code = password.getText().toString();
        Intent intent = new Intent(this,LogoutPage.class);
        intent.putExtra("user",Uname);
        intent.putExtra("secure",code);
        startActivity(intent);
    }
}
```

LogoutPage.java

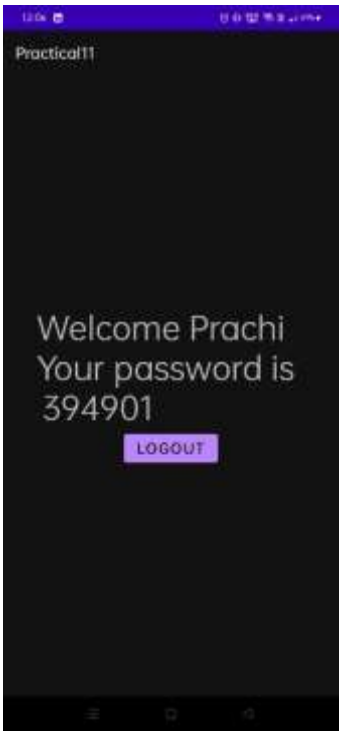
```
package com.example.practical11;

import androidx.appcompat.app.AlertDialog;
import androidx.appcompat.app.AppCompatActivity;

import android.content.DialogInterface;
import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.TextView;
import android.widget.Button;

public class LogoutPage extends AppCompatActivity {
    Button logout;
```

```
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_logout_page);
        Intent intent = getIntent();
        String text = intent.getStringExtra("user");
        String code = intent.getStringExtra("secure");
        TextView txt_view = findViewById(R.id.WelcomeMessage);
        txt_view.setText("Welcome "+text+"\nYour password is\n\t"+code);
        logout=findViewById(R.id.btnLogout);
        logout.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                messagePopUP();
            }
        });
    }
    public void messagePopUP()
    {

        AlertDialog.Builder builder = new AlertDialog.Builder(this);
        builder.setMessage("Are you sure you want to exit?");
        builder.setTitle("Alert!!");
        builder.setCancelable(false);

builder.setPositiveButton("Yes",(DialogInterface.OnClickListener)(dialog,wh
ich)->{
            Intent i = new Intent(this,MainActivity.class);
            startActivity(i);
        });

builder.setNegativeButton("No",(DialogInterface.OnClickListener)(dialog,whi
ch)->{
            dialog.cancel();
        });
        AlertDialog alertDialog = builder.create();
        alertDialog.show();
    }
}
```


Practical11
Enter user name
Enter password
LOGIN


Practical11
Prachi
394901
LOGIN

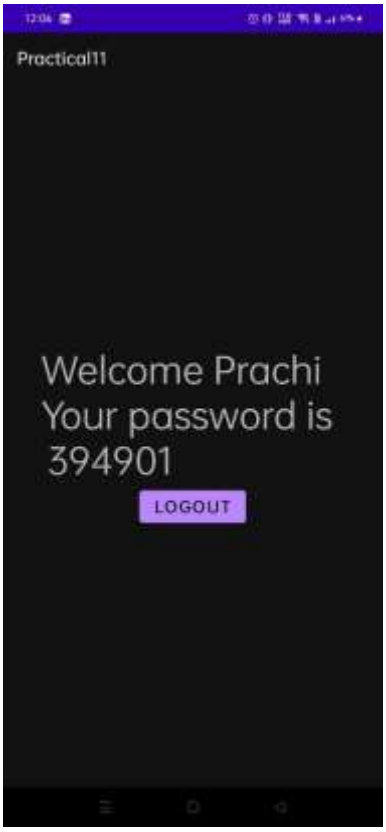
After LogIn



After LogOut

No

Yes



12. Create an application for Broadcast sender and receivers.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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"
    android:gravity="center"
    tools:context=".MainActivity">

   <TextView
       android:layout_width="wrap_content"
       android:layout_height="wrap_content"
       android:text="Hello Broadcast APP"
       android:layout_gravity="center"
       android:textSize="16sp"/>

</LinearLayout>
```

MainActivity.java

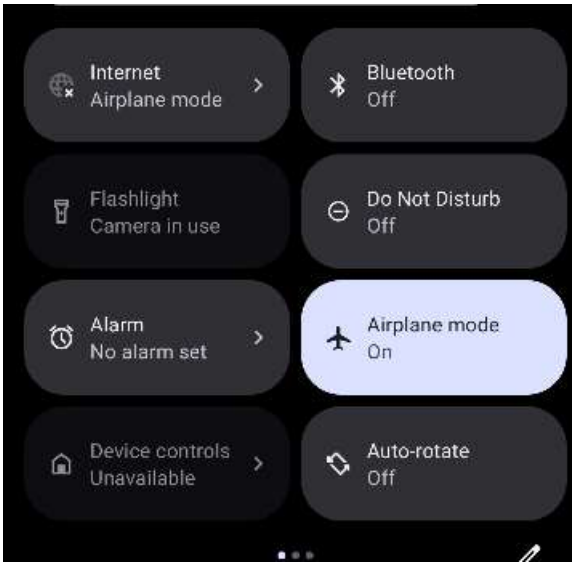
```java
package com.example.practical12final;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.content.IntentFilter;
import android.os.Bundle;


public class MainActivity extends AppCompatActivity {
    BroadcastReciever receiver = new BroadcastReciever();

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

    @Override
    protected void onStart() {
        super.onStart();
        IntentFilter intentFilter = new IntentFilter();
        intentFilter.addAction(Intent.ACTION_AIRPLANE_MODE_CHANGED);
        this.registerReceiver(receiver,intentFilter);
    }

    @Override
    protected void onStop() {
        super.onStop();
        this.unregisterReceiver(receiver);
    }
}
```

