



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Experiment 2.2

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Subject Name: MAD Lab

Subject Code: 20CSP356

- **Aim:** Create an Android App using various controls such as TextEdit, CheckBox, RadioButton, RadioGroup, etc.
- **Objective:** To create a menu using Check boxes and Radio buttons and show toast message of selected items.

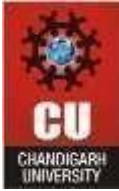
- **Tools used:**

1. Android Studio.
2. Eclipse IDE.

- **Script and Output:**

1. First create a new Android Application. This will create an XML file “activity_main.xml” and a Java File “MainActivity.Java”.
2. Open the “activity_main.xml” file and add the following widgets in a [RelativeLayout](#):
 - A **TextView** to display the question message □ 2 CheckBoxes to hold answers each.
 - A **RadioGroup** to hold the option Radio Buttons which are the possible answers
 - A **RadioButtons** to hold an answer each.
 - A Submit and a Clear button to store the response.

Also, Assign the **ID** to each of the components along with other attributes as shown in the given image and the code below. The assigned ID on a component helps that component to be easily found and used in the Java files.



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3. Now, after the UI, this step will create the Backend of Application. For this, open the “MainActivity.java” file and instantiate the components made in the XML file (RadioGroup, TextView, Clear, and Submit Button) using findViewById() method. This method binds the created object to the UI Components with the help of the assigned ID.

4. Now, after the UI, this step will create the Backend of Application. For this, open the “MainActivity.java” file and instantiate the components made in the XML file (RadioGroup, TextView, Clear, and Submit Button) using findViewById() method. This method binds the created object to the UI Components with the help of the assigned ID.

This step involves setting up the operations on the RadioGroup, RadioButtons, and the Submit and Clear Buttons.

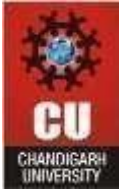
These operations are as follows:

- Unset all the Radio Buttons initially as the default value. This is done by the following command:
`radioGroup.clearCheck();`
- Add the Listener on the RadioGroup. This will help to know whenever the user clicks on any Radio Button, and the further operation will be performed. The listener can be added as follows:
`radioGroup.setOnCheckedChangeListener(new RadioGroup.OnCheckedChangeListener(){}`
- Define the operations to be done when a radio button is clicked. This involves getting the specific radio button that has been clicked, using its id. Then this radio button gets set and the rest of the radio button is reset.
- Add the listener on Submit button and clear button. This will be used to check when the user clicks on the button. This is done as follows:
`submit.setOnClickListener(new View.OnClickListener() {} clear.setOnClickListener(new View.OnClickListener() {}`

In the Submit Button Listener, set the operations to be performed. This involves displaying the marked answer in the form of **Toast**.

5. Now run the app and operate as follows:

- When the app is opened, it displays a question with 4 answers and a clear and submit button.
- When any answer is clicked, that radio button gets set.
- Clicking on any other radio button sets that one and resets the others.
- Clicking on Submit button displays the currently marked answer as a Toast.
- Clicking on Clear button resets all the radio buttons to their default state.



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CODE:

MainActivity.java

```
package com.example.unit2;

import android.support.v7.app.AppCompatActivity;
import android.os.Bundle; import
android.view.View; import android.widget.Button;
import android.widget.CheckBox; import
android.widget.EditText; import
android.widget.RadioButton; import
android.widget.Toast;

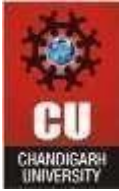
public class MainActivity extends AppCompatActivity {
    CheckBox c1,c2;
    EditText t;
    RadioButton r1,r2;
    Button bt;
    String txt="";

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

    t = (EditText) findViewById(R.id.txt);    c1 =
(CheckBox) findViewById(R.id.checkBox);
    c2 = (CheckBox) findViewById(R.id.checkBox2);

    r1 = (RadioButton) findViewById(R.id.radioButton);
r2 = (RadioButton) findViewById(R.id.radioButton2);
bt = (Button) findViewById(R.id.submit);
bt.setOnClickListener(new View.OnClickListener() {

    @Override        public void
onClick(View view) {
```



```
String t1 = t.getText().toString();
String v1 = c1.getText().toString();
String v2 = c2.getText().toString();
String v3 = r1.getText().toString();
String v4 = r2.getText().toString();
txt = t1+" selected:";
if(c1.isChecked() )
{txt = txt+" "+v1;}
if(c2.isChecked())      {txt
= txt+" "+v2;}
if(r1.isChecked())      {txt
= txt+" "+v3;}
if(r2.isChecked())      {txt
= txt+" "+v4;}

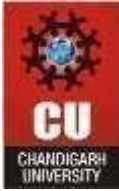
Toast t = Toast.makeText(getApplicationContext(),txt,Toast.LENGTH_LONG);
t.show();

    }
});

} }
```

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">
```



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```
<EditText
    android:id="@+id/txt"        android:layout_width="match_parent"
    android:layout_height="wrap_content"    android:ems="10"
    android:inputType="textPersonName"    android:hint="Your Name"
    android:textAlignment="center"    android:layout_marginBottom="20dp"
    android:layout_marginEnd="30dp"
    android:layout_marginStart="30dp"/>
```

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

```
<CheckBox    android:id="@+id/checkBox2"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"

    android:text="Football" />
```

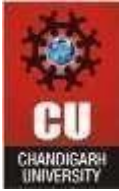
```
<RadioGroup    android:layout_width="wrap_content"
    android:layout_height="wrap_content">
```

```
<RadioButton    android:id="@+id/radioButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Chess" />
```

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

```
</RadioGroup>
```

```
<Button
    android:id="@+id/submit"
    android:layout_width="wrap_content"
```



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```
android:layout_height="wrap_content"
```

```
android:text="Submit"
```

```
/>
```

```
</LinearLayout>
```

OUTPUT:

