" Application development in Android by ANDROID STUDIO "

"CURRENCY CONVERTER"

An Internship report submitted in partial fulfilment of the requirements for the Award of Degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

by

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Under Supervision of

Prof. Ashish Ranjan Mishra



COMPUTER SCIENCE & ENGINEERING DEPARTMENT RAJKIYA ENGINEERING COLLEGE

(An AICTE Approved Government Engineering College, Affiliated to AKTU Lucknow)

CHURK SONBHADRA, UATTAR PRADESH – 231206 November, 2019



Department of Computer Science and Engineering RAJKIYA ENGINEERING COLLEGE

Churk, Sonbhadra – 231206, Uttar Pradesh, India

CERTIFICATE

This is to certify that this internship report entitled "Currency Converter Application developed in Android by ANDROID STUDIO" submitted by Harshit Verma, Aditya Sharma and Arun kumar, in partial fulfilment of the requirements for the degree of Bachelor of Technology in Computer Science & Engineering of Rajkiya Engineering College, Sonbhadra, UP (An AICTE Approved Government Engineering College, Affiliated to Dr. A.P. J. Abdul Kalam Technical University, Lucknow) during the academic year 2019-20, is a bonafide record of work carried out under guidance and supervision of **Prof. Ashish Ranjan Mishra**. This is his own industrial training and the report is fit for submission.

Prof. Ashish Ranjan Mishra
(Coordinator)
Assistant Professor
CSED, REC Sonbhadra

Dr. Amod Kumar Jiwari (Head of Department) Associate Professor CSED, REC Sonbhadra



Certificate of Internship

Date of Issue :19-Jul-19 Reference : 19SANDLKO009

TECHNEX 19

This is to certify that Mr. /Ms.

Harshit Verma

R.E.C Sonebhadra

has participated in training program held from

6 June to 5 July of 2019 (4 Weeks)

center and completed training on

Android Application Development

We wish him her all the best for future endeavours.

Convenor, Technex' 19 IIT (BHU), Varanasi Animesh Kumar

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DECLARATION

I, HARSHIT VERMA, ADITYA SHARMA and ARUN KUMAR, hereby declare that the Internship Training and Summer Project Report, entitled "CURRENCY CONVERTER", submitted to the RAJKIYA ENGINEERING COLLEGE, SONBHADRA, UTTAR PRADESH in partial fulfilment of the requirements for the award of the Degree of Bachelor of Technology is a record of original training undergone by me during the period (Month & 2019 - 20) under the supervision and guidance of Prof. Ashish Ranjan Mishra, Department of Computer Science & Engineering, Rajkiya Engineering College, Sonbhadra and it has not formed the basis for the award of any Degree/Fellowship or other similar title to any candidate of any University.

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Place: R.E.C. Sonbhadra

Date: 16-10-2019

Name of the student

1. Harshit Verma (Roll no. 1884110027)

2. Arun Kumar (Roll no.1884110019)

3. Aditya Sharma (Roll no.1884110005)

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I would like to express my gratitude towards my parents & member of **Ei System** which is convene by **Technex'19**, **IIT(BHU)** for their kind co-operation and encouragement which help me in completion of this project. I would like to express my special gratitude and thanks to industry "**Ei Systems**" persons for giving me such attention and time.

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CHAPTER - 01INTRODUCTION

A **currency converter** is software code that is designed to convert one currency into another in order to check its corresponding value. The code is generally a part of a web site or it forms a mobile app and it is based on current market or bank exchange rates.

In order to convert one currency into another, a user enters an amount of money (e.g. '1000') and chooses the currency he/she wishes to check the monetary value of (e.g. 'United States Dollar'). After that, the user selects one, or sometimes several other currencies, he/she would like to see the result in. The application software then calculates and displays the corresponding amount of money.

