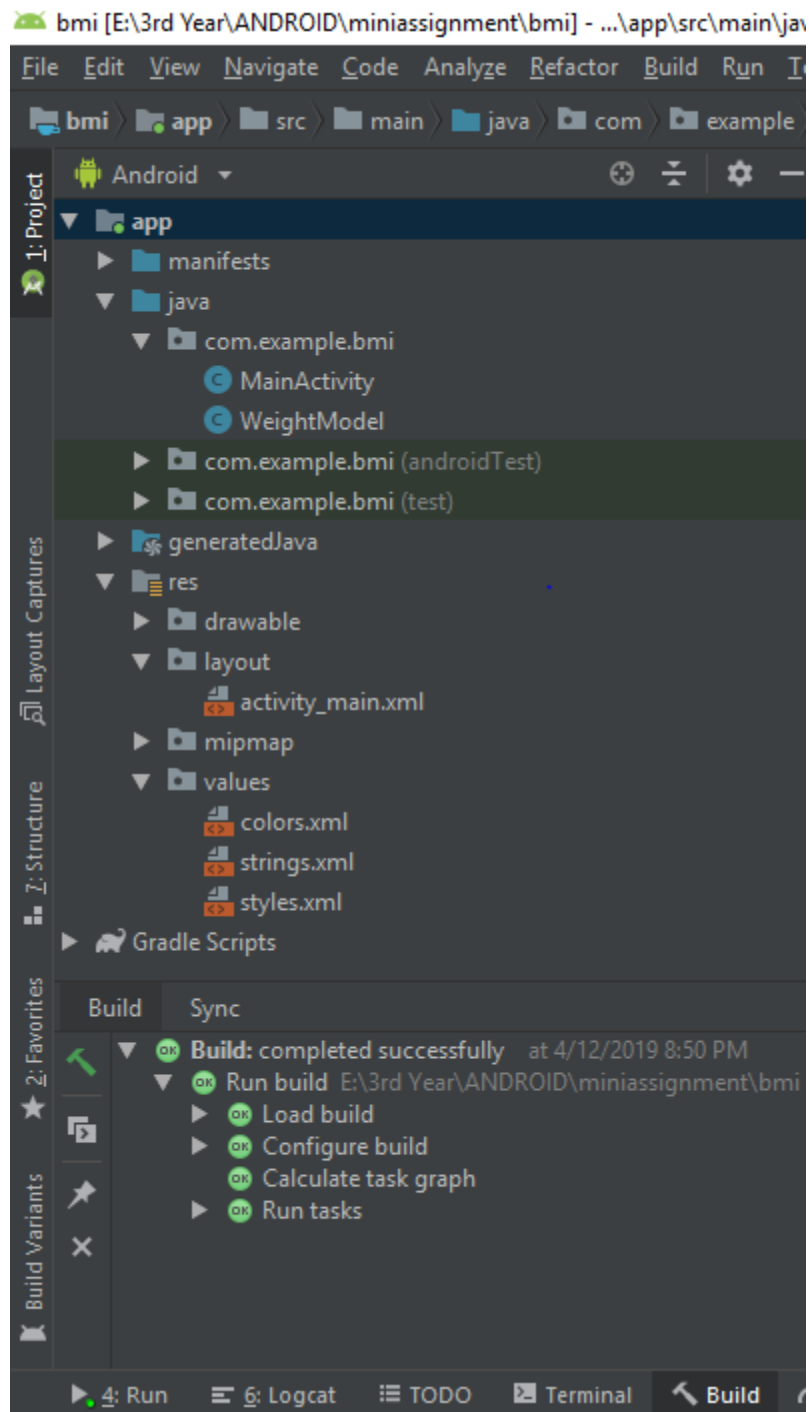
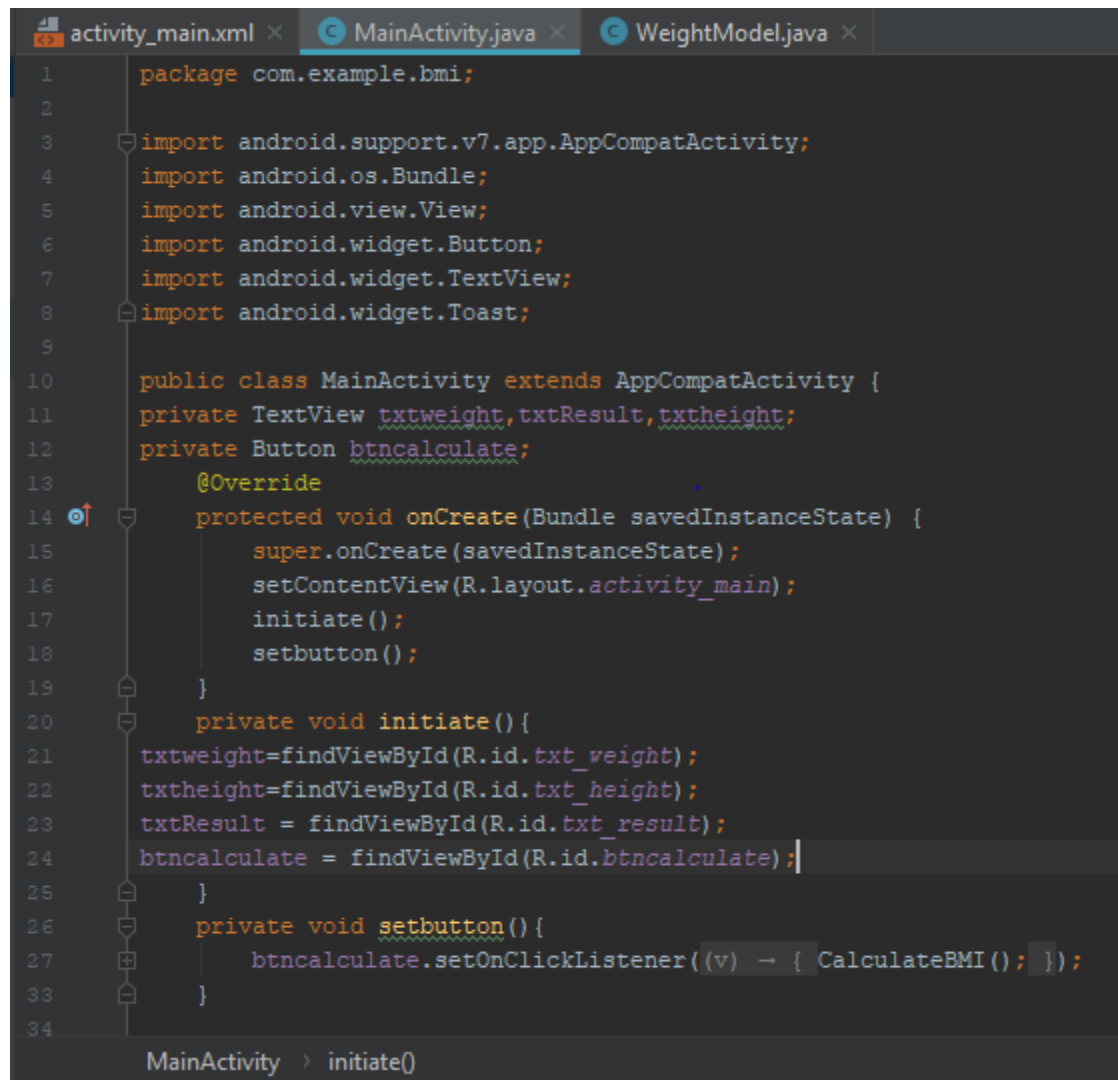


