Slip-1,14

Q1. Create a Simple Application which shows the Life Cycle of Activity.

```
package com.example.activitylifecycle;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
public class MainActivity extends AppCompatActivity {
private static final String Tag = "activitylifecycle";
   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      Log.d(Tag, "onstart() method called");
   }
      protected void onStart() {
      super.onResume();
      Log.d(Tag, "onstart() method called");
            }
           protected void onResume() {
           super.onResume();
           Log.d(Tag, "onResume()method called");
            }
          protected void onStop() {
           super.onStop();
          Log.d(Tag, "onStop()method called");
           }
           protected void onRestart() {
            super.onRestart();
           Log.d(Tag, "onRestart() method called");
           }
          protected void onDestroy() {
          super.onDestroy();
            Log.d(Tag, "onDestroy() method called");
          }
}
```

Slip-2,4

Q2. Create a Simple Application, which reads a number from the user and check whether it is even or odd.

Xml file

```
<?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"
   tools:context=".MainActivity"
   android:orientation="vertical" >

   <TextView
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text=" Check The Number is Even or Odd!"
      />

   <EditText
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:hint="enter the number"
      android:id="@+id/e1"/>


   <Button
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="check"
      android:id="@+id/b1"/>

   <TextView
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text=""
      android:id="@+id/t1" />

</LinearLayout>
```

Java code

```
package com.example.evenorodd;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends AppCompatActivity {
    EditText e1;
    Button b1;
    TextView t1;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        e1 = findViewById(R.id.e1);
        b1 = findViewById(R.id.b1);
        t1 = findViewById(R.id.t1);

        b1.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int number = Integer.parseInt(e1.getText().toString());
                number = number % 2;
                if (number == 0) {
                    t1.setText("even");
                } else {
                    t1.setText("odd");
                }
            }
        });

    }

}
```

Slip -3

Q3. . Create an Android Application that Demonstrate Check Box.

Xml code

```
<?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:padding="16dp">

   <CheckBox
      android:id="@+id/checkBox"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Painting" />

   <CheckBox
      android:id="@+id/checkBox2"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Reading" />

   <CheckBox
      android:id="@+id/checkBox3"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Singing" />

   <CheckBox
      android:id="@+id/checkBox4"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Cooking" />

   <Button
      android:id="@+id/btnCheck"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Submit"
      android:onClick="checkHobbies" />

</LinearLayout>
```

Java code

```
package com.example.checkbox;
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.widget.CheckBox;
import android.widget.Toast;
import com.example.checkbox.R;
public class MainActivity extends Activity {
   private CheckBox ch, ch1, ch2, ch3;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);

      ch = findViewById(R.id.checkBox);
      ch1 = findViewById(R.id.checkBox2);
      ch2 = findViewById(R.id.checkBox3);
      ch3 = findViewById(R.id.checkBox4);
   }

   public void checkHobbies(View v) {
      StringBuilder selectedHobbies = new StringBuilder();

      if (ch.isChecked()) {
         selectedHobbies.append("Painting ");
      }
      if (ch1.isChecked()) {
         selectedHobbies.append("Reading ");
      }
      if (ch2.isChecked()) {
         selectedHobbies.append("Singing ");
      }
      if (ch3.isChecked()) {
         selectedHobbies.append("Cooking ");
      }

      if (selectedHobbies.length() > 0) {
         Toast.makeText(this, selectedHobbies.toString() + "are selected", Toast.LENGTH_LONG).show();
      } else {
         Toast.makeText(this, "No hobbies selected", Toast.LENGTH_SHORT).show();
      }
   }
}
```

slip 4

Q1.Create an Android Application to accept two numbers and find power and Average.

```
import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

public class MainActivity extends Activity {

   private EditText etNumber1, etNumber2;
   private TextView tvResult;
   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);

      etNumber1 = findViewById(R.id.etNumber1);
      etNumber2 = findViewById(R.id.etNumber2);
      tvResult = findViewById(R.id.tvResult);

      Button btnCalculatePower = findViewById(R.id.btnCalculatePower);
      btnCalculatePower.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            calculatePower();
         }
      });
      Button btnCalculateAverage = findViewById(R.id.btnCalculateAverage);
      btnCalculateAverage.setOnClickListener(new View.OnClickListener() {
         @Override
         public void onClick(View v) {
            calculateAverage();
         }
      });
   }
   private void calculatePower() {
      double num1 = Double.parseDouble(etNumber1.getText().toString());
      double num2 = Double.parseDouble(etNumber2.getText().toString());
      double result = Math.pow(num1, num2);
      tvResult.setText("Power: " + result);
   }
   private void calculateAverage() {
      double num1 = Double.parseDouble(etNumber1.getText().toString());
      double num2 = Double.parseDouble(etNumber2.getText().toString());
      double average = (num1 + num2) / 2;
      tvResult.setText("Average: " + average);
   }
}
```