Currency converters aim to maintain real-time information on current market or bank exchange rates, so that the calculated result changes whenever the value of either of the component currencies does. They do so by connecting to a database of current currency exchange rates. The frequency at which currency converters update the exchange rates they use varies: Yahoo currency converter updates its rates every day, while Convert My Money< every hour. Currency converters usually display a value that is not biased towards buying or selling. This is useful when:

- (1V)

- Estimating the value of goods or services
- Basic accounting and invoicing
- Preparing financial plans and reports

The currency conversion software calculates the rates as decimal point numbers with typically 4 decimals after the comma. Some may calculate the conversion rates with more decimals internally but only 4 are displayed. This is related to how the Forex (foreign exchange) market works, where most conversions have 4 decimal places, although some currency pairs also have 5. Most currency converters use up to 4.



CHAPTER: 02

ABSTRACT

In finance, an exchange rate between two currencies is the rate at which one currency will be exchanged for another. It is a Useful tool which gives us the value of certain amount of Indian currency to be converted into the different currency.

It is also regarded as the value of Indian currency in terms of another currency. In this project we are going to display an activity screen in which currency options are given and the conversion value is displayed in this activity.

Different countries use different currency, and there is daily variation in these currencies relative to one another. Those who transfer money from one country to another (one currency to another) must be updated with the latest currency exchange rates in the market.

Currency converter mini project is built keeping this thing in mind. It is simply a calculator-like app developed using Ajax, Java servlets web features. In this application, there is regular update about currency of every country by which it displays present currency market value and conversion rate.

Such application can be used by any user, but it is mainly useful for business, shares, and finance related areas where money transfer and currency exchange takes place on a daily basis. In this currency converter app, users are provided with an option to select the type of conversion, i.e. from "this" currency to "that" currency. This simple feature allows users to enter amount to be converted (say currency in Dollars), and display the converted amount (say currency in Euro).



CHAPTER - 03TECHONOLOGY USED

We have used windows OS configuration. And java programming language for coding of this project. Android studio version 3.5 as an integrated development environment based on jet-brain. Emulator (API 28) for testing this application.

About java language :

The most basic building block of Android development is the programming language Java.

To be a successful Android developer, you'll need to be comfortable with Java concepts like loops, lists, variables, and control structures.

About JAVA programming language

Java is one of the most popular programming languages used by software developers today, so learning its ins and outs will stand you in good stead for work (back-end development anyone?) even beyond the Android platform

Android Software Development Kit (SDK) and Android Studio :

Android Studio is the official integrated development environment for Google's Android operating system, built on Jet-Brains' IntelliJ IDEA software and designed specifically for Android development. It is available for download on Windows, mac OS and Linux based operating systems. One of the best parts about developing for Android is that the necessary tools are free and easy to obtain.

The Android SDK is available via free - of- charge download, as is Android Studio, the official integrated development environment (IDE) for Android app development. Android Studio is the main program with which developers write code and assemble their apps from various packages and libraries. The Android SDK includes sample code, software libraries, handy coding tools, and much more to help you build, test, and debug Android applications.



CHAPTER - 04

APPLICATIONS

It converts the Indian currency into 9 other currencies (e.g., Euro, Dollar, Rouble, Pound, Australian dollar, Canadian Dollar, Dinar, Yen, Bitcoin). I hope that this application will be useful to you. A good currency converter is necessary to fetch success in the trading with currencies. With the advent of internet, nothing is impossible in this world, and no information is unbelievable. Many sites are paid, while free currency converters are in galore as well. Here are listed a few benefits that you may prefer to know about online currency converters for the convenience of your use. A currency converter is also very crucial to help you with your plan for an international holiday. Whether it is a business trip or a vacation, trip span and everything else is secondary to the consideration of an online conversion tool, to get a pre-estimate of what things would cost you, while you are travelling. Things have changed from that they were 20 years back. People are now more conscious and prefer to calculate the worth of their money when they are travelling to a foreign country.

CHAPTER - 05

CONCLUSION AND FUTURE SCOPE

Currency Converter that the people are using will always find ways to get the highest possible profits out of the exchanges. To those who are going to travel, it is a wise think to check the different foreign exchange options they have beforehand. A good currency converter is necessary to fetch success in the trading with currencies. People are now more conscious and prefer to calculate the worth of their money when they are travelling to a foreign country. It can be further developed by including more currency options, and by shown currency value tables for the users. Our application is very useful for foreign exchange E-trading,

For eg. :-

(The Foreign Exchange market is the world's largest and most liquid market and operates 24 hours a day, five days a week. In one day, the average amount of FX trading totals \$5.1 trillion a day, 30 times more than the entire daily volume at the New York Stock Exchange, according to industry experts.)