1. Body Mass Index(BMI)

Location



Main activity.java



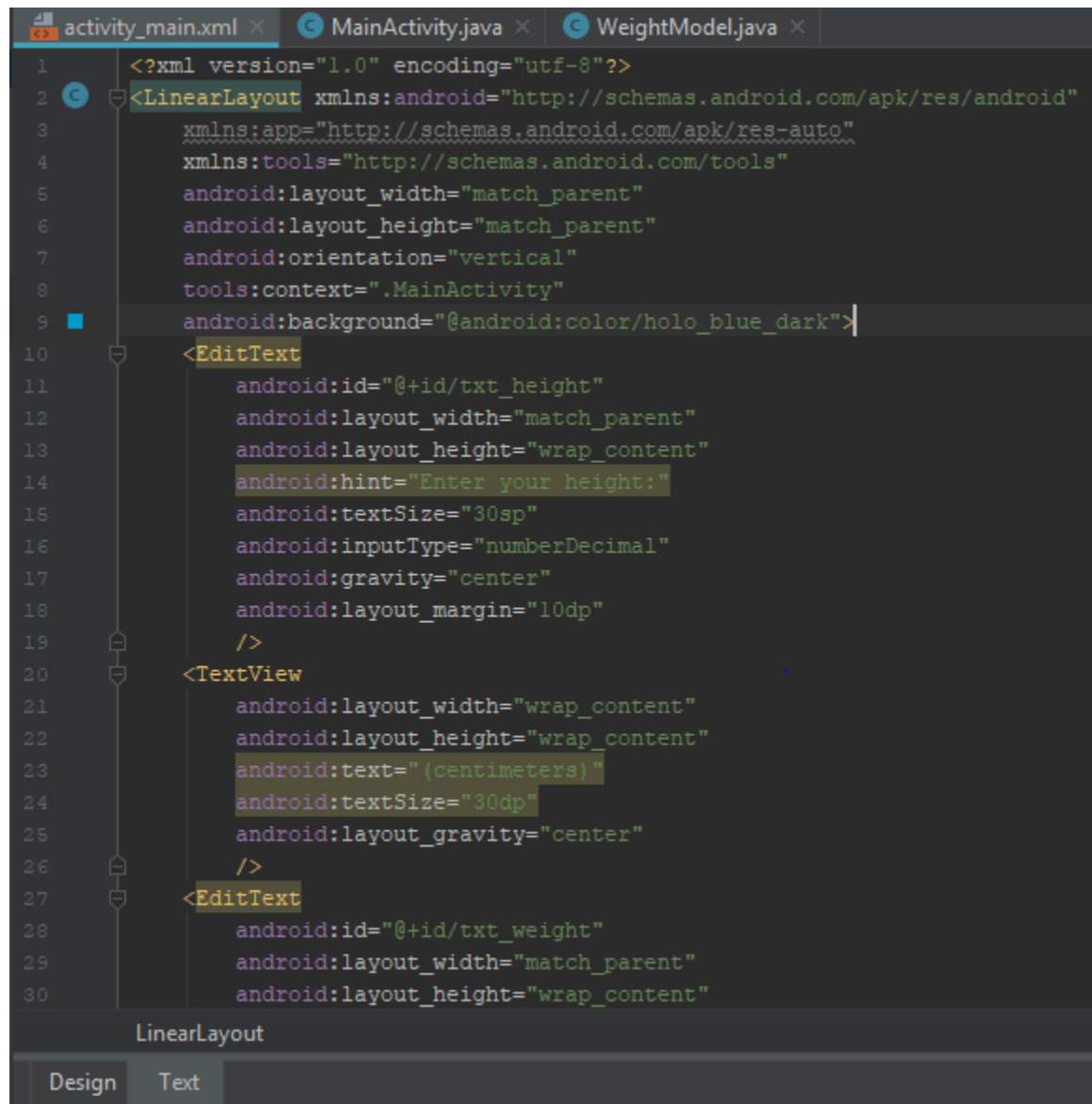
```
1 package com.example.bmi;
2
3 import android.support.v7.app.AppCompatActivity;
4 import android.os.Bundle;
5 import android.view.View;
6 import android.widget.Button;
7 import android.widget.TextView;
8 import android.widget.Toast;
9
10 public class MainActivity extends AppCompatActivity {
11     private TextView txtweight,txtResult,txtheight;
12     private Button btncalculate;
13     @Override
14     protected void onCreate(Bundle savedInstanceState) {
15         super.onCreate(savedInstanceState);
16         setContentView(R.layout.activity_main);
17         initiate();
18         setbutton();
19     }
20     private void initiate(){
21         txtweight=findViewById(R.id.txt_weight);
22         txtheight=findViewById(R.id.txt_height);
23         txtResult = findViewById(R.id.txt_result);
24         btncalculate = findViewById(R.id.btncalculate);
25     }
26     private void setbutton(){
27         btncalculate.setOnClickListener((v) -> { CalculateBMI(); });
28     }
29 }
30
31
32
33
34
```

MainActivity > initiate()

```
activity_main.xml x MainActivity.java x WeightModel.java x
34
35 private void CalculateBMI() {
36     float weight=Float.parseFloat(txtweight.getText().toString());
37     float height=Float.parseFloat(txtheight.getText().toString())/100;
38     WeightModel wm=new WeightModel(weight,height);
39     float result=wm.getWeight()/(wm.getHeight()*wm.getHeight());
40     txtResult.setText(""+result);
41     if (result<18.5){
42         Toast.makeText( context: MainActivity.this, text: "Underweight",Toast.LENGTH_LONG).show();
43     }
44     else if (result>=18.5 && result<=24.9){
45         Toast.makeText( context: MainActivity.this, text: "Normal Weight",Toast.LENGTH_LONG).show();
46     }
47     else if (result>=25 && result<=29.9){
48         Toast.makeText( context: MainActivity.this, text: "Overweight",Toast.LENGTH_LONG).show();
49     }
50     else{
51         Toast.makeText( context: MainActivity.this, text: "Obesity",Toast.LENGTH_LONG).show();
52     }
53
54 }
55
56
57

MainActivity > initiate()
```

Activity_main.xml



```
1  <?xml version="1.0" encoding="utf-8"?>
2  <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3      xmlns:app="http://schemas.android.com/apk/res-auto"
4      xmlns:tools="http://schemas.android.com/tools"
5      android:layout_width="match_parent"
6      android:layout_height="match_parent"
7      android:orientation="vertical"
8      tools:context=".MainActivity"
9      android:background="@android:color/holo_blue_dark">
10     <EditText
11         android:id="@+id/txt_height"
12         android:layout_width="match_parent"
13         android:layout_height="wrap_content"
14         android:hint="Enter your height:"
15         android:textSize="30sp"
16         android:inputType="numberDecimal"
17         android:gravity="center"
18         android:layout_margin="10dp"
19     />
20     <TextView
21         android:layout_width="wrap_content"
22         android:layout_height="wrap_content"
23         android:text="(centimeters)"
24         android:textSize="30dp"
25         android:layout_gravity="center"
26     />
27     <EditText
28         android:id="@+id/txt_weight"
29         android:layout_width="match_parent"
30         android:layout_height="wrap_content"
```

LinearLayout

Design Text

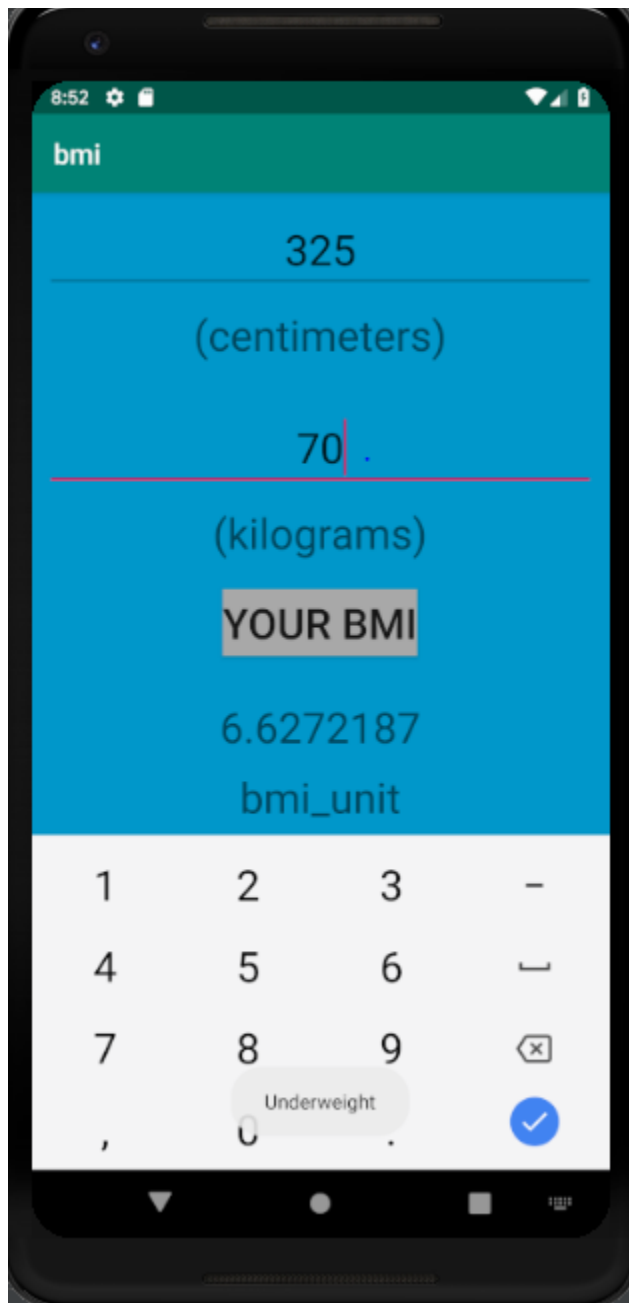
```
activity_main.xml x MainActivity.java x WeightModel.java x
30 android:layout_height="wrap_content"
31 android:hint="Enter your weight:"
32 android:textSize="30sp"
33 android:gravity="center"
34 android:layout_marginTop="30dp"
35 android:inputType="numberDecimal"
36 android:layout_marginLeft="10dp"
37 android:layout_marginRight="10dp"
38 android:layout_marginBottom="10dp"
39 />
40 <TextView
41     android:layout_width="wrap_content"
42     android:layout_height="wrap_content"
43     android:text="(kilograms)"
44     android:textSize="30dp"
45     android:layout_gravity="center"
46 />
47 <Button
48     android:id="@+id/btncalculate"
49     android:layout_width="wrap_content"
50     android:layout_height="wrap_content"
51     android:layout_gravity="center"
52     android:text="YOUR BMI"
53     android:background="@android:color/darker_gray"
54     android:textSize="30sp"
55     android:textAllCaps="false"
56     android:layout_marginTop="20dp"/>
57
58 <TextView
59     android:id="@+id/txt_result"
60     android:layout_width="wrap_content"
61     android:layout_height="wrap_content"
62     android:text=""
63     android:textSize="30sp"
64     android:gravity="center"
65     android:layout_marginTop="20dp"/>
66 />
67 />
```

