MOBILE APPLICATION DEVELOPMENT:

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1) Design the following APP for the IOT store. The cost of Arduino Uno is 500RS, the cost of WIFI module is 250RS and the Bluetooth module is 200RS. Based on the quantity compute the Amount payable when submit button is clicked, when clear is clicked clear all the Editboxes.
   Java Code:

```java
package com.example.lab21;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
public class MainActivity extends AppCompatActivity {
    EditText T1, T2, T3, T4;
    Button B1,B2;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        T1 = findViewById(R.id.uno);
        T2 = findViewById(R.id.wifi);
        T3 = findViewById(R.id.bluetooth);
        T4 = findViewById(R.id.Total);
        B1 = findViewById(R.id.submitButton);
        B2 = findViewById(R.id.clearButton);
        B1.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View v)
            {
                int a = Integer.parseInt(T1.getText().toString());
                int b = Integer.parseInt(T2.getText().toString());
                int c = Integer.parseInt(T3.getText().toString());
                int x = a*500;
                int y = b*250;
                int z = c*200;
                int s = x+y+z;
                T4.setText(String.valueOf(s));
            }
        });
        B2.setOnClickListener(new View.OnClickListener()
        {
            @Override
            public void onClick(View v)
            {
```

```java
                T1.setText("");
                T2.setText("");
                T3.setText("");
                T4.setText("");
            }
        });
    }
}
```

XML:

```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">
    <EditText
        android:id="@+id/bluetooth"
        android:layout_width="128dp"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="number"
        app:layout_constraintBottom_toBottomOf="@+id/textView5"
        app:layout_constraintStart_toStartOf="@+id/textView2" />
    <EditText
        android:id="@+id/Total"
        android:layout_width="128dp"
        android:layout_height="wrap_content"
        android:layout_marginStart="12dp"
        android:layout_marginLeft="12dp"
        android:ems="10"
        android:inputType="number"
        app:layout_constraintBottom_toBottomOf="@+id/textView6"
        app:layout_constraintStart_toEndOf="@+id/textView6" />
    <EditText
        android:id="@+id/wifi"
        android:layout_width="128dp"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="number"
        app:layout_constraintBottom_toBottomOf="@+id/textView4"
        app:layout_constraintStart_toStartOf="@+id/textView2" />
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="64dp"
        android:layout_marginLeft="64dp"
        android:layout_marginTop="128dp"
        android:text="Items"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="parent"
```

```xml
        app:layout_constraintTop_toTopOf="parent" />
    <TextView
        android:id="@+id/textView2"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="96dp"
        android:layout_marginLeft="96dp"
        android:layout_marginTop="128dp"
        android:text="Quantity"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintStart_toEndOf="@+id/textView"
        app:layout_constraintTop_toTopOf="parent" />
    <TextView
        android:id="@+id/textView3"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="32dp"
        android:text="Arduino Uno"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="@+id/textView"
        app:layout_constraintTop_toBottomOf="@+id/textView" />
    <TextView
        android:id="@+id/textView4"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
        android:text="Wifi Module"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="@+id/textView3"
        app:layout_constraintTop_toBottomOf="@+id/textView3" />
    <TextView
        android:id="@+id/textView5"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
        android:text="Bluetooth"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="@+id/textView4"
        app:layout_constraintTop_toBottomOf="@+id/textView4" />
    <TextView
        android:id="@+id/textView6"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="28dp"
        android:text="Amount Payable"
        android:textSize="24sp"
        android:textStyle="bold"
        app:layout_constraintStart_toStartOf="@+id/submitButton"
        app:layout_constraintTop_toBottomOf="@+id/submitButton" />
    <EditText
        android:id="@+id/uno"
        android:layout_width="128dp"
        android:layout_height="wrap_content"
```
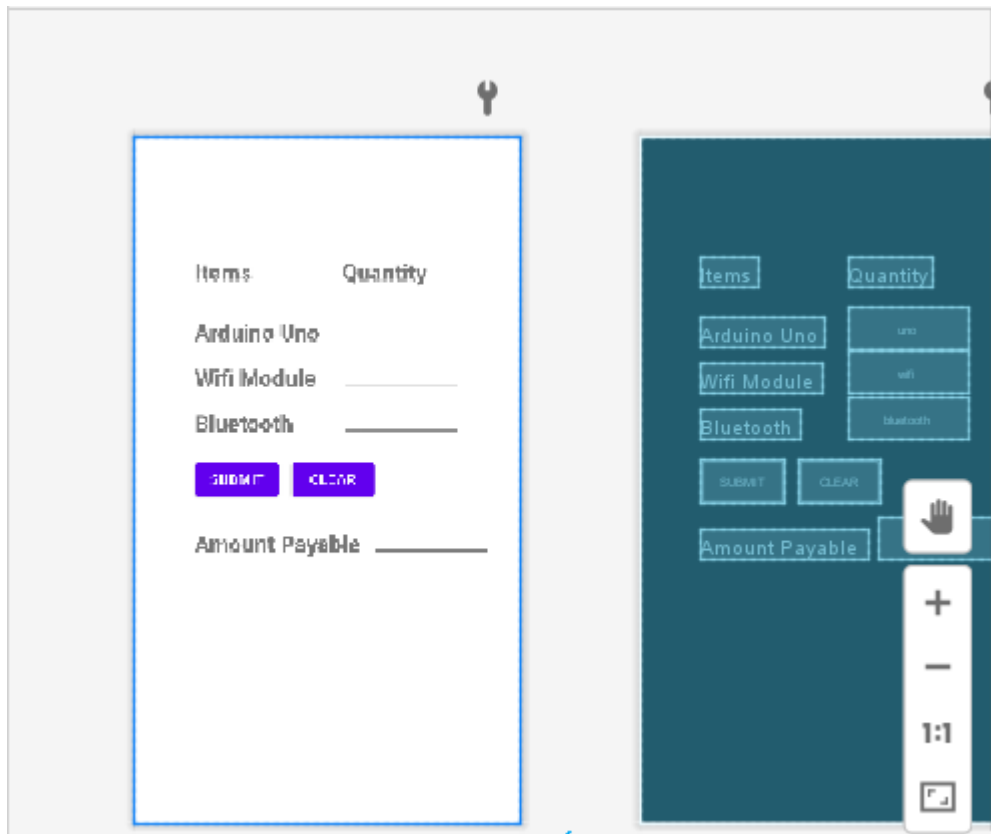
```
        android:ems="10"
        android:inputType="number"
        app:layout_constraintBottom_toBottomOf="@+id/textView3"
        app:layout_constraintStart_toStartOf="@+id/textView2" />
    <Button
        android:id="@+id/submitButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="20dp"
        android:text="Submit"
        app:layout_constraintStart_toStartOf="@+id/textView5"
        app:layout_constraintTop_toBottomOf="@+id/textView5" />
    <Button
        android:id="@+id/clearButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginStart="13dp"
        android:layout_marginLeft="13dp"
        android:text="Clear"
        app:layout_constraintBottom_toBottomOf="@+id/submitButton"
        app:layout_constraintStart_toEndOf="@+id/submitButton" />
</androidx.constraintlayout.widget.ConstraintLayout>
```

