MainActivity.java:

```java
package com.example.practicals;

import android.os.Bundle;
import androidx.appcompat.app.AppCompatActivity;
import com.example.practicals.R;

public class MainActivity extends AppCompatActivity {

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

    }
}
```

activity_main.xml:

```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"
        android:textColor="#ff0000"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"></TextView>

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

Hello World

MainActivity.java:

```java
package com.example.practicals;

import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;
import com.example.practicals.R;

public class MainActivity extends AppCompatActivity {

    TextView txt ;

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

        txt = findViewById(R.id.txt);
        txt.setText("\n onCreate");

    }

    @Override
    protected void onStart() {
        super.onStart();
        txt.append("\n onStart");
    }

    @Override
    protected void onResume() {
        super.onResume();
        txt.append("\n onResume");
    }

    @Override
    protected void onPause() {
        super.onPause();
        txt.append("\n onPause");
    }
```

```java
    @Override
    protected void onStop() {
        super.onStop();
        txt.append("\n onStop");
    }

    @Override
    protected void onRestart() {
        super.onRestart();
        txt.append("\n onRestart");
    }

    @Override
    protected void onDestroy() {
        super.onDestroy();
        txt.append("\n onDestroy");
    }
}
```

activity_main.xml:

```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:id="@+id/txt"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"></TextView>

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

onCreate
onStart
onResume
onPause
onStop
onRestart
onStart
onResume

MainActivity2.java:

```java
package com.example.practicals;

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

public class MainActivity2 extends AppCompatActivity {

    EditText edtxt;
    Button button;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main2);

        edtxt = findViewById(R.id.edtxt);
        button = findViewById(R.id.btn);

        button.setOnClickListener(v -> {

            String text = edtxt.getText().toString();
            Toast.makeText(MainActivity2.this, text, Toast.LENGTH_LONG).show();

        });
    }
}
```

activity_main2.xml:

```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=".MainActivity2">

    <EditText
        android:id="@+id/edtxt"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginStart="15dp"
        android:layout_marginEnd="15dp"
        android:hint="Enter Text"
        app:layout_constraintBottom_toTopOf="@id/btn"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/btn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
        android:text="Show Message"
        android:layout_marginBottom="120dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@id/edtxt" />

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

Hello

SHOW MESSAGE

Hello

MainActivity3.java:

```java
package com.example.practicals;

import android.content.Intent;
import android.os.Bundle;
import android.widget.Button;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity3 extends AppCompatActivity {

    Button btn;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main3);

        btn = findViewById(R.id.btn);

        btn.setOnClickListener(v -> {

            Intent intent = new Intent(MainActivity3.this, MainActivity4.class);
            startActivity(intent);
        });
    }
}
```

activity_main3.xml:

```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=".MainActivity3">
```

```xml
    <Button
        android:id="@+id/btn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Welcome Activity"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"/>

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

MainActivity4.java:

```java
package com.example.practicals;

import android.os.Bundle;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity4 extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        EdgeToEdge.enable(this);
        setContentView(R.layout.activity_main4);

    }
}
```

activity_main4.xml:

```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=".MainActivity4">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Welcome"
        android:textSize="30sp"
        android:textStyle="bold"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"/>

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

WELCOME ACTIVITY

Welcome

MainActivity3.java:

```java
package com.example.practicals;

import android.content.Intent;
import android.os.Bundle;
import android.widget.Button;
import android.widget.EditText;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity3 extends AppCompatActivity {

    Button btn;
    EditText a, b;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main3);

        btn = findViewById(R.id.btn);
        a = findViewById(R.id.a);
        b = findViewById(R.id.b);

        btn.setOnClickListener(v -> {

            int n1 = Integer.parseInt(a.getText().toString());
            int n2 = Integer.parseInt(b.getText().toString());

            Intent intent = new Intent(MainActivity3.this, MainActivity4.class);
            intent.putExtra("a", n1);
            intent.putExtra("b", n2);
            startActivity(intent);
        });
    }
}
```

activity_main3.xml:

```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=".MainActivity3">

    <EditText
        android:id="@+id/a"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        app:layout_constraintBottom_toTopOf="@+id/btn"
        app:layout_constraintEnd_toStartOf="@+id/b"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        android:hint="Number 1"/>


    <EditText
        android:id="@+id/b"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        app:layout_constraintStart_toEndOf="@id/a"
        app:layout_constraintBottom_toTopOf="@+id/btn"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        android:hint="Number 2"/>

    <Button
        android:id="@+id/btn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Add"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintBottom_toBottomOf="parent"
```

