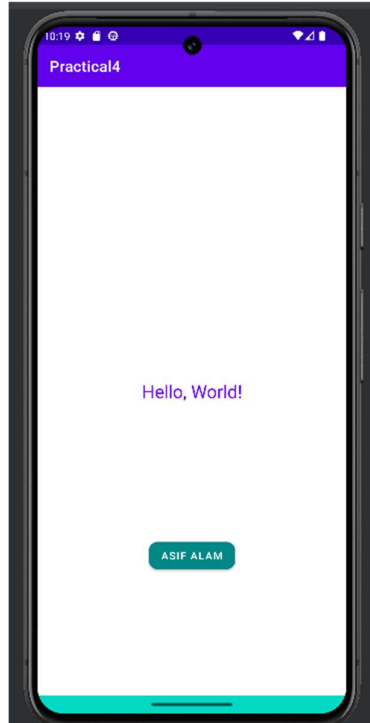


**Output:**



---

## Experiment 5

**Title: Demonstration of Android Activity and Fragment life cycle for “Hello World” application.**

### **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.Practical5"
        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>
        </activity>
    </application>
</manifest>
```

### **MainActivity.java**

```
package com.example.practical5;
import android.os.Bundle;
import android.util.Log;
```

```
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        if (savedInstanceState == null) {
            getSupportFragmentManager().beginTransaction()
                .replace(R.id.main, new BlankFragment())
                .commit();
        }
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main),
            (v, insets) -> {
                Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
                v.setPadding(systemBars.left, systemBars.top,
                    systemBars.right, systemBars.bottom);
                return insets;
            });
    }

    protected void onStart() {
        super.onStart();
        Log.d("Lifecycle", "onStart");
    }
    protected void onResume() {
        super.onResume();
        Log.d("Lifecycle", "onResume");
    }
}
```

```
protected void onPause() {
    super.onPause();
    Log.d("Lifecycle", "onPause");
}
protected void onStop() {
    super.onStop();
    Log.d("Lifecycle", "onStop");
}
protected void onDestroy() {
    super.onDestroy();
    Log.d("Lifecycle", "onDestroy");
}
protected void onRestart() {
    super.onRestart();
    Log.d("Lifecycle", "onRestart");
}
}
```

### **activity\_main.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<androidx.constraintlayout.widget.ConstraintLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:id="@+id/main"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Hello World!"
        app:layout_constraintBottom_toBottomOf="parent"
```

```
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
<FrameLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:id="@+id/f1"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintBottom_toBottomOf="parent"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

### **BlankFragment.java**

```
package com.example.practical5;
import android.os.Bundle;
import android.util.Log;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import androidx.annotation.NonNull;
import androidx.annotation.Nullable;
import androidx.fragment.app.Fragment;

public class BlankFragment extends Fragment {
    private static final String TAG = "HelloWorldFragment";
    @Nullable
    @Override
    public View onCreateView(@NonNull LayoutInflater inflater, @Nullable
        ViewGroup container, @Nullable Bundle savedInstanceState) {
        Log.d("fragmentlifecycle", "onCreateView called");
        return inflater.inflate(R.layout.fragment_blank, container,
            false);
    }
}
```