OUTPUT:

lab2.1

Items	Quantity
Arduino Uno	_____
Wifi Module	_____
Bluetooth	_____

SUBMIT   **CLEAR**

Amount Payable _____

lab2.1

Items	Quantity
Arduino Uno	10
Wifi Module	20
Bluetooth	30

SUBMIT   **CLEAR**

Amount Payable   16000

2)Design a Currency converter APP.1rs=

JAVA CODE:

```java
package com.example.lab21;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.RadioGroup;
public class MainActivity extends AppCompatActivity {
    EditText T1, T2;
    RadioGroup RG;
    RadioButton RB;
    Button B;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        T1 = findViewById(R.id.input);
        T2 = findViewById(R.id.result);
        RG = findViewById(R.id.radioGroup);
        B = findViewById(R.id.convertButton);
        B.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View v) {
                int radioId = RG.getCheckedRadioButtonId();
                RB = findViewById(radioId);
                float rs = Float.parseFloat(T1.getText().toString());
                String str = RB.getText().toString();
               if(str.equals("USD"))
                    T2.setText(String.valueOf(rs*14/1000));
                else if(str.equals("EURO"))
                    T2.setText(String.valueOf(rs*11/1000));
                else if(str.equals("YEN"))
                    T2.setText(String.valueOf(rs*148/100));
                else
                    T2.setText("");
            }

        });

    }

}
```

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"
```

```xml
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".MainActivity">
    <TextView
        android:id="@+id/textView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="48dp"
        android:text="  CURRENCY \n CONVERTER"
        android:textAllCaps="false"
        android:textSize="36sp"
        android:textStyle="bold|italic"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toTopOf="parent" />
    <EditText
        android:id="@+id/input"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_marginTop="32dp"
        android:ems="10"
        android:hint="in rs"
        android:inputType="number|textPersonName"
        app:layout_constraintEnd_toEndOf="parent"
        app:layout_constraintStart_toStartOf="parent"
        app:layout_constraintTop_toBottomOf="@+id/textView" />
    <RadioGroup
        android:id="@+id/radioGroup"
        android:layout_width="128dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
        android:checkedButton="@id/usdButton"
        app:layout_constraintStart_toStartOf="@+id/input"
        app:layout_constraintTop_toBottomOf="@+id/input">