LinearLayout > TextView

```
activity_main.xml x MainActivity.java x WeightModel.java x
51     android:layout_gravity="center"
52     android:text="YOUR BMI"
53     android:background="@android:color/darker_gray"
54     android:textSize="30sp"
55     android:textAllCaps="false"
56     android:layout_marginTop="20dp"/>
57
58     <TextView
59         android:id="@+id/txt_result"
60         android:layout_width="match_parent"
61         android:layout_height="wrap_content"
62         android:hint="Your BMI"
63         android:textSize="30sp"
64         android:layout_marginTop="30dp"
65         android:layout_marginLeft="10dp"
66         android:layout_marginRight="10dp"
67         android:layout_marginBottom="10dp"
68         android:gravity="center"/>
69     <TextView
70         android:layout_width="match_parent"
71         android:layout_height="wrap_content"
72         android:textSize="30sp"
73         android:text="bmi_unit"
74         android:gravity="center"/>
75 </LinearLayout>
```

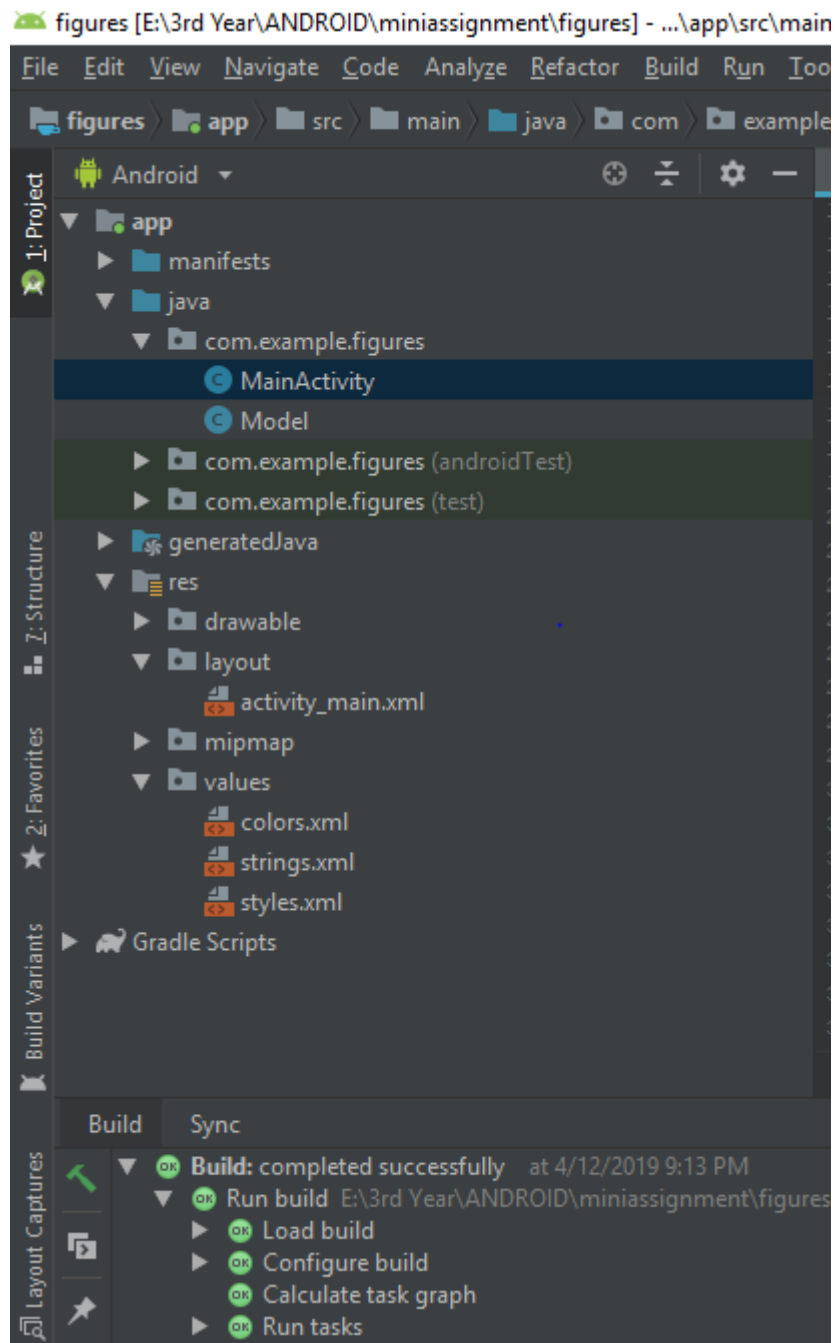
LinearLayout > TextView

Output



2. Converting numbers into figures

Location



Main_activity.java

```
MainActivity.java x
1  package com.example.figures;
2
3  import ...
4
5
6
7
8
9
10 public class MainActivity extends AppCompatActivity {
11     private EditText txtnumber;
12     private TextView txtresult;
13     private Button btnConvert;
14     @Override
15     protected void onCreate(Bundle savedInstanceState) {
16         super.onCreate(savedInstanceState);
17         setContentView(R.layout.activity_main);
18         initiate();
19         setAction();
20     }
21     private void initiate() {
22         txtnumber=findViewById(R.id.txtInput);
23         txtresult=findViewById(R.id.txtOutput);
24         btnConvert=findViewById(R.id.btnConvert);
25     }
26     private void setAction() {
27         btnConvert.setOnClickListener((v) -> {
28             int input = Integer.parseInt(txtnumber.getText().toString());
29             Model model = new Model();
30             if (input < 20) {
31
32             }
33             txtresult.setText(model.getOnes()[input]);
34         } else if (input < 100) {
35             int tensIndex = input / 10;
36             int onesIndex = input % 10;
37         }
```

```

34      txtresult.setText(model.getOnes()[input]);
35    } else if (input < 100) {
36      int tensIndex = input / 10;
37      int onesIndex = input % 10;
38
39      if (onesIndex != 0) {
40        txtresult.setText(model.getTens()[tensIndex] + " " + model.getOnes()[onesIndex]);
41      } else {
42        txtresult.setText(model.getTens()[tensIndex]);
43      }
44    } else {
45      int hundredsIndex = input / 100;
46      int remainder = input % 100;
47      int tensIndex = remainder / 10;
48      int onesIndex = remainder % 10;
49
50      if (onesIndex != 0) { txtresult.setText(model.getOnes()[hundredsIndex] + " Hundred "
51      + model.getTens()[tensIndex] + " " + model.getOnes()[onesIndex]);
52    } else {
53      txtresult.setText(model.getOnes()[hundredsIndex] + " Hundred " + model.getTens()[tensIndex]);
54    }
55  }
56  });
57  }
58  }
59