```
@Override
public void onCreateView(@NonNull View view, @Nullable Bundle
    savedInstanceState) {
    super.onCreateView(view, savedInstanceState);
    Log.d("fragmentlifecycle", "onViewCreated called");
}
@Override
public void onStart() {
    super.onStart();
    Log.d("fragmentlifecycle", "onStart called");
}
@Override
public void onResume() {
    super.onResume();
    Log.d(TAG, "onResume called");
}
@Override
public void onPause() {
    super.onPause();
    Log.d("fragmentlifecycle", "onPause called");
}
@Override
public void onStop() {
    super.onStop();
    Log.d("fragmentlifecycle", "onStop called");
}
@Override
public void onDestroyView() {
    super.onDestroyView();
    Log.d("fragmentlifecycle", "onDestroyView called");
}
@Override
public void onDestroy() {
    super.onDestroy();
```

---

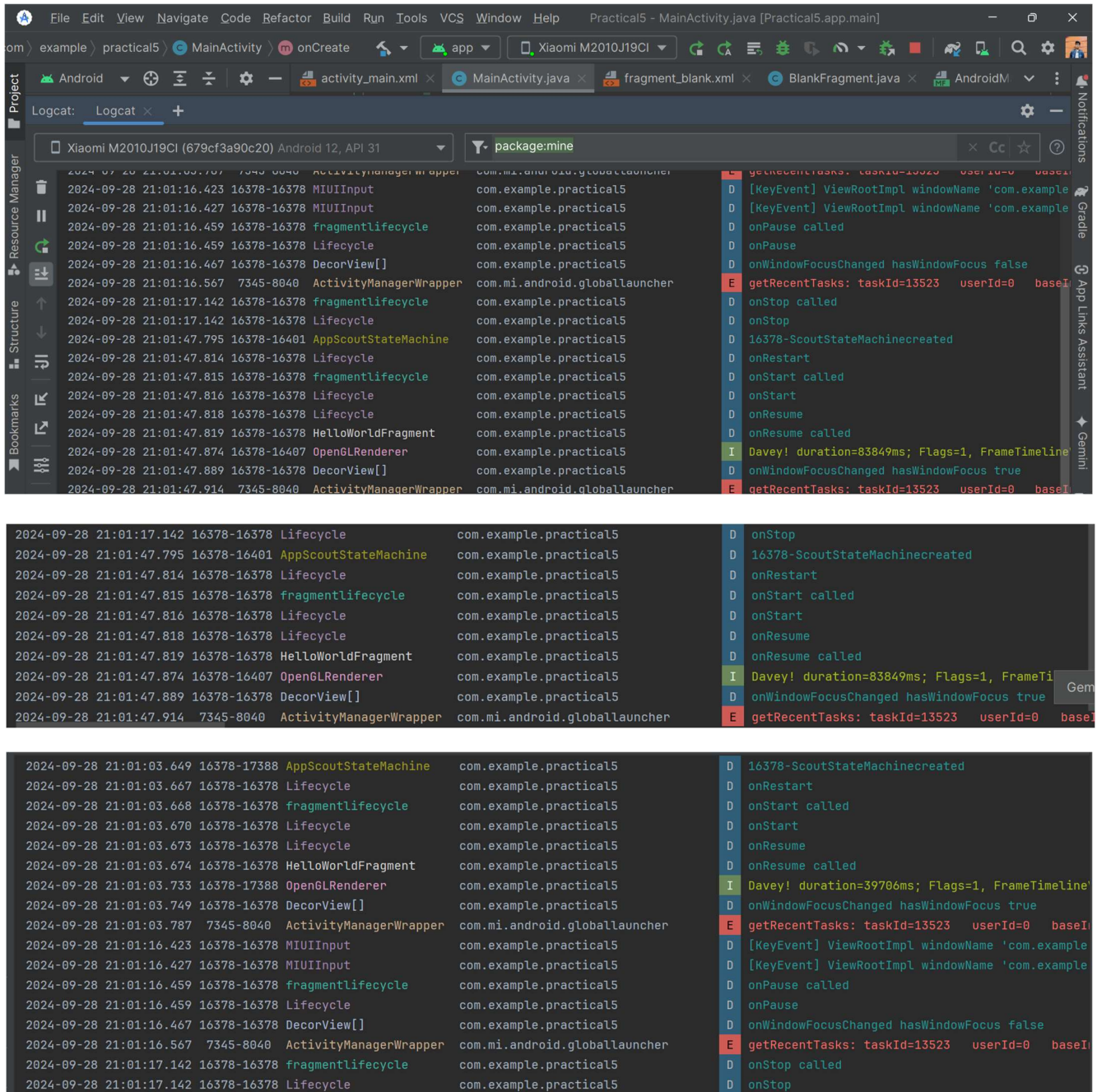
```
Log.d("fragmentlifecycle", "onDestroy called");  
}  
}
```

### **fragment\_blank.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"  
    tools:context=".BlankFragment">  
    <TextView  
        android:layout_width="match_parent"  
        android:layout_height="match_parent"  
        android:text="@string/hello_blank_fragment" />  
</FrameLayout>
```



## Output:



```

2024-09-28 21:01:16.423 16378-16378 MIUIInput com.example.practical5 D [KeyEvent] ViewRootImpl windowName 'com.example
2024-09-28 21:01:16.427 16378-16378 MIUIInput com.example.practical5 D [KeyEvent] ViewRootImpl windowName 'com.example
2024-09-28 21:01:16.459 16378-16378 fragmentlifecycle com.example.practical5 D onPause called
2024-09-28 21:01:16.459 16378-16378 Lifecycle com.example.practical5 D onPause
2024-09-28 21:01:16.467 16378-16378 DecorView[] com.example.practical5 D onWindowFocusChanged hasWindowFocus false
2024-09-28 21:01:16.567 7345-8040 ActivityManagerWrapper com.mi.android.globallauncher E getRecentTasks: taskId=13523 userId=0 baseI
2024-09-28 21:01:17.142 16378-16378 fragmentlifecycle com.example.practical5 D onStop called
2024-09-28 21:01:17.142 16378-16378 Lifecycle com.example.practical5 D onStop
2024-09-28 21:01:47.795 16378-16401 AppScoutStateMachine com.example.practical5 D 16378-ScoutStateMachinecreated
2024-09-28 21:01:47.814 16378-16378 Lifecycle com.example.practical5 D onRestart
2024-09-28 21:01:47.815 16378-16378 fragmentlifecycle com.example.practical5 D onStart called
2024-09-28 21:01:47.816 16378-16378 Lifecycle com.example.practical5 D onStart
2024-09-28 21:01:47.818 16378-16378 Lifecycle com.example.practical5 D onResume
2024-09-28 21:01:47.819 16378-16378 HelloWorldFragment com.example.practical5 D onResume called
2024-09-28 21:01:47.874 16378-16407 OpenGLRenderer com.example.practical5 I Davey! duration=83849ms; Flags=1, FrameTimeline
2024-09-28 21:01:47.889 16378-16378 DecorView[] com.example.practical5 D onWindowFocusChanged hasWindowFocus true
2024-09-28 21:01:47.914 7345-8040 ActivityManagerWrapper com.mi.android.globallauncher E getRecentTasks: taskId=13523 userId=0 baseI

2024-09-28 21:01:17.142 16378-16378 Lifecycle com.example.practical5 D onStop
2024-09-28 21:01:47.795 16378-16401 AppScoutStateMachine com.example.practical5 D 16378-ScoutStateMachinecreated
2024-09-28 21:01:47.814 16378-16378 Lifecycle com.example.practical5 D onRestart
2024-09-28 21:01:47.815 16378-16378 fragmentlifecycle com.example.practical5 D onStart called
2024-09-28 21:01:47.816 16378-16378 Lifecycle com.example.practical5 D onStart
2024-09-28 21:01:47.818 16378-16378 Lifecycle com.example.practical5 D onResume
2024-09-28 21:01:47.819 16378-16378 HelloWorldFragment com.example.practical5 D onResume called
2024-09-28 21:01:47.874 16378-16407 OpenGLRenderer com.example.practical5 I Davey! duration=83849ms; Flags=1, FrameTi
2024-09-28 21:01:47.889 16378-16378 DecorView[] com.example.practical5 D onWindowFocusChanged hasWindowFocus true
2024-09-28 21:01:47.914 7345-8040 ActivityManagerWrapper com.mi.android.globallauncher E getRecentTasks: taskId=13523 userId=0 baseI

2024-09-28 21:01:03.649 16378-17388 AppScoutStateMachine com.example.practical5 D 16378-ScoutStateMachinecreated
2024-09-28 21:01:03.667 16378-16378 Lifecycle com.example.practical5 D onRestart
2024-09-28 21:01:03.668 16378-16378 fragmentlifecycle com.example.practical5 D onStart called
2024-09-28 21:01:03.670 16378-16378 Lifecycle com.example.practical5 D onStart
2024-09-28 21:01:03.673 16378-16378 Lifecycle com.example.practical5 D onResume
2024-09-28 21:01:03.674 16378-16378 HelloWorldFragment com.example.practical5 D onResume called
2024-09-28 21:01:03.733 16378-17388 OpenGLRenderer com.example.practical5 I Davey! duration=39706ms; Flags=1, FrameTimeline
2024-09-28 21:01:03.749 16378-16378 DecorView[] com.example.practical5 D onWindowFocusChanged hasWindowFocus true
2024-09-28 21:01:03.787 7345-8040 ActivityManagerWrapper com.mi.android.globallauncher E getRecentTasks: taskId=13523 userId=0 baseI
2024-09-28 21:01:16.423 16378-16378 MIUIInput com.example.practical5 D [KeyEvent] ViewRootImpl windowName 'com.example
2024-09-28 21:01:16.427 16378-16378 MIUIInput com.example.practical5 D [KeyEvent] ViewRootImpl windowName 'com.example
2024-09-28 21:01:16.459 16378-16378 fragmentlifecycle com.example.practical5 D onPause called
2024-09-28 21:01:16.459 16378-16378 Lifecycle com.example.practical5 D onPause
2024-09-28 21:01:16.467 16378-16378 DecorView[] com.example.practical5 D onWindowFocusChanged hasWindowFocus false
2024-09-28 21:01:16.567 7345-8040 ActivityManagerWrapper com.mi.android.globallauncher E getRecentTasks: taskId=13523 userId=0 baseI
2024-09-28 21:01:17.142 16378-16378 fragmentlifecycle com.example.practical5 D onStop called
2024-09-28 21:01:17.142 16378-16378 Lifecycle com.example.practical5 D onStop
  
