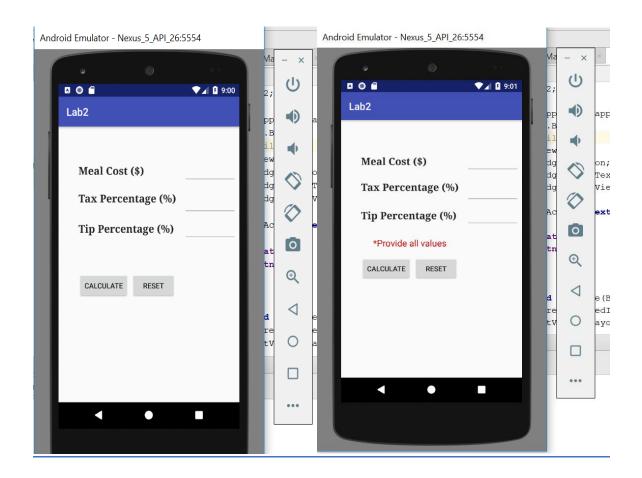
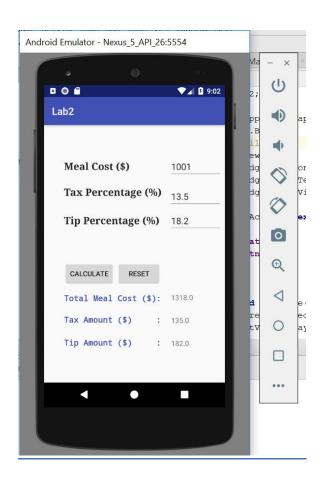
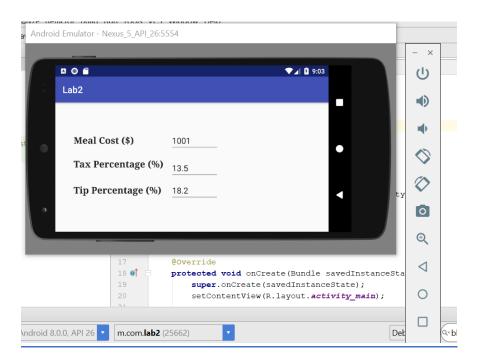
## Bhavinkumar Patel - A20410380

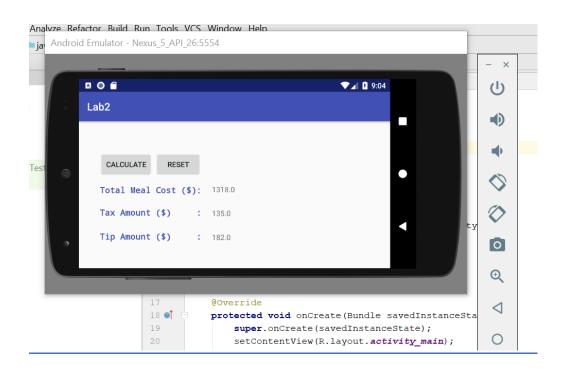
## ITMD555-Lab2

# **S**CREENSHOTS











#### **ACTIVITY MAIN.XML:**

```
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout</pre>
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="m.com.lab2.MainActivity">
    <ScrollView
        android:layout width="match parent"
        android: layout height="match parent"
        android:layout marginBottom="50dp">
    <LinearLayout</pre>
        android:layout width="wrap content"
        android:layout height="wrap content"
        android:orientation="vertical"
        android:descendantFocusability="beforeDescendants"
        android:focusableInTouchMode="true"
        android:focusable="true" >
        <RelativeLayout
            android:layout width="wrap content"
            android:layout height="wrap content">
            <TextView
                android:id="@+id/textView"
                android:layout width="wrap content"
                android:layout height="wrap content"
                android:layout alignParentStart="true"
                android:layout alignParentTop="true"
                android:layout_marginStart="40dp"
                android:layout marginTop="68dp"
                android:fontFamily="serif"
                android:text="Meal Cost ($)"
                android: textAppearance="@style/TextAppearance.AppCompat.Body2"
                android:textSize="20sp"
                android:textStyle="bold" />
            <EditText
                android:id="@+id/editText3"
                android:layout width="wrap content"
                android:layout height="wrap_content"
                android:layout alignBaseline="@+id/textView"
                android:layout alignBottom="@+id/textView"
                android:layout_marginStart="15dp"
                android:layout toEndOf="@+id/textView2"
                android: imeOptions="actionDone|flagNoFullscreen"
                android:ems="5"
                android:focusable="true"
                android:focusableInTouchMode="true"
                android:inputType="number" />
            <TextView
                android:id="@+id/textView2"
                android:layout width="wrap content"
                android:layout height="wrap content"
                android:layout_alignStart="@+id/textView"
```

```
android:layout below="@+id/editText3"
    android:layout marginTop="14dp"
    android:fontFamily="serif"
   android:text="Tax Percentage (%)"
    android:textAppearance="@style/TextAppearance.AppCompat.Body2"
    android:textSize="20sp"
    android:textStyle="bold" />
<EditText
    android:id="@+id/editText"
    android:layout_width="wrap_content"
    android: layout height="wrap content"
    android:layout_alignStart="@+id/editText3"
    android:layout_alignTop="@+id/textView2"
    android: imeOptions="actionDone|flagNoFullscreen"
    android:ems="5"
    android:inputType="numberDecimal" />
<TextView
    android:id="@+id/textView3"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignStart="@+id/textView2"
    android:layout below="@+id/editText"
    android:layout marginTop="11dp"
   android:fontFamily="serif"
   android:text="Tip Percentage (%)"
    android:textAppearance="@style/TextAppearance.AppCompat.Body2"
    android:textSize="20sp"
   android:textStyle="bold" />
<EditText
   android:id="@+id/editText2"
   android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout_alignBaseline="@+id/textView3"
    android:layout_alignBottom="@+id/textView3"
    android:layout alignStart="@+id/editText"
    android: imeOptions="actionDone | flagNoFullscreen"
    android:ems="5"
    android:inputType="numberDecimal" />
<Button
   android:id="@+id/calButton"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout alignStart="@+id/textView3"
    android:layout below="@+id/textView11"
    android:layout marginTop="15dp"
    android:text="Calculate" />
<TextView
    android:id="@+id/textView5"