```

Model.java

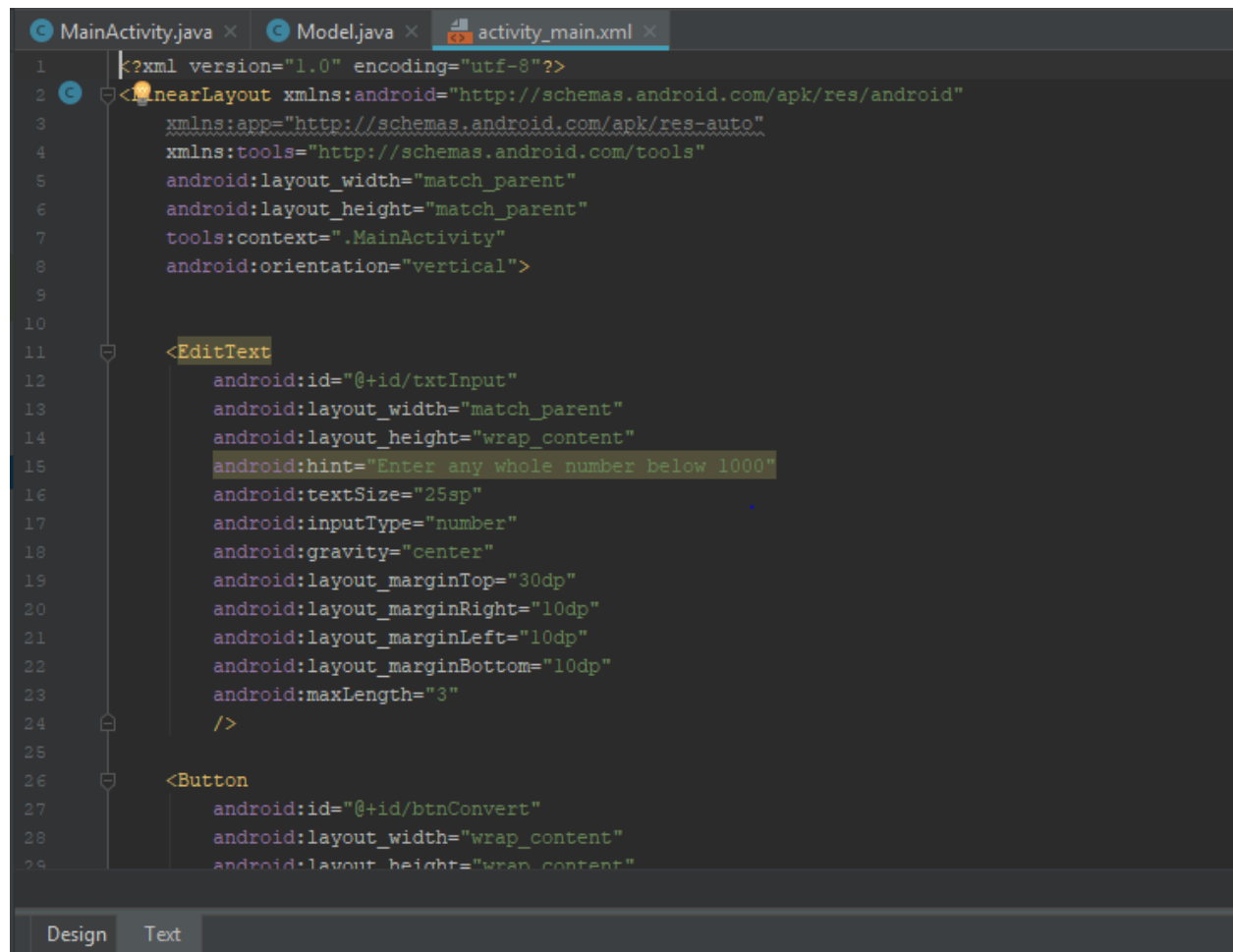
```

1  package com.example.figures;
2
3  public class Model {
4      private String[] ones = {"Zero", "One", "Two", "Three", "Four", "Five", "Six", "Seven", "Eight", "Nine", "Ten",
5      "Eleven", "Twelve", "Thirteen", "Fourteen", "Fifteen", "Sixteen", "Seventeen", "Eighteen", "Nineteen"};
6      private String[] tens = {"", "", "Twenty", "Thirty", "Forty", "Fifty", "Sixty", "Seventy", "Eighty", "Ninety"};
7
8      public Model() {
9      }
10
11     public Model(String[] ones, String[] tens) {
12         this.ones = ones;
13         this.tens = tens;
14     }
15
16     public String[] getOnes() { return ones; }
17
18     public void setOnes(String[] ones) { this.ones = ones; }
19
20     public String[] getTens() { return tens; }
21
22     public void setTens(String[] tens) { this.tens = tens; }
23
24     }
25
26
27
28
29
30
31
32

```

Model

Main_activity.xml



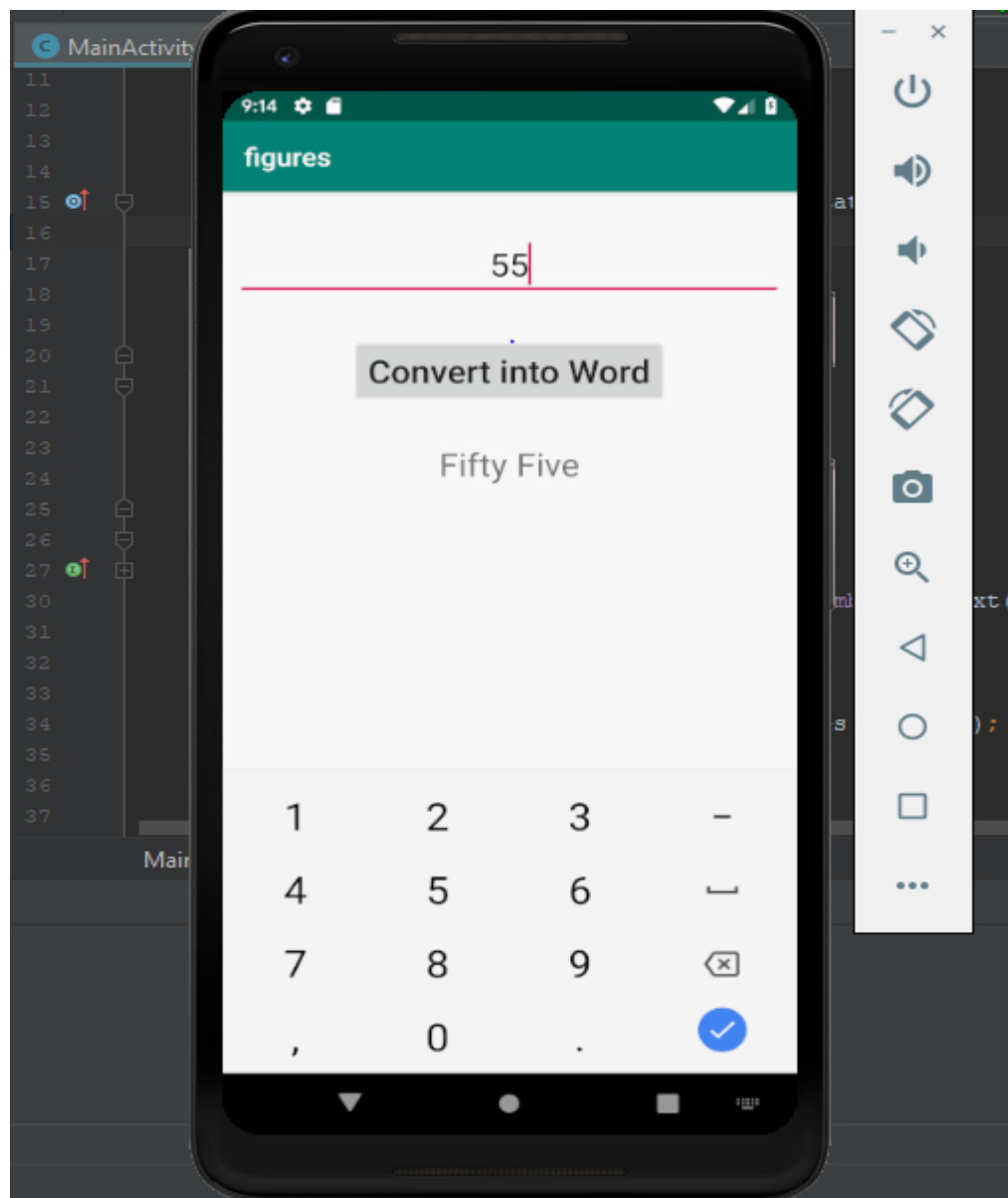
```
1  <?xml version="1.0" encoding="utf-8"?>
2  <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3      xmlns:app="http://schemas.android.com/apk/res-auto"
4      xmlns:tools="http://schemas.android.com/tools"
5      android:layout_width="match_parent"
6      android:layout_height="match_parent"
7      tools:context=".MainActivity"
8      android:orientation="vertical">
9
10
11      <EditText
12          android:id="@+id/txtInput"
13          android:layout_width="match_parent"
14          android:layout_height="wrap_content"
15          android:hint="Enter any whole number below 1000"
16          android:textSize="25sp"
17          android:inputType="number"
18          android:gravity="center"
19          android:layout_marginTop="30dp"
20          android:layout_marginRight="10dp"
21          android:layout_marginLeft="10dp"
22          android:layout_marginBottom="10dp"
23          android:maxLength="3"
24      />
25
26      <Button
27          android:id="@+id/btnConvert"
28          android:layout_width="wrap_content"
29          android:layout_height="wrap_content"
```

