LAB NO:05

BASIC EVENT HANDLING:

1. Create an application which can display a Toast message by pressing a button.

.java code:

```java
package com.example.lab51;

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

public class MainActivity extends AppCompatActivity {
    private Button getButtonText;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        getButtonText = (Button) findViewById(R.id.button);

        getButtonText.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                Toast.makeText( context: MainActivity.this,  text: "Welcome to Bahria University" , Toast.LENGTH_LONG).show();
            }
        });

    }
}
```

.xml code:

```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:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
        android:text="Bahria University"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.262"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />

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

OUTPUT:

2. Create an application having three buttons. Bind those buttons with the same callback method. On pressing any button, identify which button was pressed.

.xml code:

```
<?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:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">

    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
        app:layout_constraintBottom_toTopOf="@+id/button2"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.395"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent"
        app:layout_constraintVertical_bias="0.531"
        android:onClick="onBtnBahria"
        android:text="Bahria University"/>

    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="32dp"
        app:layout_constraintBottom_toTopOf="@+id/button3"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintHorizontal_bias="0.439"
        app:layout_constraintStart_toStartOf="parent"
        android:onClick="onBtnSE"
        android:text="BSE"/>

    <Button
        android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginBottom="464dp"
        app:layout_constraintBottom_toBottomOf="parent"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        android:onClick="onBtnSDMA"
        android:text="Software  Mobile Application"/>
</androidx.constraintlayout.widget.ConstraintLayout>
```

.java code:

```java
package com.example.lab51;

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

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

    }
    public void onBtnBahria(View view) {
        Toast.makeText(getApplicationContext(), "BAHRIA...", Toast.LENGTH_SHORT).show();
    }

    public void onBtnSE(View view) {
        Toast.makeText(getApplicationContext(), "Software Department ...",
Toast.LENGTH_SHORT).show();
    }
    public void onBtnSDMA(View view) {
        Toast.makeText(getApplicationContext(), "Software Application and Mobile Device
...", Toast.LENGTH_SHORT).show();
    }
}
```

Output:


10:51 PM
LAB 5(1)
BAHRIA UNIVERSITY
BSE
SOFTWARE MOBILE APPLICATION
Software Department ...

3. Create an application which takes a string message from user and create a toast of it on pressing button.

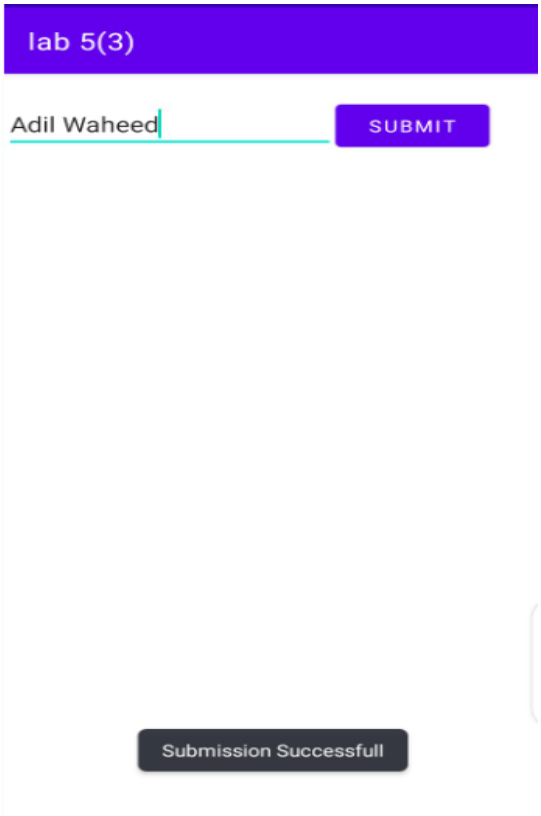
.xml code:

```
<?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="horizontal"
    android:weightSum="5">
    <EditText
        android:id="@+id/editTextTextPersonName"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:ems="10"
        android:inputType="textPersonName"
        android:hint="Enter your name"
        android:layout_marginTop="20dp"
        />
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="Submit"
        android:onClick="onClick"
        android:layout_marginTop="20dp"/>
</LinearLayout>
```

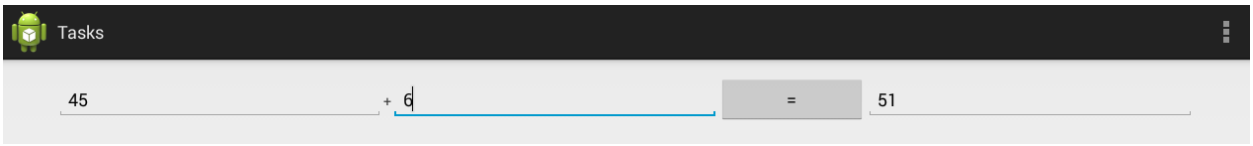
.java code:

```
package com.example.lab53;

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

public class MainActivity extends AppCompatActivity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
    public void onClick(View view) {
        Toast.makeText(getApplicationContext(), text: "Submission Successfull", Toast.LENGTH_SHORT).show();
    }
}
```

Output:



4. Create a calculator application for two integers. The output must look as follows



.xml code:

```
<?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="horizontal"
    android:weightSum="8">

    <EditText
        android:id="@+id/num1"
        android:layout_width="20dp"
        android:layout_height="wrap_content"
        android:gravity="center_vertical"

        android:layout_marginTop="20dp"

        android:layout_weight="2"
        android:ems="10"
        android:hint="number1"
        android:inputType="number" />

    <TextView
        android:id="@+id/textView"
        android:layout_width="20dp"
```

```
        android:layout_height="wrap_content"
        android:layout_marginLeft="10dp"
        android:layout_marginTop="20dp"
        android:layout_weight="1"
        android:gravity="center_horizontal"

        android:text="+"

        android:textSize="12dp" />

    <EditText
        android:id="@+id/num2"
        android:layout_width="20dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:layout_weight="2"
        android:inputType="number"
        android:gravity="center_horizontal"

        android:ems="10"
        android:hint="number2" />

    <Button
        android:id="@+id/button"
        android:layout_width="20dp"
        android:layout_height="wrap_content"
```

```
        android:layout_marginTop="20dp"
        android:layout_weight="1"
        android:gravity="center_horizontal"
        android:text="="

        />

    <TextView
        android:id="@+id/Result"
        android:layout_width="20dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:layout_weight="2"
        android:gravity="center_horizontal"
        android:hint="Result"
        android:textSize="20dp" />
</LinearLayout>
```

.java code:

```
package com.example.lab54;

import androidx.appcompat.app.AppCompatActivity;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import android.view.View;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {
    EditText number1;
    EditText number2;
    Button Add_button;
    TextView result;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        number1=(EditText) findViewById(R.id.num1);
        number2=(EditText) findViewById(R.id.num2);
        Add_button=(Button) findViewById(R.id.button);
        result = (TextView) findViewById(R.id.Result);


        Add_button.setOnClickListener(new View.OnClickListener() {

            public void onClick(View v) {

                // num1 or num2 double type
                // get data which is in edittext, convert it to string
                // using parse Double convert it to Double type

                double num1 = Double.parseDouble(number1.getText().toString());
                double num2 = Double.parseDouble(number2.getText().toString());
                // add both number and store it to sum
                double sum = num1 + num2;
                // set it ot result textview
                result.setText(Double.toString(sum));
            }
        });
    }
}
```

Output:


10:50 PM
lab 5(4)
number1
+
number2
=
Result


10:50 PM
lab 5(4)
2.5
+
5.2
=
7.7