```



---

## Experiment 6

**Title: Create Sign in and Sign up screen using Toast and Recycler view.**

### **MainActivity.java**

```
package com.example.practical3;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.Toast;
import androidx.activity.EdgeToEdge;
import androidx.appcompat.app.AppCompatActivity;
import androidx.core.graphics.Insets;
import androidx.core.view.ViewCompat;
import androidx.core.view.WindowInsetsCompat;

public class MainActivity extends AppCompatActivity {
    Button btn1, btn2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main);
        ViewCompat.setOnApplyWindowInsetsListener(findViewById(R.id.main), (v,
insets) -> {
            Insets systemBars =
insets.getInsets(WindowInsetsCompat.Type.systemBars());
            v.setPadding(systemBars.left, systemBars.top, systemBars.right,
systemBars.bottom);
            return insets;
        });
        btn1 = findViewById(R.id.toLogin);
        btn2 = findViewById(R.id.toRegister);

        btn1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                Intent intent = new Intent(MainActivity.this, LoginActivity.class);
```

```
startActivity(intent);
    }
    });
    btn2.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View v) {
            Intent intent = new Intent(MainActivity.this,
RegistrationActivity.class);
            startActivity(intent);
        }
    });
}
}
```

**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:id="@+id/main"
android:layout_height="match_parent"
android:orientation="vertical"
android:padding="16dp"
android:gravity="center"
tools:context=".MainActivity">
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Home"
    android:textSize="40sp"
    android:textStyle="bold"
    android:layout_marginBottom="20dp" />
<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="20dp">
```