Design Text

```
MainActivity.java x Model.java x activity_main.xml x
23         android:maxLength="3"
24     />
25
26     <Button
27         android:id="@+id/btnConvert"
28         android:layout_width="wrap_content"
29         android:layout_height="wrap_content"
30         android:layout_gravity="center"
31         android:text="Convert into Word"
32         android:textSize="25sp"
33         android:textAllCaps="false"
34         android:layout_marginTop="20dp"/>
35
36     <TextView
37         android:id="@+id/txtOutput"
38         android:layout_width="match_parent"
39         android:layout_height="wrap_content"
40         android:textSize="25sp"
41         android:gravity="center"
42         android:layout_marginTop="30dp"
43     />
44
45
46 </LinearLayout>
```

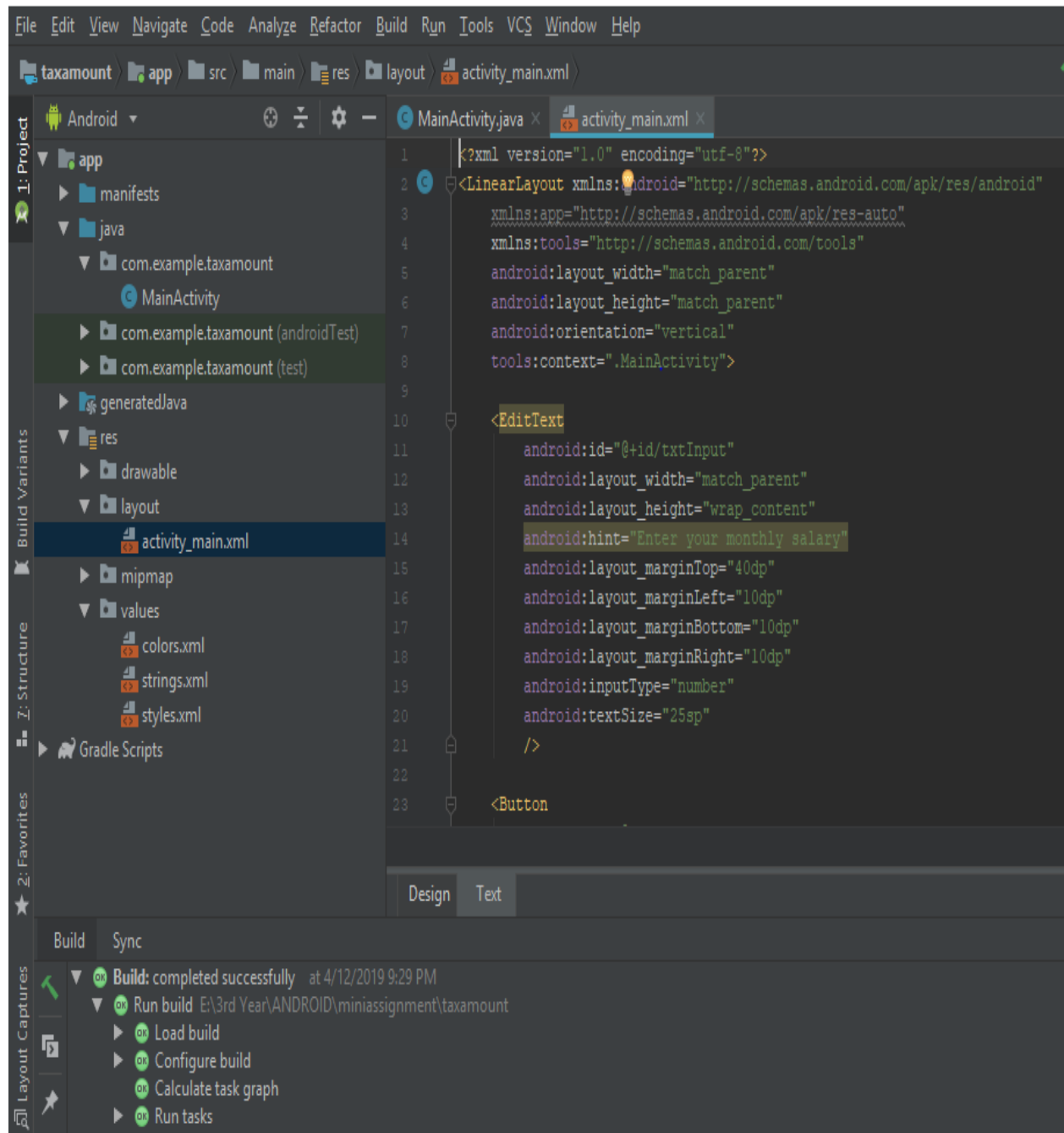
Design Text

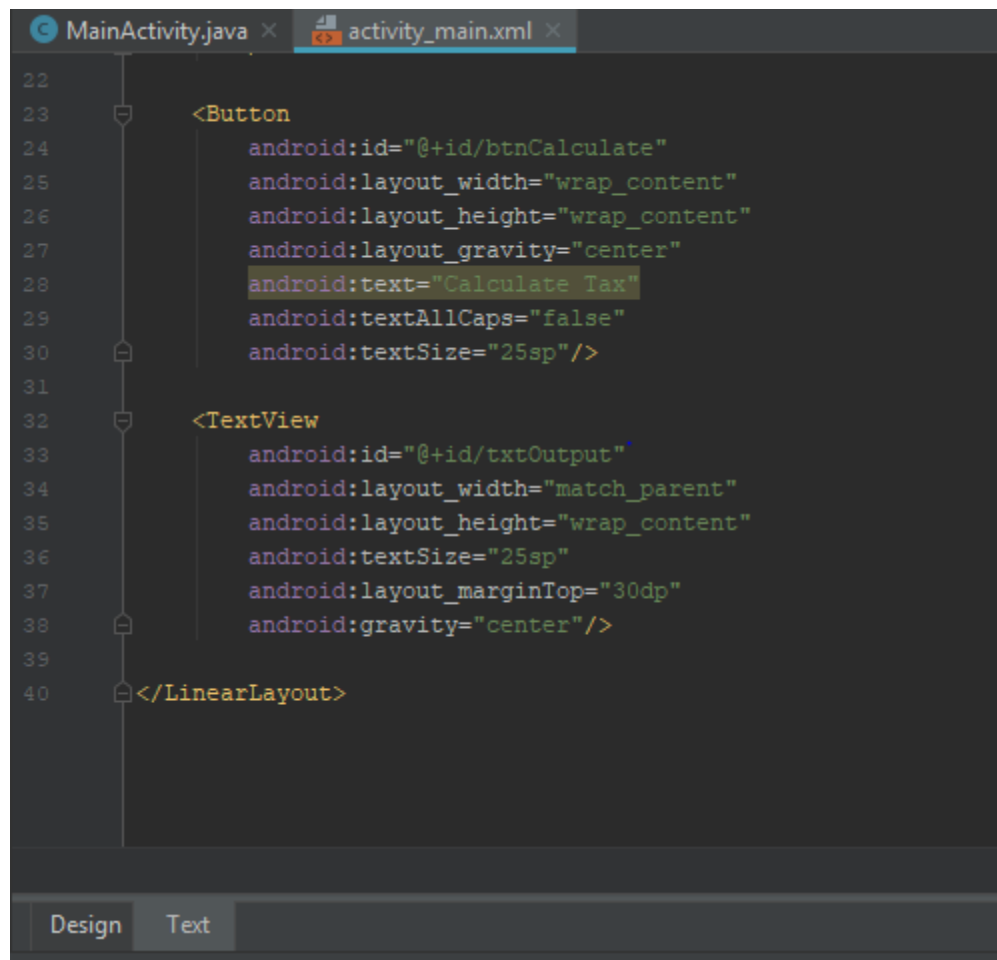
Output



3. Tax amount calculation activity_main.xml

taxamount [E:\3rd Year\ANDROID\miniassignment\taxamount] - ... \app\src\main\res\layout\activity_main.xml [app] - Android Studio





```
22
23 <Button
24     android:id="@+id/btnCalculate"
25     android:layout_width="wrap_content"
26     android:layout_height="wrap_content"
27     android:layout_gravity="center"
28     android:text="Calculate Tax"
29     android:textAllCaps="false"
30     android:textSize="25sp"/>
31
32 <TextView
33     android:id="@+id/txtOutput"
34     android:layout_width="match_parent"
35     android:layout_height="wrap_content"
36     android:textSize="25sp"
37     android:layout_marginTop="30dp"
38     android:gravity="center"/>
39
40 </LinearLayout>
```