In above paragraph there is discussion of \$5.1 trillion to convert currency from dollar to Indian currency our application is very useful.

REFERENCE

- **Books**
 - 1. JavaTpoint.com (for Java Language)
 - 2. Mark L. Murphy (For Android)
- Trainings
 - 1. Ei System which is convene by Technex'19, IIT(BHU)

APPENDIX

CODE OF MainActivity.java File :-

```
package com.harshit.currencyconverter;
import androidx.appcompat.app.AppCompatActivity;
import android.os.Bundle;
import android.text.TextUtils;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;
import java.text.DecimalFormat;
import java.util.Formatter;
public class MainActivity extends AppCompatActivity {
  Button euro, pound, dollar, yen, dinar, bitcoin, rubel, ausdollar, candollar;
  EditText edittext;
  TextView textview;
  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    euro=findViewById(R.id.euro);
    pound=findViewById(R.id.pound);
    dollar=findViewById(R.id.dollar);
    yen=findViewById(R.id.yen);
    dinar=findViewById(R.id.dinar);
    bitcoin=findViewById(R.id.bitcoin);
    rubel=findViewById(R.id.rubel);
    ausdollar=findViewById(R.id.ausdollar);
    candollar=findViewById(R.id.candollar);
    edittext=findViewById(R.id.editText);
    textview=findViewById(R.id.textView);
    euro.setOnClickListener(new View.OnClickListener() {
       @Override
       public void onClick(View view) {
         String z=edittext.getText().toString();
         if (TextUtils.isEmpty(z))
           edittext.setError("Empty User Input !!! \n Please enter value in Rupees");
         else
           double n.k:
           n=Double.parseDouble(z);
```

```
textview.setText(null);
       Formatter formatter=new Formatter();
       k=n*0.012;
       DecimalFormat numberFormat=new DecimalFormat("#.##");
       textview.setText(""+numberFormat.format(k));
       textview.setText(""+k+" €");
    }
  }
});
dollar.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    String z=edittext.getText().toString();
    if (TextUtils.isEmpty(z))
       edittext.setError("Empty User Input !!! \n Please enter value in Rupees");
     }
    else
     {
       double n,k;
       n=Double.parseDouble(z);
       textview.setText(null);
       Formatter formatter=new Formatter();
       k=n*0.014:
       DecimalFormat numberFormat=new DecimalFormat("#.##");
       textview.setText(""+numberFormat.format(k));
       textview.setText(""+k+" $");
    }
  }
});
pound.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    String z=edittext.getText().toString();
    if (TextUtils.isEmpty(z))
       edittext.setError("Empty User Input !!! \n Please enter value in Rupees");
     }
    else
       double n,k;
       n=Double.parseDouble(z);
       textview.setText(null);
       Formatter formatter=new Formatter();
       k=n*0.011:
       DecimalFormat numberFormat=new DecimalFormat("#.##");
       textview.setText(""+numberFormat.format(k));
       textview.setText(""+k+" £");
    }
  }
});
```

```
yen.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    String z=edittext.getText().toString();
    if (TextUtils.isEmpty(z))
       edittext.setError("Empty User Input !!! \n Please enter value in Rupees");
     }
    else
       double n,k;
       n=Double.parseDouble(z);
       textview.setText(null);
       Formatter formatter=new Formatter();
       k=n*1.49;
       DecimalFormat numberFormat=new DecimalFormat("#.##");
       textview.setText(""+numberFormat.format(k));
       textview.setText(""+k+" \mathbb{Y}");
    }
  }
});
dinar.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    String z=edittext.getText().toString();
    if (TextUtils.isEmpty(z))
       edittext.setError("Empty User Input !!! \n Please enter value in Rupees");
     }
    else
       double n,k;
       n=Double.parseDouble(z);
       textview.setText(null);
       Formatter formatter=new Formatter();
       k=n*0.0042:
       DecimalFormat numberFormat=new DecimalFormat("#.##");
       textview.setText(""+numberFormat.format(k));
       textview.setText(""+k+";... ");
     }
  }
});
bitcoin.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    String z=edittext.getText().toString();
    if (TextUtils.isEmpty(z))
       edittext.setError("Empty User Input !!! \n Please enter value in Rupees");
```

```
else
       double n,k;
       n=Double.parseDouble(z);
       textview.setText(null);
       Formatter formatter=new Formatter();
       k=n*0.0000015;
       DecimalFormat numberFormat=new DecimalFormat("#.##");
       textview.setText(""+numberFormat.format(k));
       textview.setText(""+k+" B");
    }
  }
});
rubel.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    String z=edittext.getText().toString();
    if (TextUtils.isEmpty(z))
       edittext.setError("Empty User Input !!! \n Please enter value in Rupees");
    else
       double n,k;
       n=Double.parseDouble(z);
       textview.setText(null);
       Formatter formatter=new Formatter();
       k=n*0.93;
       DecimalFormat numberFormat=new DecimalFormat("#.##");
       textview.setText(""+numberFormat.format(k));
       textview.setText(""+k+" ₽");
    }
  }
});
ausdollar.setOnClickListener(new View.OnClickListener() {
  @Override
  public void onClick(View view) {
    String z=edittext.getText().toString();
    if (TextUtils.isEmpty(z))
       edittext.setError("Empty User Input !!! \n Please enter value in Rupees");
    }
    else
       double n,k;
       n=Double.parseDouble(z);
       textview.setText(null);
       Formatter formatter=new Formatter();
       k=n*0.21;
       DecimalFormat numberFormat=new DecimalFormat("#.##");
```

```
textview.setText(""+numberFormat.format(k));
         textview.setText(""+k+" Aus$");
       }
    }
  });
  candollar.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
       String z=edittext.getText().toString();
       if (TextUtils.isEmpty(z))
         edittext.setError("Empty User Input !!! \n Please enter value in Rupees");
       }
       else
         double n,k;
         n=Double.parseDouble(z);
         textview.setText(null);
         Formatter formatter=new Formatter();
         k=n*0.019;
         DecimalFormat numberFormat=new DecimalFormat("#.##");
         textview.setText(""+numberFormat.format(k));
         textview.setText(""+k+" Can$");
    }
  });
}
```