```
<Button
    android:id="@+id/toLogin"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="20dp"
    android:background="#f5602f"
    android:text="Login"
    android:textColor="#212121" />
<Button
    android:id="@+id/toRegister"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_margin="20dp"
    android:background="#f5602f"
    android:text="Register"
    android:textColor="#212121" />
</LinearLayout>
</LinearLayout>
```

**LoginActivity.java**

**Login.xml**

**RegistrationActivity.java**

**Registration.xml**

These four file is almost same as Practical 3

**Build.gradle - implementation 'androidx.recyclerview:recyclerview:1.2.1'**

**LandingPageActivity.java**

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

```
import android.os.Bundle;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.TextView;
```

```
import androidx.appcompat.app.AppCompatActivity;
import androidx.recyclerview.widget.LinearLayoutManager;
```

```
import androidx.recyclerview.widget.RecyclerView;
import java.util.ArrayList;
import java.util.List;

public class LandingPageActivity extends AppCompatActivity {
    private RecyclerView recyclerView;
    private List<String> dataList;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.landing_page);
        recyclerView = findViewById(R.id.recyclerView2);
        recyclerView.setLayoutManager(new LinearLayoutManager(this));
        initializeData();
        recyclerView.setAdapter(new MyAdapter(dataList));
    }

    private void initializeData() {
        dataList = new ArrayList<>();
        dataList.add("Item 1");
        dataList.add("Item 2");
        dataList.add("Item 3");
        dataList.add("Item 4");
        dataList.add("Item 5");
        dataList.add("Item 6");
        dataList.add("Item 7");
        dataList.add("Item 8");
        dataList.add("Item 9");
        dataList.add("Item 10");
        dataList.add("Item 11");
        dataList.add("Item 12");
        dataList.add("Item 13");
        dataList.add("Item 14");
        dataList.add("Item 15");
        dataList.add("Item 16");
        dataList.add("Item 17");
        dataList.add("Item 18");
        dataList.add("Item 19");
    }
}
```

```
dataList.add("Item 20");
}
public class MyAdapter extends
RecyclerView.Adapter<MyAdapter.MyViewHolder> {

    private List<String> dataList;
    public MyAdapter(List<String> dataList) {
        this.dataList = dataList;
    }
    @Override
    public MyViewHolder onCreateViewHolder(ViewGroup parent, int viewType) {
        View view =
LayoutInflater.from(parent.getContext()).inflate(R.layout.item_text, parent, false);
        return new MyViewHolder(view);
    }
    @Override
    public void onBindViewHolder(MyViewHolder holder, int position) {
        holder.textView.setText(dataList.get(position));
    }
    @Override
    public int getItemCount() {
        return dataList.size();
    }
    public class MyViewHolder extends RecyclerView.ViewHolder {
        TextView textView;
        public MyViewHolder(View itemView) {
            super(itemView);
            textView = itemView.findViewById(R.id.textView);
        }
    }
}
```

**Landing\_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"
tools:context=".LandingPageActivity">
<androidx.recyclerview.widget.RecyclerView
    android:id="@+id/recyclerView2"
    android:layout_width="match_parent"
    android:layout_height="10dp"
    android:layout_weight="1" />
<LinearLayout
    android:id="@+id/item_text"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:padding="16dp">
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="18sp"
        android:text="My name is Asif Alam" />
    </LinearLayout>
</LinearLayout>
```

**item.xml**

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:orientation="vertical"
    android:padding="16dp">
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
```

