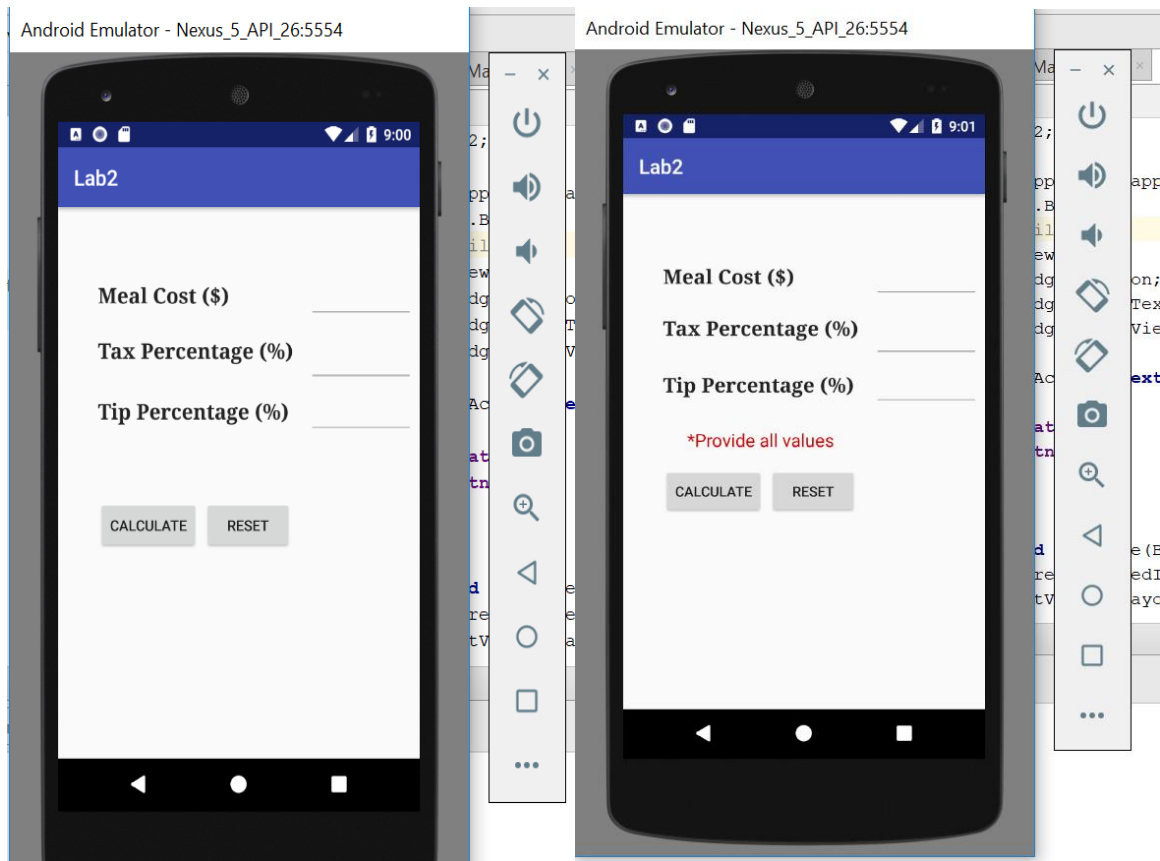
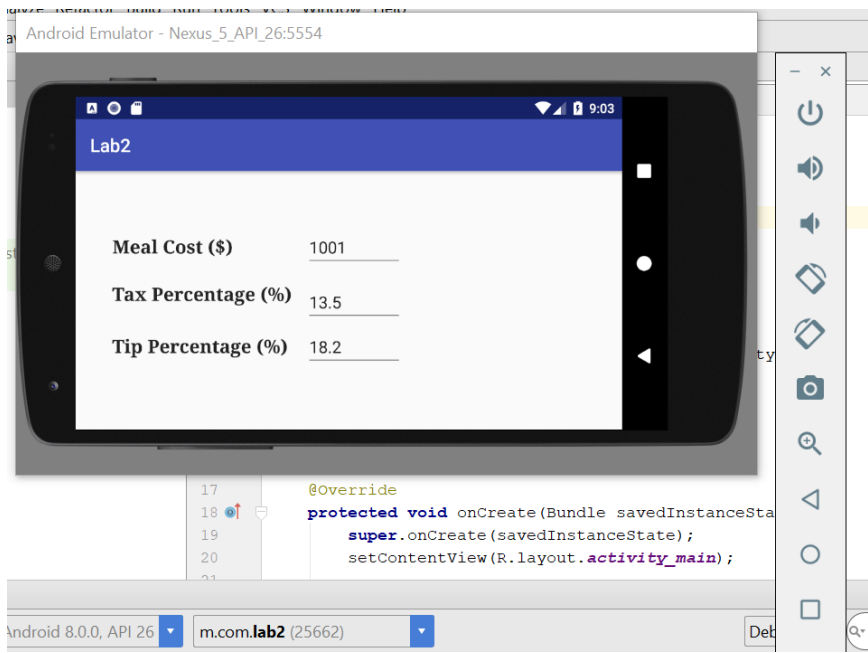
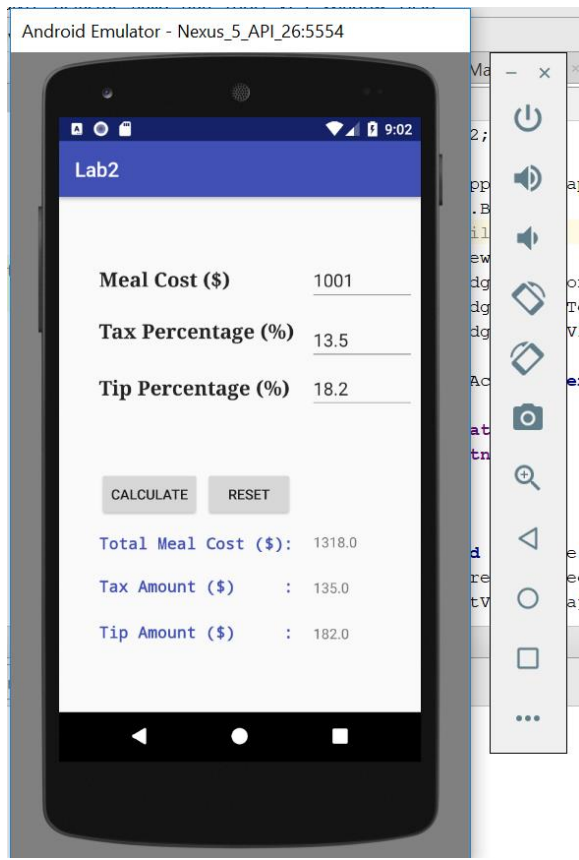
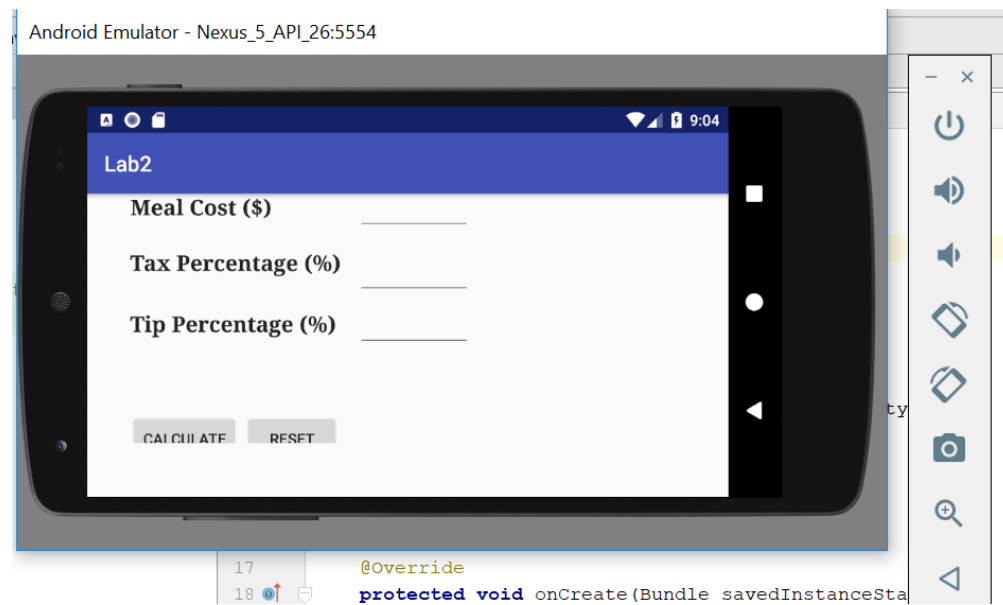
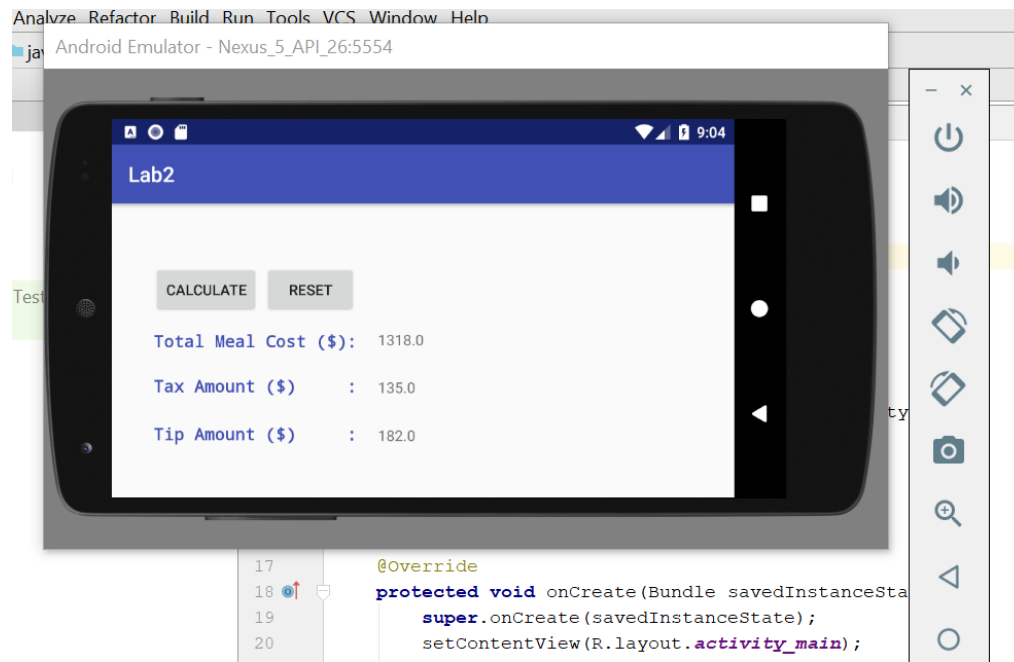

Bhavinkumar Patel - A20410380

ITMD555-Lab2

SCREENSHOTS







ACTIVITY MAIN.XML:

```
<?xml version="1.0" encoding="utf-8" ?>
<android.support.constraint.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="m.com.lab2.MainActivity">

    <ScrollView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_marginBottom="50dp">

        <LinearLayout
            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" />

```

```

        <Button
            android:id="@+id/button"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_above="@+id/textView5"
            android:layout_toStartOf="@+id/textView8"
            android:text="Reset" />

    </RelativeLayout>
</LinearLayout>

</ScrollView>

</android.support.constraint.ConstraintLayout>

```

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.setOnClickListener();

    }

    /* 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 errMsg = (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);
    errMsg.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);
    errMsg.setVisibility(View.VISIBLE);
    errMsg.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();
}
}
```