Xml code

```
<?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:padding="16dp">

   <EditText
      android:id="@+id/etNumber1"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:hint="Enter first number"
      android:inputType="numberDecimal" />

   <EditText
      android:id="@+id/etNumber2"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:hint="Enter second number"
      android:inputType="numberDecimal" />

   <Button
      android:id="@+id/btnCalculatePower"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Calculate Power"
      android:onClick="calculatePower" />

   <Button
      android:id="@+id/btnCalculateAverage"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Calculate Average"
      android:onClick="calculateAverage" />

   <TextView
      android:id="@+id/tvResult"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_marginTop="16dp"
      android:textSize="18sp" />
</LinearLayout>
```

Slip 6,8,12,15

Q1.Create a Simple Application Which Send —Hello! message from one activity to another with help of Button (Use Intent).

Java 1

```
package com.example.myapplication1;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.content.Intent;
import android.view.View;
import android.widget.Button;

public class MainActivity extends AppCompatActivity {
   Button b1;

   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);
      b1=findViewById(R.id.b1);

      b1.setOnClickListener(new View.OnClickListener(){
            public void onClick(View v) {
            Intent i = new Intent(getApplicationContext(),new1.class);
            i.putExtra("data","Hello World");
            startActivity(i);
      }
   });
}
}
```

java 2

```
package com.example.myapplication1;

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

public class new1 extends AppCompatActivity {
   TextView t1;

   @Override
   protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.second);
      t1 = findViewById(R.id.t1);
      String ans = getIntent().getStringExtra("data");
      t1.setText(ans);

   }
}
```

xml 1

```
<?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"
   tools:context=".MainActivity">

   <Button
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="click here"
      android:id= "@+id/b1"   >
   </Button>

</LinearLayout>
```

Xml 2

```
<?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"
   tools:context=".MainActivity">

   <TextView
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="hello"
      android:id="@+id/t1"
   ></TextView>

</LinearLayout>
```

Slip 7

Q1. Create an Android Application that Demonstrate Radio Button.

```
import android.os.Bundle;
import android.widget.RadioGroup;
import android.widget.Toast;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        RadioGroup radioGroup = findViewById(R.id.radioGroup);
        radioGroup.setOnCheckedChangeListener((group, checkedId) -> {
            switch (checkedId) {
                case R.id.radioButton1:
                    Toast.makeText(this, "Option 1 selected", Toast.LENGTH_SHORT).show();
                    break;
                case R.id.radioButton2:
                    Toast.makeText(this, "Option 2 selected", Toast.LENGTH_SHORT).show();
                    break;
                // Add more cases for other radio buttons
            }
        });
    }
}
```

Xml

```
<!-- res/layout/activity_main.xml -->
<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:padding="16dp"
    tools:context=".MainActivity">

    <RadioGroup
        android:id="@+id/radioGroup"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical">

        <RadioButton
            android:id="@+id/radioButton1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Option 1" />

        <RadioButton
            android:id="@+id/radioButton2"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="Option 2" />

        <!-- Add more RadioButtons as needed -->
    </RadioGroup>

</LinearLayout>
```

Slip 9

Q1. Write an Android application to accept two numbers from the user, and display them, but reject input if both numbers are greater than 10 and asks for two new numbers.