Design Text

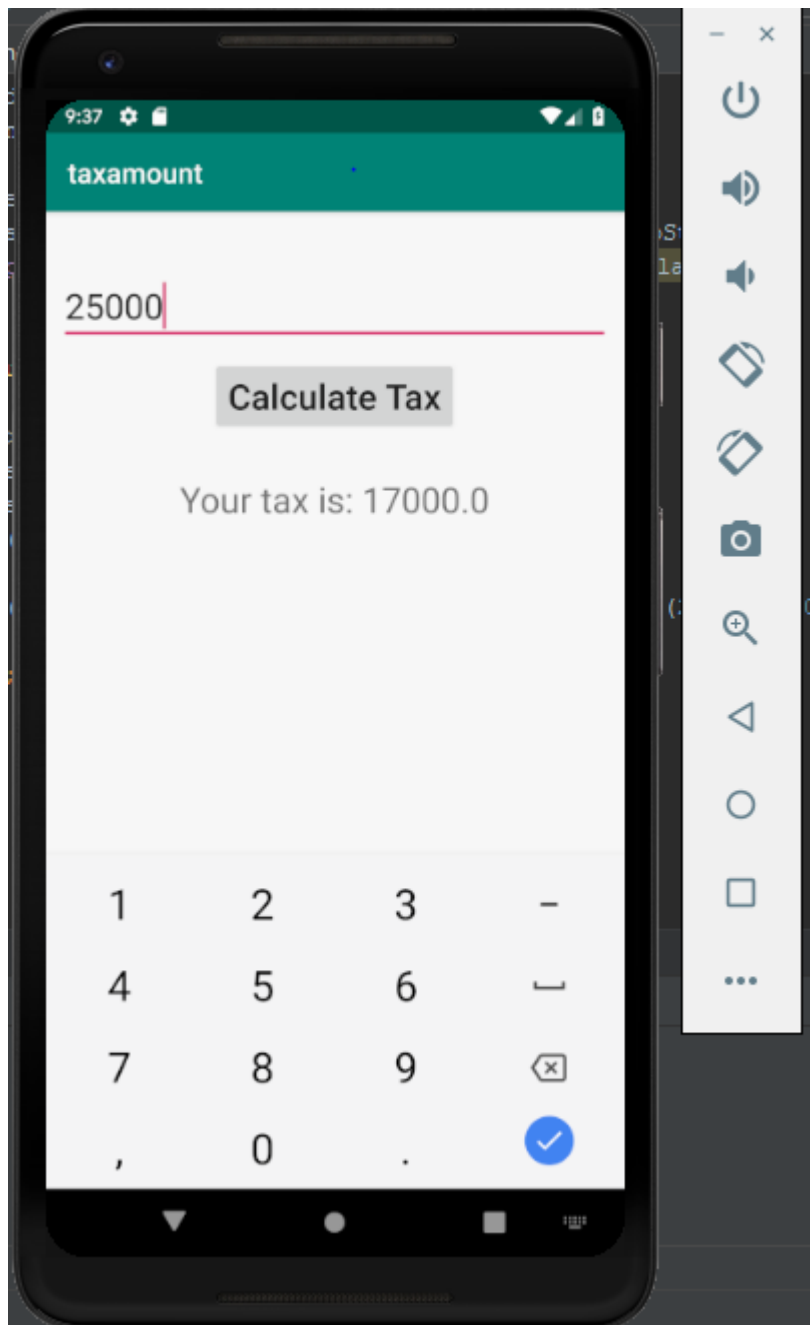
Mainactivity.java

```
MainActivity.java × activity_main.xml ×
1 package com.example.taxamount;
2 import ...
3
4 public class MainActivity extends AppCompatActivity {
5     private EditText txtInput;
6     private Button btnCalculate;
7     private TextView txtOutput;
8
9     @Override
10    protected void onCreate(Bundle savedInstanceState) {
11        super.onCreate(savedInstanceState);
12        setContentView(R.layout.activity_main);
13
14        txtInput = findViewById(R.id.txtInput);
15        txtOutput = findViewById(R.id.txtOutput);
16        btnCalculate = findViewById(R.id.btnCalculate);
17        btnCalculate.setOnClickListener((v) -> {
18            float salary = Float.parseFloat(txtInput.getText().toString());
19            txtOutput.setText("Your tax is: "+calculate(salary, salary*12));
20        });
21
22    }
23
24    @private float calculate(float salary){
25        float tax;
26        if (salary>1 && salary<=200000){
27            tax = salary / 100;
28        }else if (salary>200000 && salary<=350000){
```



```
MainActivity.java × activity_main.xml ×
18      txtInput = findViewById(R.id.txtInput);
19      txtOutput = findViewById(R.id.txtOutput);
20      btnCalculate = findViewById(R.id.btnCalculate);
21      btnCalculate.setOnClickListener((v) -> {
22          float salary = Float.parseFloat(txtInput.getText().toString());
23          txtOutput.setText("Your tax is: "+calculate( salary: salary*12));
24      });
25
26  }
27
28  @
29  private float calculate(float salary){
30      float tax;
31      if (salary>=1 && salary<=200000){
32          tax = salary / 100;
33      }else if (salary>200000 && salary<=350000){
34          tax = (salary - 200000)*(15f/100) + (200000f/100);
35      }else {
36          tax = (salary-350000)*(25f/100) + (150000*15f)/100 + (200000f/100);
37      }
38      return tax;
39  }
40  }
```

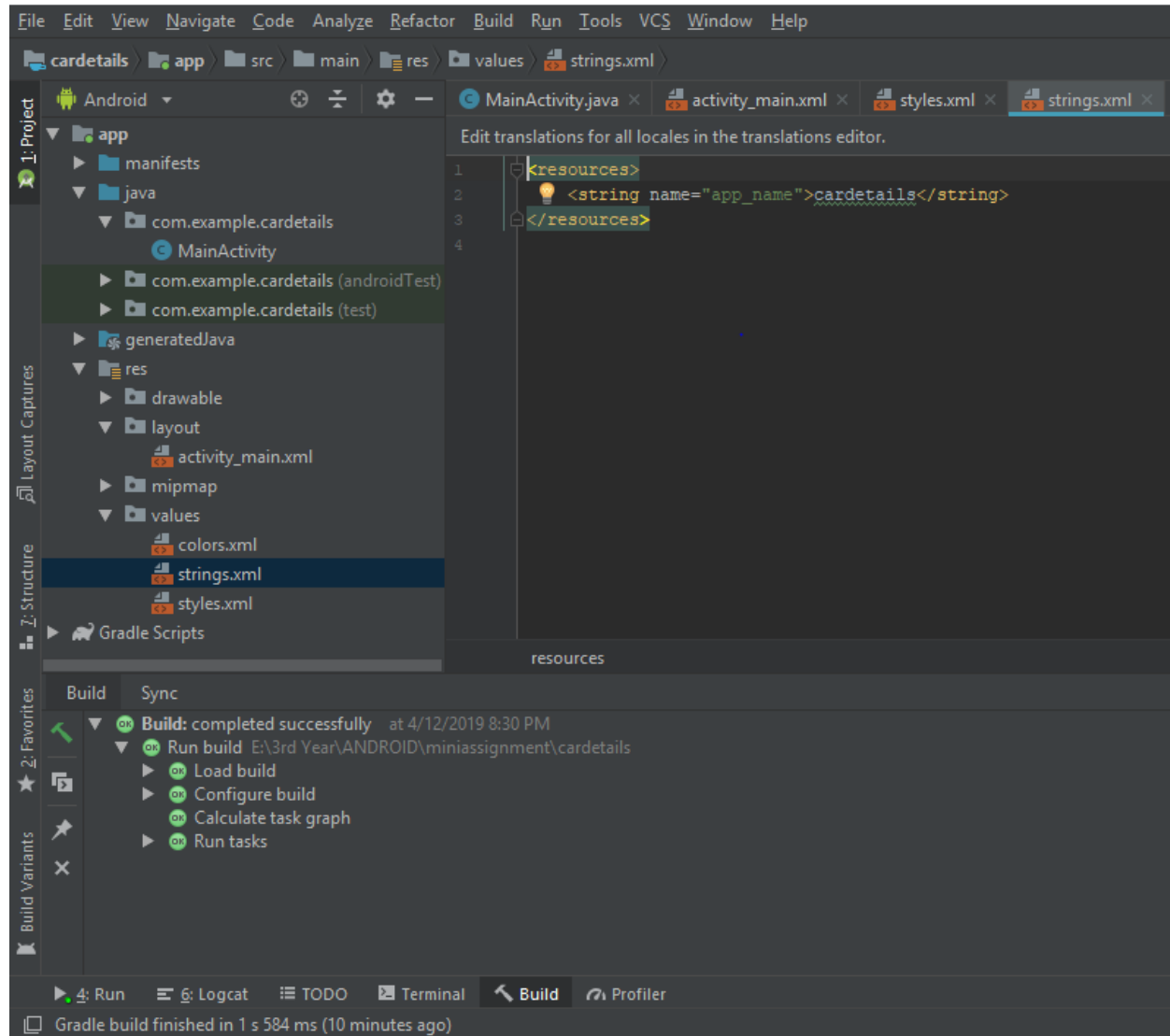
Output



4. Car details

Location

cardetails [E:\3rd Year\ANDROID\miniassignment\cardetails] - ...app\src\main\res\values\strings.xml [app] - Android Studio



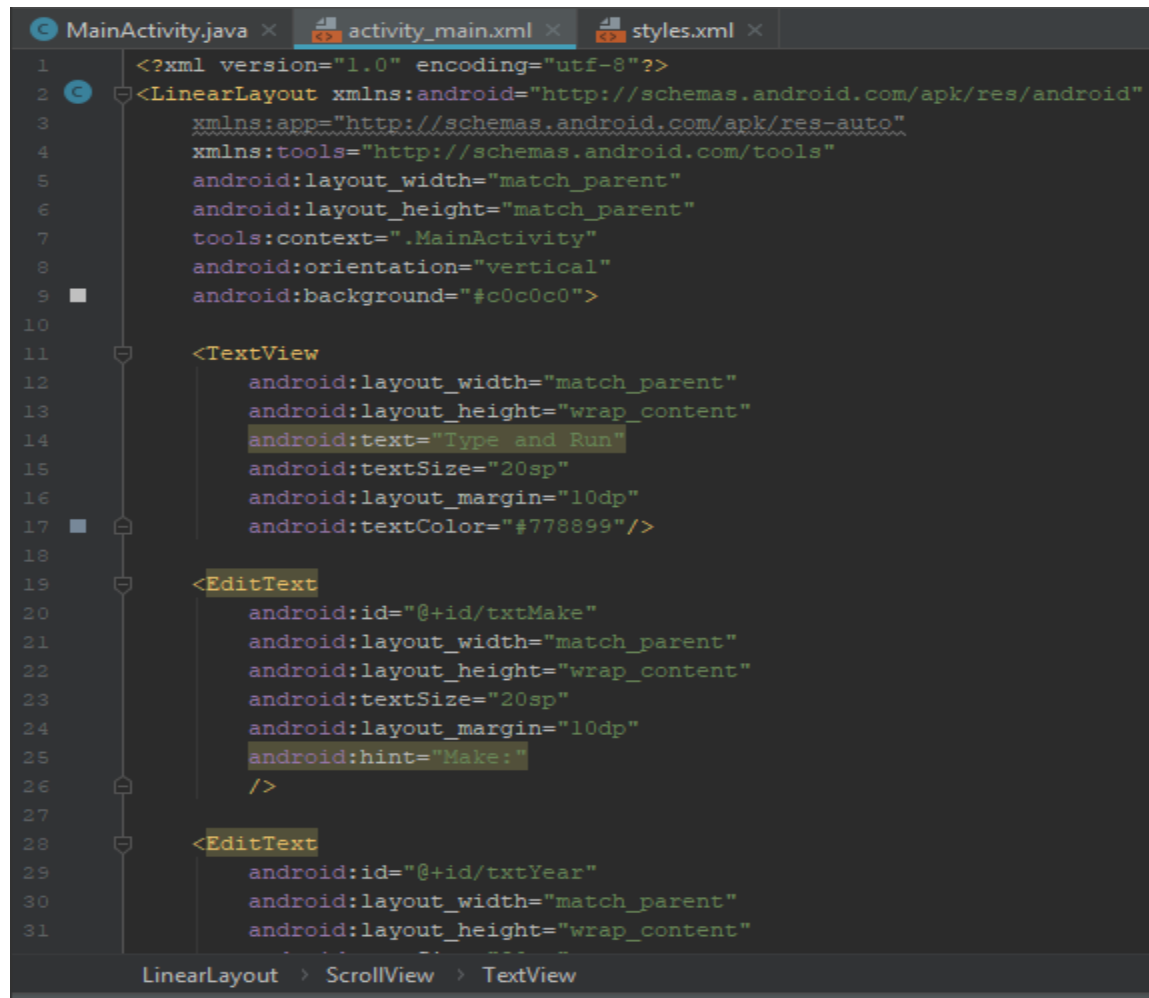
Main activity.java

```
MainActivity.java × activity_main.xml × styles.xml ×
1 package com.example.cardetails;
2 import ...
9 public class MainActivity extends AppCompatActivity {
10 private TextView txtScrollable;
11 private EditText txtMake,txtYear,txtColor,txtPurchasePrice,txtEngineSize;
12 private Button btnCreateCar;
13 @Override
14 protected void onCreate(Bundle savedInstanceState) {
15     super.onCreate(savedInstanceState);
16     setContentView(R.layout.activity_main);
17     initItems();
18 }
19 private void initItems(){
20     txtMake = findViewById(R.id.txtMake);
21     txtYear = findViewById(R.id.txtYear);
22     txtColor = findViewById(R.id.txtColor);
23     txtPurchasePrice = findViewById(R.id.txtPurchasePrice);
24     txtEngineSize = findViewById(R.id.txtEngineSize);
25
26     txtScrollable = findViewById(R.id.txtScrollable);
27     txtScrollable.setMovementMethod(new ScrollingMovementMethod());
28
29     btnCreateCar = findViewById(R.id.btnCreateCar);
30     btnCreateCar.setOnClickListener((v) -> { performAction(); });
36 }

MainActivity > performAction()
```

```
MainActivity.java × activity_main.xml × styles.xml ×
20     txtMake = findViewById(R.id.txtMake);
21     txtYear = findViewById(R.id.txtYear);
22     txtColor = findViewById(R.id.txtColor);
23     txtPurchasePrice = findViewById(R.id.txtPurchasePrice);
24     txtEngineSize = findViewById(R.id.txtEngineSize);
25
26     txtScrollable = findViewById(R.id.txtScrollable);
27     txtScrollable.setMovementMethod(new ScrollingMovementMethod());
28
29     btnCreateCar = findViewById(R.id.btnCreateCar);
30     btnCreateCar.setOnClickListener((v) -> { performAction(); });
36 }
37 private void performAction() {
38     String data = "\r\n" + "Make:" + txtMake.getText().toString() + ". " + "\r\n" + "Year:" + txtYear.getText().toString()
39     + ". " + "\r\n" + "Color:" + txtColor.getText().toString() + ". " + "\r\n"
40     + "Purchase Price:" + txtPurchasePrice.getText().toString()
41     + ". " + "\r\n" + "Engine Size:" + txtEngineSize.getText().toString();
42     txtScrollable.setText(txtScrollable.getText().toString() + "\r\n" + data);
43
44 }
```

Main_activity.xml



```
1 <?xml version="1.0" encoding="utf-8"?>
2 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3     xmlns:app="http://schemas.android.com/apk/res-auto"
4     xmlns:tools="http://schemas.android.com/tools"
5     android:layout_width="match_parent"
6     android:layout_height="match_parent"
7     tools:context=".MainActivity"
8     android:orientation="vertical"
9     android:background="#c0c0c0">
10
11     <TextView
12         android:layout_width="match_parent"
13         android:layout_height="wrap_content"
14         android:text="Type and Run"
15         android:textSize="20sp"
16         android:layout_margin="10dp"
17         android:textColor="#778899"/>
18
19     <EditText
20         android:id="@+id/txtMake"
21         android:layout_width="match_parent"
22         android:layout_height="wrap_content"
23         android:textSize="20sp"
24         android:layout_margin="10dp"
25         android:hint="Make:"
26         />
27
28     <EditText
29         android:id="@+id/txtYear"
30         android:layout_width="match_parent"
31         android:layout_height="wrap_content"
```