```
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"/>

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

MainActivity4.java:

```java
package com.example.practicals;

import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity4 extends AppCompatActivity {

    TextView sum;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main4);

        sum = findViewById(R.id.sum);

        int a = getIntent().getIntExtra("b", 0);
        int b = getIntent().getIntExtra("a", 0);

        int add = a+b;

        sum.setText("Sum is: " + add);

    }
}
```

activity_main4.xml:

```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=".MainActivity4">

    <TextView
        android:id="@+id/sum"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:textSize="30sp"
        android:textStyle="bold"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintEnd_toEndOf="parent"/>

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

2

2

ADD

Sum is: 4

MainActivity5.java:

```java
package com.example.practicals;

import android.graphics.Color;
import android.os.Bundle;
import android.widget.RadioButton;
import android.widget.RadioGroup;
import androidx.appcompat.app.AppCompatActivity;
import androidx.constraintlayout.widget.ConstraintLayout;

public class MainActivity5 extends AppCompatActivity {

    RadioGroup group;
    RadioButton blue, yellow, red ;
    ConstraintLayout layout;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main5);

        layout = findViewById(R.id.main);
        group = findViewById(R.id.bg);

        blue = findViewById(R.id.blue);
        yellow = findViewById(R.id.yellow);
        red = findViewById(R.id.Red);

        group.setOnCheckedChangeListener((group, checkedId) -> {
            if (checkedId == R.id.blue) {
                layout.setBackgroundColor(Color.BLUE);
            } else if (checkedId == R.id.yellow) {
                layout.setBackgroundColor(Color.YELLOW);
            } else if (checkedId == R.id.Red) {
                layout.setBackgroundColor(Color.RED);
            }
        });
    }
}
```

activity_main5.xml:

```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=".MainActivity5">

    <RadioGroup
        android:id="@+id/bg"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent">

        <RadioButton
            android:id="@+id/blue"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Blue" />

        <RadioButton
            android:id="@+id/yellow"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Yellow" />

        <RadioButton
            android:id="@+id/Red"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Red" />
    </RadioGroup>
</androidx.constraintlayout.widget.ConstraintLayout>
```

○ Blue

○ Yellow

○ Red

MainActivity6.java:

```java
package com.example.practicals;

import android.os.Bundle;
import android.widget.Button;
import android.widget.EditText;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity6 extends AppCompatActivity {

    EditText a, b;
    Button add, sub, div, mul;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main6);

        a = findViewById(R.id.a);
        b = findViewById(R.id.b);
        add = findViewById(R.id.add);
        sub = findViewById(R.id.sub);
        mul = findViewById(R.id.mul);
        div = findViewById(R.id.div);

        add.setOnClickListener(v -> {
            performOperation("add");

        });

        sub.setOnClickListener(v -> {
            performOperation("sub");
        });

        mul.setOnClickListener(v -> {
            performOperation("mul");
        });

        div.setOnClickListener(v -> {
            performOperation("div");
```

```java
        });
    }

    private void performOperation(String operation) {

        String n1 = a.getText().toString();
        String n2 = b.getText().toString();

        if (n1.isEmpty() || n2.isEmpty()) {
            Toast.makeText(MainActivity6.this, "Please enter both numbers.",
Toast.LENGTH_SHORT).show();
            return;
        }

        double num1 = Double.parseDouble(n1);
        double num2 = Double.parseDouble(n2);
        double result = 0;

        switch (operation) {
            case "add":
                result = num1 + num2;
                break;
            case "sub":
                result = num1 - num2;
                break;
            case "mul":
                result = num1 * num2;
                break;
            case "div":
                if (num2 != 0) {
                    result = num1 / num2;
                } else {
                    Toast.makeText(MainActivity6.this, "Cannot divide by zero",
Toast.LENGTH_SHORT).show();
                    return;
                }
                break;
        }

        Toast.makeText(MainActivity6.this, "Result: " + result, Toast.LENGTH_LONG).show();
```

```
    }
}

activity_main6.xml:


<?xml version="1.0" encoding="utf-8"?>
<TableLayout 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=".MainActivity6"
    android:stretchColumns="1"
    android:gravity="center"
    android:padding="16dp">

    <TableRow
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:weightSum="2"
        android:paddingBottom="8dp">

        <EditText
            android:id="@+id/a"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:hint="Number 1"
            android:inputType="number"
            android:layout_marginEnd="8dp" />

        <EditText
            android:id="@+id/b"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:hint="Number 2"
            android:inputType="number" />
    </TableRow>
```

```xml
<TableRow
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:paddingBottom="8dp">