```
        android:textSize="18sp" />
    </LinearLayout>
```

---

**AndroidManifest.xml**

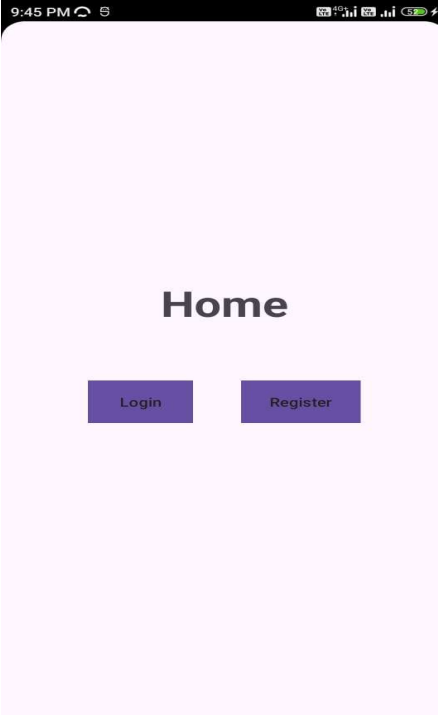
```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools">
    <application
        android:allowBackup="true"
        android:dataExtractionRules="@xml/data_extraction_rules"
        android:fullBackupContent="@xml/backup_rules"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportRtl="true"
        android:theme="@style/Theme.Practical3"
        tools:targetApi="31">
        <activity android:name=".LandingPageActivity"
            android:exported="false" />
        <activity android:name=".LoginActivity"
            android:exported="true" />
        <activity android:name=".RegistrationActivity"
            android:exported="true" />
        <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>
        </activity>
    </application>
</manifest>
```

**Strings.xml**

```
<resources>
    <string name="app_name">Practical 3</string>
    <string-array name="states_array">
        <item>Bihar</item>
        <item>Gujarat</item>
        <item>West Bengal</item>
    </string-array>
</resources>
```



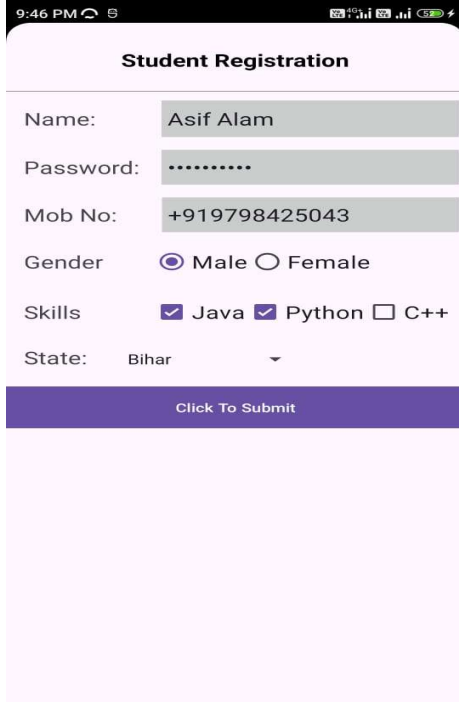
**Output:**



9:45 PM 5

**Home**

Login Register



9:46 PM 5

**Student Registration**

Name: Asif Alam

Password: .....

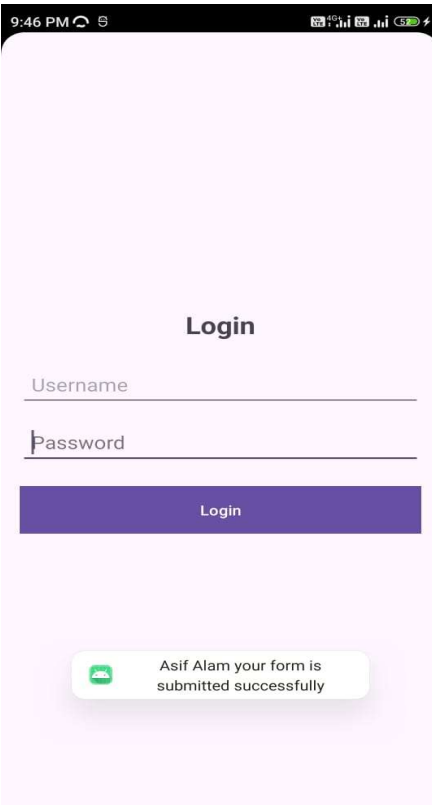
Mob No: +919798425043

Gender ☒ Male ☐ Female

Skills ☒ Java ☒ Python ☐ C++

State: Bihar

Click To Submit



9:46 PM 5

**Login**

Username

Password

Login

Asif Alam your form is submitted successfully