LinearLayout > ScrollView > TextView

```
MainActivity.java × activity_main.xml × styles.xml ×
32         android:textSize="20sp"
33         android:layout_margin="10dp"
34         android:hint="Year:"
35     />
36
37     <EditText
38         android:id="@+id/txtColor"
39         android:layout_width="match_parent"
40         android:layout_height="wrap_content"
41         android:textSize="20sp"
42         android:layout_margin="10dp"
43         android:hint="Color:"
44     />
45
46     <EditText
47         android:id="@+id/txtPurchasePrice"
48         android:layout_width="match_parent"
49         android:layout_height="wrap_content"
50         android:textSize="20sp"
51         android:layout_margin="10dp"
52         android:hint="Purchase price (£):"
53     />
54
55     <EditText
56         android:id="@+id/txtEngineSize"
57         android:layout_width="match_parent"
58         android:layout_height="wrap_content"
59         android:textSize="20sp"
60         android:layout_margin="10dp"
61         android:hint="Engine size (litre):"
62     />

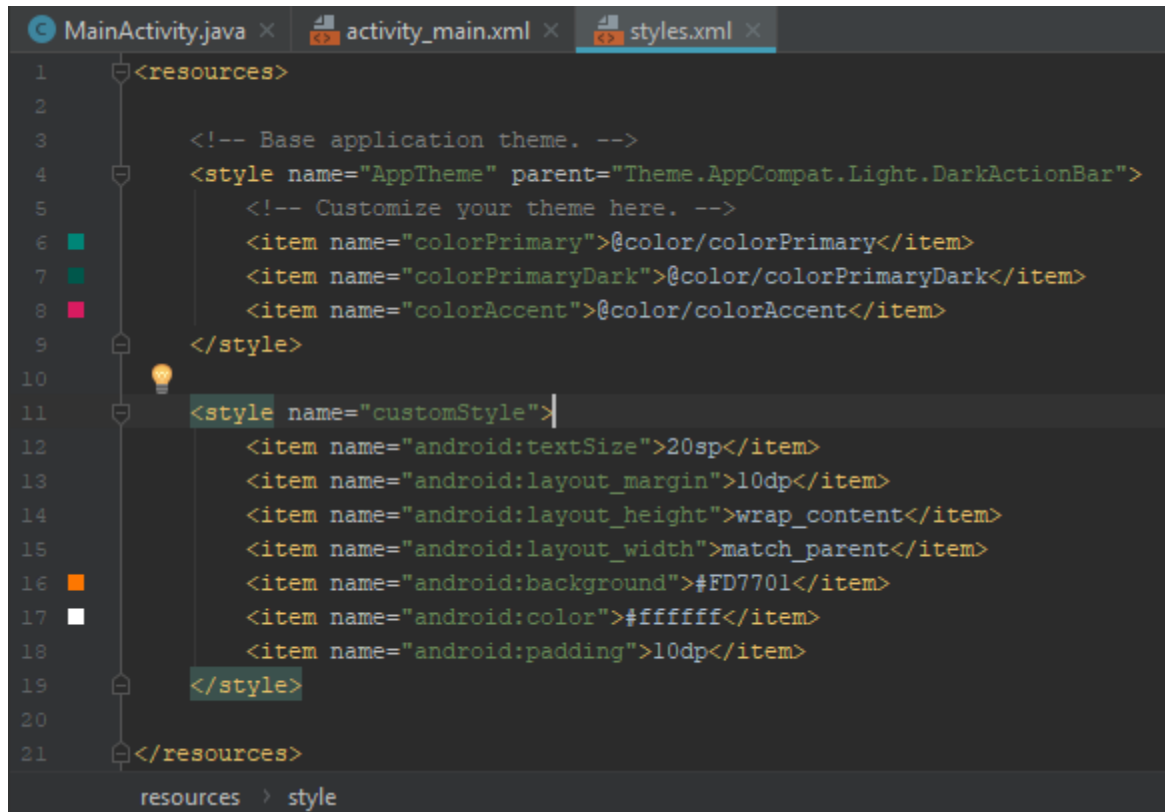
```

LinearLayout

```
MainActivity.java × activity_main.xml × styles.xml ×
60 android:layout_margin="10dp"
61 android:hint="Engine size (litre):"
62 />
63 <Button
64     android:id="@+id/btnCreateCar"
65     android:layout_width="wrap_content"
66     android:layout_height="wrap_content"
67     android:textSize="15sp"
68     android:text="Create Car"
69     android:layout_gravity="center"
70     android:layout_margin="10dp"/>
71
72 <ScrollView
73     android:layout_width="match_parent"
74     android:layout_height="wrap_content">
75     <TextView
76         android:id="@+id/txtScrollable"
77         android:layout_marginTop="10dp"
78         android:layout_width="match_parent"
79         android:layout_height="200dp"
80         style="@style/customStyle"
81         android:scrollbars="vertical"
82         android:text=""
83     />
84
85 </ScrollView>
86 </LinearLayout>
```

LinearLayout

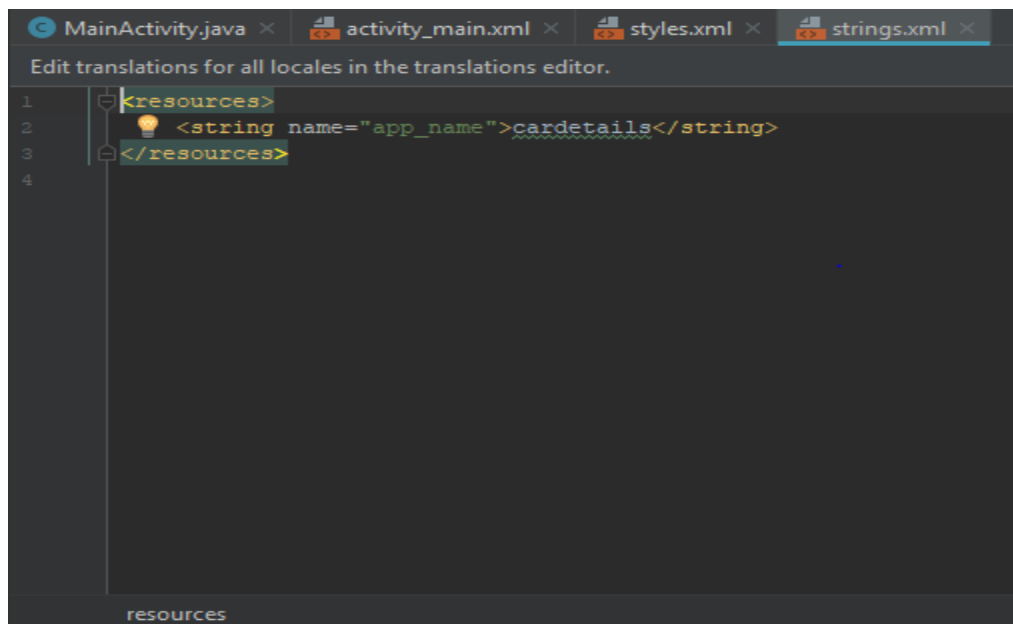
Styles.xml



```
1 <resources>
2
3     <!-- Base application theme. -->
4     <style name="AppTheme" parent="Theme.AppCompat.Light.DarkActionBar">
5         <!-- Customize your theme here. -->
6         <item name="colorPrimary">@color/colorPrimary</item>
7         <item name="colorPrimaryDark">@color/colorPrimaryDark</item>
8         <item name="colorAccent">@color/colorAccent</item>
9     </style>
10
11     <style name="customStyle">
12         <item name="android:textSize">20sp</item>
13         <item name="android:layout_margin">10dp</item>
14         <item name="android:layout_height">wrap_content</item>
15         <item name="android:layout_width">match_parent</item>
16         <item name="android:background">#FD7701</item>
17         <item name="android:color">#ffffff</item>
18         <item name="android:padding">10dp</item>
19     </style>
20
21 </resources>
```

resources > style

String.xml



```
1 <resources>
2     <string name="app_name">cardetails</string>
3 </resources>
4
```

resources

Output:

cardetails] - ...\\app\\src\\main\\res\\values\\strings.xml [app] - Android Studio