Java code

```
// MainActivity.java
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    private EditText editText1, editText2;
    private TextView resultTextView;

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

        editText1 = findViewById(R.id.editText1);
        editText2 = findViewById(R.id.editText2);
        resultTextView = findViewById(R.id.resultTextView);

        Button displayButton = findViewById(R.id.displayButton);
        displayButton.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                try {
                    int num1 = Integer.parseInt(editText1.getText().toString());
                    int num2 = Integer.parseInt(editText2.getText().toString());

                    if (num1 > 10 && num2 > 10) {
                        resultTextView.setText("Both numbers are greater than 10. Enter new numbers.");
                    } else {
                        resultTextView.setText("Number 1: " + num1 + "\nNumber 2: " + num2);
                    }
                } catch (NumberFormatException e) {
                    resultTextView.setText("Invalid input. Please enter valid numbers.");
                }
            }
        });
    }
}
```

Xml code

```
<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:padding="16dp"
   tools:context=".MainActivity">

   <RadioGroup
      android:id="@+id/radioGroup"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:orientation="vertical">

      <RadioButton
         android:id="@+id/radioButton1"
         android:layout_width="wrap_content"
         android:layout_height="wrap_content"
         android:text="Option 1" />

      <RadioButton
         android:id="@+id/radioButton2"
         android:layout_width="wrap_content"
         android:layout_height="wrap_content"
         android:text="Option 2" />

      <!-- Add more RadioButtons as needed -->
   </RadioGroup>

</LinearLayout>
```

Slip 10

Q1. Create an Android Application that Demonstrate Switch and Toggle Button.

```
<!-- res/layout/activity_main.xml -->

<RelativeLayout
   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:padding="16dp"
   tools:context=".MainActivity">

   <Switch
      android:id="@+id/mySwitch"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Switch Example"
      android:layout_centerHorizontal="true" />

   <ToggleButton
      android:id="@+id/myToggleButton"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Toggle Example"
      android:layout_below="@id/mySwitch"
      android:layout_centerHorizontal="true" />

   <!-- Add a TextView to display state changes if needed -->

</RelativeLayout>
```

Java code

```
import android.os.Bundle;
import android.widget.CompoundButton;
import android.widget.Switch;
import android.widget.ToggleButton;
import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        Switch mySwitch = findViewById(R.id.mySwitch);
        ToggleButton myToggleButton = findViewById(R.id.myToggleButton);

        mySwitch.setOnCheckedChangeListener((buttonView, isChecked) -> {
            // Handle switch state change (on/off)
            // Update TextView if needed
        });

        myToggleButton.setOnCheckedChangeListener((buttonView, isChecked) -> {
            // Handle toggle button state change (on/off)
            // Update TextView if needed
        });
    }
}
```

Slip 11

Q1. Create android application to change Font Size, Color and Font Family of String.

Xml

```
<!-- res/layout/activity_main.xml -->

<RelativeLayout
   xmlns:android="http://schemas.android.com/apk/res/android"
   android:layout_width="match_parent"
   android:layout_height="match_parent"
   android:padding="16dp">

   <TextView
      android:id="@+id/customTextView"
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:text="Hello, Font Customization!"
      android:textSize="18sp"
      android:textColor="#000000"
      android:fontFamily="sans-serif" />
   <!-- Add buttons or other controls for customization -->
</RelativeLayout>
```

Java

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

public class MainActivity extends AppCompatActivity {
   private TextView customTextView;

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

      customTextView = findViewById(R.id.customTextView);

      // Implement button click listeners to customize font properties
      // Example: Change font size, color, and family dynamically
   }
}
```

Slip 13 and 16

Q.1 Create following Vertical Scroll View Creation in Android.

```
<?xml version="1.0" encoding="utf-8"?>
<ScrollView
      android:layout_height="match_parent"
      android:layout_width="match_parent"
      xmlns:android="http://schemas.android.com/apk/res/android">
   <LinearLayout
      android:layout_height="match_parent"
      android:layout_width="match_parent"
      android:orientation="vertical"
      >
     <Button
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="Button 1"
        android:textSize="10sp"
        android:layout_marginTop="20dp"/>
      <Button
         android:layout_width="wrap_content"
         android:layout_height="wrap_content"
         android:text="Button 2"
         android:textSize="10sp"
         android:layout_marginTop="20dp"/>
      <Button
         android:layout_width="wrap_content"
         android:layout_height="wrap_content"
         android:text="Button 3"
         android:textSize="10sp"
         android:layout_marginTop="20dp"/>
      <Button
         android:layout_width="wrap_content"
         android:layout_height="wrap_content"
         android:text="Button 4"
         android:textSize="10sp"
         android:layout_marginTop="20dp"/>
      <Button
         android:layout_width="wrap_content"
         android:layout_height="wrap_content"
         android:text="Button 5"
         android:textSize="10sp"
         android:layout_marginTop="20dp"/>


   </LinearLayout>
</ScrollView>
```