    android:layout width="wrap content"
    android: layout_height="wrap_content"
    android:layout alignStart="@+id/calButton"
    android:layout_below="@+id/calButton"
   android:layout marginTop="14dp"
    android: fontFamily="monospace"
    android:text="Total Meal Cost ($):"
    android:textColor="@color/colorPrimary"
    android:textSize="16sp"
    android:textStyle="bold" />
```

```
<TextView
    android:id="@+id/textView6"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout_alignStart="@+id/textView5"
    android:layout below="@+id/textView5"
    android:layout marginTop="21dp"
    android: fontFamily="monospace"
    android:text="Tax Amount ($)
    android:textColor="@color/colorPrimary"
    android:textSize="16sp"
    android:textStyle="bold" />
<TextView
    android:id="@+id/textView7"
    android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout_alignStart="@+id/textView6"
    android:layout_below="@+id/textView6"
    android:layout_marginTop="24dp"
    android: fontFamily="monospace"
    android: textColor="@color/colorPrimary"
    android:textSize="16sp"
    android:textStyle="bold"
                                     :" />
   android:text="Tip Amount ($)
<TextView
   android:id="@+id/textView8"
   android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout alignTop="@+id/textView5"
    android:layout marginStart="20dp"
    android:layout_toEndOf="@+id/textView5"
   android:text="" />
<TextView
    android:id="@+id/textView9"
    android:layout width="wrap content"
    android: layout_height="wrap_content"
    android:layout above="@+id/textView7"
    android:layout_alignStart="@+id/textView8"
    android:text="" />
<TextView
    android:id="@+id/textView10"
    android:layout width="wrap content"
    android:layout_height="wrap_content"
    android:layout_alignBottom="@+id/textView7"
    android:layout_alignStart="@+id/textView9"
    android:text="" />
<TextView
    android:id="@+id/textView11"
   android:layout width="wrap content"
    android:layout height="wrap content"
    android:layout_alignStart="@+id/calButton"
    android:layout below="@+id/editText2"
    android:layout marginStart="24dp"
    android:layout marginTop="19dp"
    android:text=""
    android:textColor="@android:color/holo_red_dark"
   android:textSize="18sp" />
```

### **MAINACTIVITY.JAVA**

```
package m.com.lab2;
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
public class MainActivity extends AppCompatActivity {
    Button calculateBtn;
   Button resetBtn;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        calculateBtn = (Button) findViewById(R.id.calButton);
        calculateButtonListener();
        resetBtn = (Button) findViewById(R.id.button);
        resetButtonListener();
        resetBtn.callOnClick();
    }
    /* Method to hide result fields when the app loads initially */
   private void hideResultFields()
        TextView totalCostLabel = (TextView) findViewById(R.id.textView5);
```

```
totalCostLabel.setVisibility(View. INVISIBLE);
       TextView taxAmountLabel = (TextView) findViewById(R.id.textView6);
       taxAmountLabel.setVisibility(View.INVISIBLE);
       TextView tipAmountLabel = (TextView) findViewById(R.id.textView7);
       tipAmountLabel.setVisibility(View.INVISIBLE);
       TextView totalCostVal = (TextView) findViewById(R.id.textView8);
       totalCostVal.setVisibility(View. INVISIBLE);
       TextView taxAmountVal = (TextView) findViewById(R.id.textView9);
       taxAmountVal.setVisibility(View.INVISIBLE);
       TextView tipAmountVal = (TextView) findViewById(R.id.textView10);
       tipAmountVal.setVisibility(View.INVISIBLE);
       TextView errMsq = (TextView) findViewById(R.id.textView11);
       errMsg.setVisibility(View.INVISIBLE);
   /* Method to show result fields after total amount calculation */
   private void showResultFields()
       TextView totalCostLabel = (TextView) findViewById(R.id.textView5);
       totalCostLabel.setVisibility(View.VISIBLE);
       TextView taxAmountLabel = (TextView) findViewById(R.id.textView6);