    <Button
        android:id="@+id/add"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="Add" />
</TableRow>

<TableRow
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:paddingBottom="8dp">

    <Button
        android:id="@+id/sub"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="Sub" />
</TableRow>

<TableRow
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:paddingBottom="8dp">

    <Button
        android:id="@+id/mul"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="Mul" />
</TableRow>

<TableRow
```

```xml
        android:layout_width="match_parent"
        android:layout_height="wrap_content">

        <Button
            android:id="@+id/div"
            android:layout_width="0dp"
            android:layout_height="wrap_content"
            android:layout_weight="1"
            android:text="Div" />
    </TableRow>

</TableLayout>
```

| 20 | 2 |

ADD

SUB

MUL

DIV

Result: 40.0

MainActivity8.java:

```java
package com.example.practicals;

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

public class MainActivity8 extends AppCompatActivity {

    EditText usernameEditText, passwordEditText;
    Button loginButton;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main8);

        usernameEditText = findViewById(R.id.username);
        passwordEditText = findViewById(R.id.password);
        loginButton = findViewById(R.id.loginButton);

        loginButton.setOnClickListener( v -> {
            String username = usernameEditText.getText().toString();
            String password = passwordEditText.getText().toString();

            if (isValidLogin(username, password)) {

                Intent intent = new Intent(MainActivity8.this, MainActivity9.class);
                intent.putExtra("username", username);
                startActivity(intent);
            } else {
                Toast.makeText(MainActivity8.this, "Invalid username or password!",
Toast.LENGTH_LONG).show();
            }

        });
```

```java
    }
    private boolean isValidLogin(String username, String password) {

        return "admin".equals(username) && "123".equals(password);
    }
}
```

activity_main9.xml:

```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=".MainActivity8">


    <EditText
        android:id="@+id/username"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="50dp"
        android:hint="Username"
        android:inputType="text"
        app:layout_constraintBottom_toTopOf="@+id/password"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <EditText
        android:id="@+id/password"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:hint="Password"
        android:layout_marginTop="50dp"
        android:inputType="textPassword"
```

```xml
        app:layout_constraintBottom_toTopOf="@+id/loginButton"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

    <Button
        android:id="@+id/loginButton"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="Login"
        android:layout_marginTop="80dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

MainActivity9.java:

```java
package com.example.practicals;

import android.os.Bundle;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity9 extends AppCompatActivity {

    TextView txt;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main9);

        txt = findViewById(R.id.txt);

        String username = getIntent().getStringExtra("username");

        txt.setText("Welcome, " + username + "!");
    }
}
```

activity_main9.xml:

```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=".MainActivity9">

    <TextView
        android:id="@+id/txt"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Welcome!"
        android:textSize="20sp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

aadmin

•••

LOGIN

Invalid username or password!

Welcome, admin!

MainActivity9.java:

package com.example.practicals;

```java
import android.os.Bundle;
import android.view.View;
import android.widget.ImageButton;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity7 extends AppCompatActivity {

    ImageButton imgbtn;
    boolean isImageOne = true;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main7);

        imgbtn = findViewById(R.id.imageButton);


        imgbtn.setOnClickListener(v -> {

            if (isImageOne) {
                imgbtn.setImageResource(R.drawable.image2);
            } else {
                imgbtn.setImageResource(R.drawable.image1);
            }
            isImageOne = !isImageOne;

        });

        imgbtn.setOnLongClickListener(v -> {
            Toast.makeText(MainActivity7.this, "Long Click Detected",
Toast.LENGTH_SHORT).show();
            return true;

        });
    }
}
```
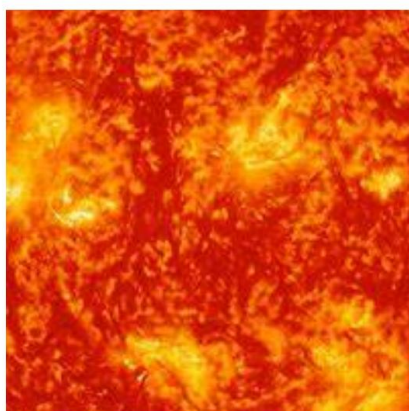
activity_main_9.xml:

```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="match_parent"
    android:orientation="vertical"
    android:gravity="center"
    android:padding="16dp">

    <ImageButton
        android:id="@+id/imageButton"
        android:layout_width="200dp"
        android:layout_height="200dp"
        android:src="@drawable/image1"
        android:contentDescription="Image Button"
        android:layout_marginBottom="20dp"
        android:background="?android:attr/selectableItemBackgroundBorderless" />

</LinearLayout>
```

Long Click Detected