Experiment 5

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Subject Name: MAD Lab

1. **Aim:** Create an application that takes the data from the check box and shows toast message along with the names of the items checked in the check box, when the user clicks the submit button.

2. **Program**

MainActivity.java

```
package com.example.exp5;

import androidx.appcompat.app.AppCompatActivity;

import android.annotation.SuppressLint;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.CheckBox;

import android.widget.CompoundButton;

import android.widget.Toast;

import java.util.Arrays;

import java.util.Objects;


public class MainActivity extends AppCompatActivity {

    @SuppressLint("MissingInflatedId")

    @Override

    protected void onCreate(Bundle savedInstanceState) {

        super.onCreate(savedInstanceState);

        setContentView(R.layout.activity_main);
```

```
Objects.requireNonNull(getSupportActionBar()).setTitle("Hobbies");
CheckBox ch1, ch2, ch3, ch4;
ch1 = findViewById(R.id.checkbox_painting);
ch2 = findViewById(R.id.checkbox_reading);
ch3 = findViewById(R.id.checkbox_writing);
ch4 = findViewById(R.id.checkbox_cycling);
int[] mi = {0, 0, 0, 0};
String[] ms = {"Painting", "Reading", "Writing", "Cycling"};
ch1.setOnCheckedChangeListener(new CompoundButton.OnCheckedChangeListener() {
   @Override
   public void onCheckedChanged(CompoundButton buttonView, boolean isChecked) {
      if(isChecked) {
         Toast.makeText(MainActivity.this, "Painting is checked.",
               Toast.LENGTH_SHORT).show();
         mi[0] = 1;
      } else {
         Toast.makeText(MainActivity.this, "Painting is unchecked.",
               Toast.LENGTH_SHORT).show();
         mi[0] = 0;
      }
   }
});
ch2.setOnCheckedChangeListener(new CompoundButton.OnCheckedChangeListener() {
   @Override
   public void onCheckedChanged(CompoundButton buttonView, boolean isChecked) {
      if(isChecked) {
         Toast.makeText(MainActivity.this, "Reading is checked.",
```

```
                Toast.LENGTH_SHORT).show();
            mi[1] = 1;
        } else {
            Toast.makeText(MainActivity.this, "Reading is unchecked.",
                Toast.LENGTH_SHORT).show();
            mi[1] = 0;
        }
    }
});
ch3.setOnCheckedChangeListener(new CompoundButton.OnCheckedChangeListener() {
    @Override
    public void onCheckedChanged(CompoundButton buttonView, boolean isChecked) {
        if(isChecked) {
            Toast.makeText(MainActivity.this, "Writing is checked.",
                Toast.LENGTH_SHORT).show();
            mi[2] = 1;
        } else {
            Toast.makeText(MainActivity.this, "Writing is unchecked.",
                Toast.LENGTH_SHORT).show();
            mi[2] = 0;
        }
    }
});
ch4.setOnCheckedChangeListener(new CompoundButton.OnCheckedChangeListener() {
    @Override
    public void onCheckedChanged(CompoundButton buttonView, boolean isChecked) {
        if(isChecked) {
```

```
            Toast.makeText(MainActivity.this, "Cycling is checked.",
                    Toast.LENGTH_SHORT).show();
            mi[3] = 1;
        } else {
            Toast.makeText(MainActivity.this, "Cycling is unchecked.",
                    Toast.LENGTH_SHORT).show();
            mi[3] = 0;
        }
    }
});
StringBuilder msg = new StringBuilder();
Button submit = findViewById(R.id.button_submit);
submit.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        int s = Arrays.stream(mi).sum();
        msg.setLength(0);
        for(int i=0; i<4; i++) {
            if(mi[i] == 1) {
                msg.append(ms[i]).append(", ");
            }
        }
        if(s == 0) {
            Toast.makeText(MainActivity.this, "None are selected.",
                    Toast.LENGTH_SHORT).show();
        } else if(s == 1) {
            Toast.makeText(MainActivity.this, msg + " is selected.",
```

```
                Toast.LENGTH_SHORT).show();
            } else {
                Toast.makeText(MainActivity.this, msg + " are selected.",
                Toast.LENGTH_SHORT).show();
            }
        }
    });
  }
}
```

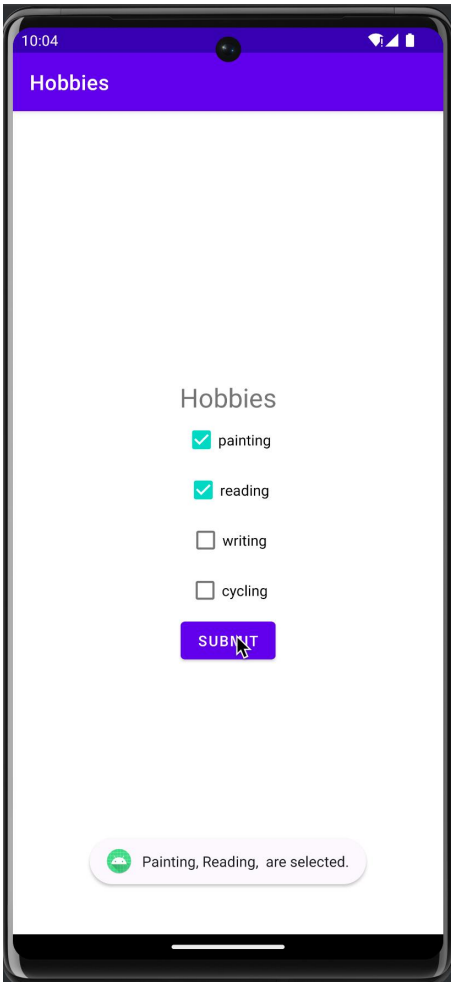
activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    android:orientation="vertical"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_gravity="center"
    android:gravity="center"
    android:padding="10dp">

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="@string/hobbies"
        android:gravity="center"
        android:textSize="25sp"/>
    <CheckBox
        android:id="@+id/checkbox_painting"
```

```
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/painting" />
    <CheckBox
        android:id="@+id/checkbox_reading"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/reading"/>
    <CheckBox
        android:id="@+id/checkbox_writing"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/writing" />
    <CheckBox
        android:id="@+id/checkbox_cycling"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/cycling"/>
    <Button
        android:id="@+id/button_submit"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:text="@string/submit"/>
</LinearLayout>
```

3. OUTPUT


10:04
Hobbies
Hobbies
painting
reading
writing
cycling
SUBMIT
Painting, Reading, are selected.