        <RadioButton
            android:id="@+id/usdButton"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="USD" />
        <RadioButton
            android:id="@+id/euroButton"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="EURO" />

        <RadioButton
            android:id="@+id/yenButton"
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:text="YEN" />
    </RadioGroup>
    <Button
        android:id="@+id/convertButton"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:layout_marginTop="16dp"
```
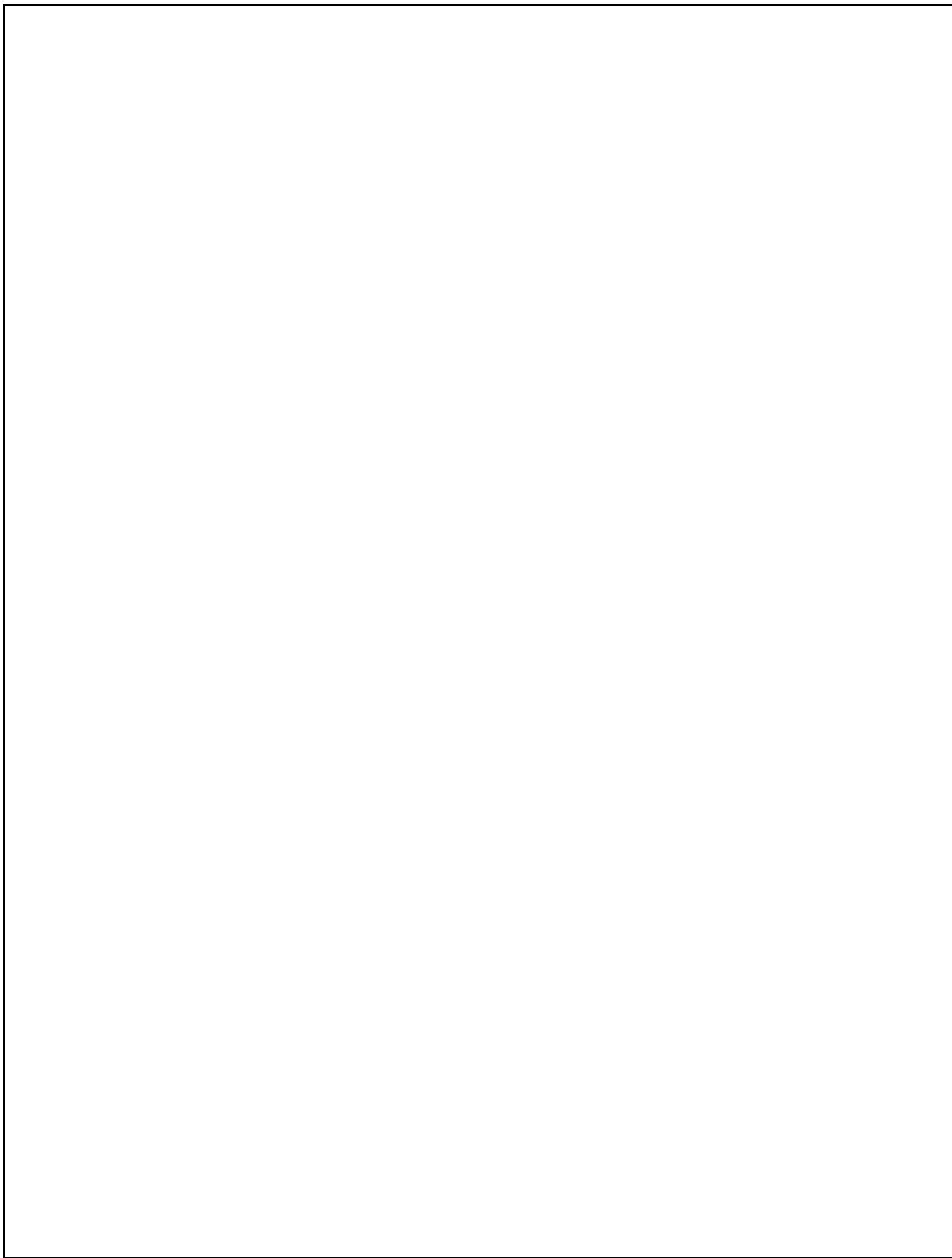
```xml
            android:text="CONVERT"
            app:layout_constraintStart_toStartOf="@+id/input"
            app:layout_constraintTop_toBottomOf="@+id/radioGroup" />

        <EditText
            android:id="@+id/result"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_marginTop="16dp"
            android:ems="10"
            android:inputType="number|textPersonName"
            app:layout_constraintStart_toStartOf="@+id/convertButton"
            app:layout_constraintTop_toBottomOf="@+id/convertButton" />

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

lab2.1

CURRENCY CONVERTER

50

○ USD

○ EURO

◉ YEN

CONVERT

74.0