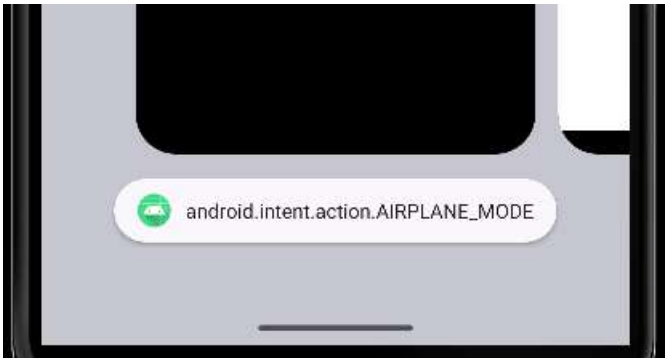
BroadcastReceiver.java

```java
package com.example.practical12final;

import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.widget.Toast;

public class BroadcastReciever extends BroadcastReceiver {

    @Override
    public void onReceive(Context context, Intent intent) {
        String actionString = intent.getAction();
        Toast.makeText(context, actionString, Toast.LENGTH_SHORT).show();
    }
}
```

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.example.practical12final">
    <uses-permission
android:name="android.permission.ACCESS_NETWORK_STATE"></uses-permission>

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical12Final"
        tools:targetApi="31">

        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER"
/>
                <category android:name="android.intent.category.DEFAULT"/>
            </intent-filter>

            <meta-data
                android:name="android.app.lib_name"
                android:value="" />
        </activity>
        <receiver
            android:name=".BroadcastReciever"
            android:exported="true">
            <intent-filter>
                <action
android:name="android.intent.action.AIRPLANE_MODE"/>
            </intent-filter>
        </receiver>
    </application>

</manifest>
```





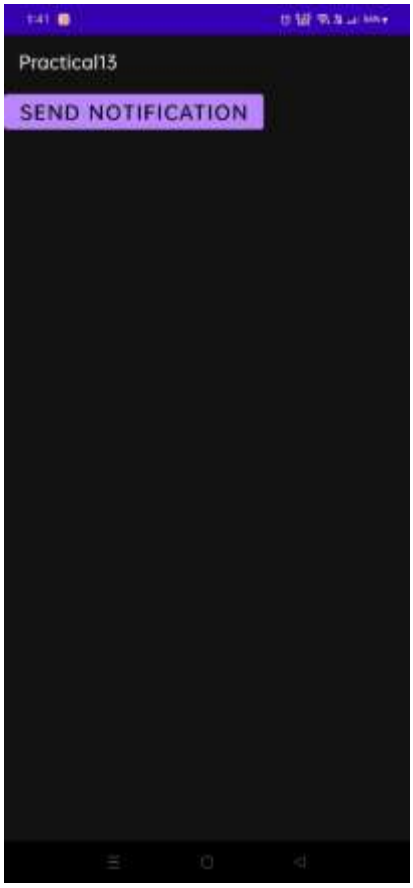
13. Create an application to create notification having icon, text and title.

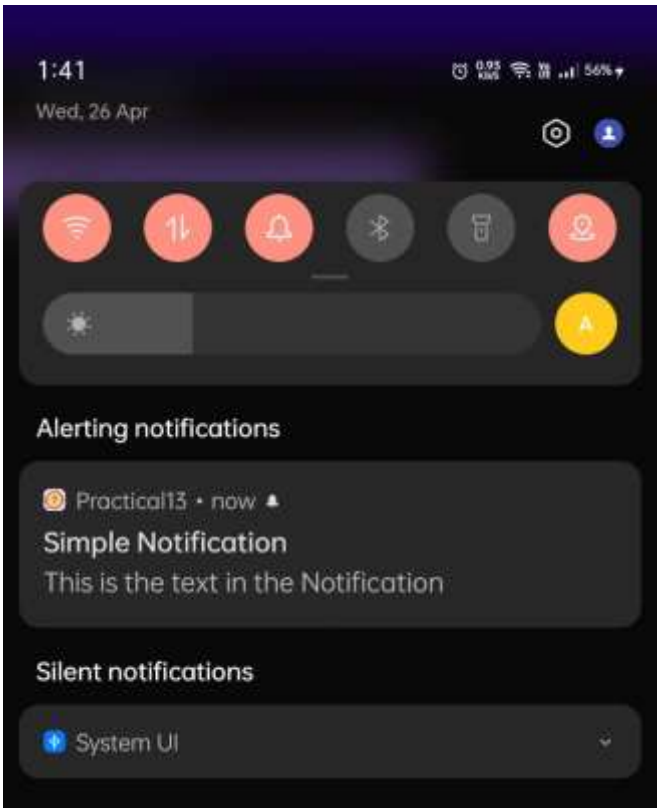
activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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=".MainActivity">

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="SEND NOTIFICATION"
        android:textSize="16sp"
        android:onClick="onDisplayNotification"/>

</LinearLayout>
```