       taxAmountLabel.setVisibility(View.VISIBLE);
       TextView tipAmountLabel = (TextView) findViewById(R.id.textView7);
       tipAmountLabel.setVisibility(View.VISIBLE);
       TextView totalCostVal = (TextView) findViewById(R.id.textView8);
       totalCostVal.setVisibility(View.VISIBLE);
       TextView taxAmountVal = (TextView) findViewById(R.id.textView9);
       taxAmountVal.setVisibility(View.VISIBLE);
       TextView tipAmountVal = (TextView) findViewById(R.id.textView10);
       tipAmountVal.setVisibility(View.VISIBLE);
   /* Method to implement listener for calculate button */
   private void calculateButtonListener()
        calculateBtn.setOnClickListener(new View.OnClickListener() {
           @Override
           public void onClick(View view) {
                EditText billAmount = (EditText) findViewById(R.id.editText3);
                EditText taxAmount = (EditText) findViewById(R.id.editText);
               EditText tipAmount = (EditText) findViewById(R.id.editText2);
               billAmount.clearFocus();
                taxAmount.clearFocus();
                tipAmount.clearFocus();
               /* Check values for null before proceeding for total amount
calculation */
               if (billAmount.getText() == null ||
```

```
"".equalsIgnoreCase(billAmount.getText().toString()))
                {
                    TextView errMsg = (TextView) findViewById(R.id.textView11);
                    errMsg.setVisibility(View.VISIBLE);
                    errMsq.setText("*Provide all values");
                    return;
                }
                if (taxAmount.getText() == null | |
"".equalsIgnoreCase(taxAmount.getText().toString()))
                    TextView errMsg = (TextView) findViewById(R.id.textView11);
                    errMsg.setVisibility(View.VISIBLE);
                    errMsg.setText("*Provide all values");
                    return;
                }
                if (tipAmount.getText() == null ||
"".equalsIgnoreCase(tipAmount.getText().toString()))
                    TextView errMsg = (TextView) findViewById(R.id.textView11);
                    errMsq.setVisibility(View.VISIBLE);
                    errMsq.setText("*Provide all values");
                    return;
                }
                TextView errMsg = (TextView) findViewById(R.id.textView11);
                errMsg.setVisibility(View.INVISIBLE);
                errMsg.setText("");
                /* Getting input values and converting to necessary data type*/
                int iBillAmount = new Integer(billAmount.getText().toString());
                double iTaxAmount = new Double(taxAmount.getText().toString());
                double iTipAmount = new Double(tipAmount.getText().toString());
                calculateResult(iBillAmount, iTaxAmount, iTipAmount);
       });
   /* Method to implement listener for reset button */
   private void resetButtonListener()
        resetBtn.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view)
                hideResultFields();
                EditText billAmount = (EditText) findViewById(R.id.editText3);
                billAmount.setText("");
                EditText taxAmount = (EditText) findViewById(R.id.editText);
                taxAmount.setText("");
                EditText tipAmount = (EditText) findViewById(R.id.editText2);
                tipAmount.setText("");
       });
   }
```

```
/* Method to calculate total amount, tip amount and tax amount and setting values
on screen */

private void calculateResult(int cost, double tax, double tip)
{
    double taxAmt = Math.round(cost * (tax/100));
    double tipAmt = Math.round(cost * (tip/100));
    double totalCost = Math.round(cost + taxAmt + tipAmt);

    TextView totalCostVal = (TextView) findViewById(R.id.textView8);
    totalCostVal.setText(""+totalCost);

    TextView taxAmountVal = (TextView) findViewById(R.id.textView9);
    taxAmountVal.setText(""+taxAmt);

    TextView tipAmountVal = (TextView) findViewById(R.id.textView10);
    tipAmountVal.setText(""+tipAmt);
    showResultFields();
}
```