MainActivity.java

```
package com.example.practical13;

import androidx.appcompat.app.AppCompatActivity;
import androidx.core.app.NotificationCompat;
import androidx.core.app.NotificationManagerCompat;

import android.app.NotificationChannel;
import android.app.NotificationManager;
import android.os.Build;
import android.os.Bundle;
import android.view.View;

public class MainActivity extends AppCompatActivity {
    private final String CHANNEL_ID="Personal Notifications";
    private final int Notifications_Id = 001;


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

    }

    public void onDisplayNotification(View view)
    {  CreateNotificationchannel();
        NotificationCompat.Builder builder = new
NotificationCompat.Builder(this, CHANNEL_ID);
        builder.setSmallIcon(R.drawable.icon);
        builder.setContentTitle("Simple Notification");
        builder.setContentText("This is the text in the Notification");
        builder.setPriority(NotificationCompat.PRIORITY_DEFAULT);

        NotificationManagerCompat c = NotificationManagerCompat.from(this);
        c.notify(Notifications_Id , builder.build());
    }

    private void CreateNotificationchannel()
    {
        if(Build.VERSION.SDK_INT >= Build.VERSION_CODES.O)
        {
            CharSequence name = "Personal Notifications";
            String description = " Include all the personal notifications";
            int importance = NotificationManager.IMPORTANCE_DEFAULT;

            NotificationChannel notificationChannel = new
NotificationChannel(CHANNEL_ID, name, importance);
            notificationChannel.setDescription(description);
            NotificationManager notificationManager = (NotificationManager)
getSystemService(NOTIFICATION_SERVICE);

notificationManager.createNotificationChannel(notificationChannel);

        }
    }
}
```





The notification poped up with notification ringtone.

14.Create an application to create services.

activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout 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=".MainActivity">

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Start Service"
        android:onClick="startService"/>

    <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Stop Service"
        android:onClick="stopService"/>

</LinearLayout>
```

AndroidManifest.xml

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">

    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/Theme.Practical14"
        tools:targetApi="31">
        <activity
            android:name=".MainActivity"
            android:exported="true">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER"
/>
            </intent-filter>

            <meta-data
                android:name="android.app.lib_name"
                android:value="" />
        </activity>
        <service android:name=".AndroidService"/>
    </application>

</manifest>
```

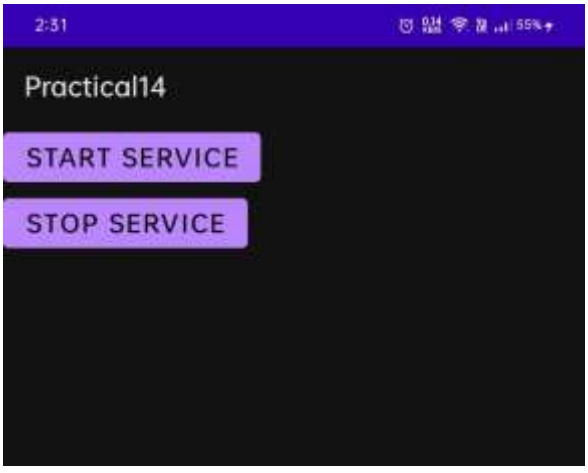
MainActivity.java

```
package com.example.practical14;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void startService(View view){
        startService(new Intent(this,AndroidService.class));
    }
    public void stopService(View view){
        stopService(new Intent(this, AndroidService.class));
```

```
    }
}
```

AndroidService.java

```
package com.example.practical14;
import android.app.Service;
import android.content.Intent;
import android.media.MediaPlayer;
import android.os.IBinder;
import android.provider.Settings;

public class AndroidService extends Service {
    private MediaPlayer player;
    public int onStartCommand(Intent intent, int flags, int startId){
        player= MediaPlayer.create(this,
Settings.System.DEFAULT_ALARM_ALERT_URI);
        player.setLooping(true);
        player.start();
        return START_STICKY;
    }
    @Override
    public void onDestroy(){
        super.onDestroy();
        player.stop();
    }
    public IBinder onBind(Intent intent){
        return null;
    }
}
```



After clicking Start service button alarm started to ring and after clicking Stop Service button alarm stopped ringing.