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CODE OF MainActivity.xml File :-

```
<?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"
  android:background="#2C3335"
  tools:context=".MainActivity">
  <TextView
    android:id="@+id/textView"
    android:layout width="match parent"
    android:layout_height="120dp"
    android:layout_marginStart="8dp"
    android:layout marginTop="16dp"
    android:layout_marginEnd="8dp"
    android:background="#333945"
    android:text="0.00"
    android:textAlignment="center"
    android:textColor="#fff"
    android:textSize="30sp"
    app:layout constraintEnd toEndOf="parent"
    app:layout constraintHorizontal bias="0.0"
    app:layout_constraintStart_toStartOf="parent"
    app:layout_constraintTop_toTopOf="parent" />
  <EditText
    android:id="@+id/editText"
    android:layout_width="match_parent"
    android:layout_height="75dp"
    android:layout_marginStart="8dp"
    android:layout_marginTop="16dp"
    android:layout_marginEnd="8dp"
    android:hint=" ₹ "
    android:inputType="number"
    android:textAlignment="center"
    android:textColor="#fff"
    android:textColorHint="#fff"
    android:textSize="50sp"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintHorizontal_bias="0.0"
    app:layout constraintStart toStartOf="parent"
    app:layout_constraintTop_toBottomOf="@+id/textView"/>
```

```
<LinearLayout
   android:id="@+id/linearLayout"
   android:layout_width="match_parent"
   android:layout height="120dp"
   android:layout marginStart="8dp"
   android:layout_marginTop="16dp"
   android:layout_marginEnd="8dp"
   android:background="#535C68"
   android:orientation="horizontal"
   android:weightSum="3"
   app:layout_constraintEnd_toEndOf="parent"
   app:layout_constraintHorizontal_bias="0.0"
   app:layout constraintStart toStartOf="parent"
   app:layout_constraintTop_toBottomOf="@+id/editText">
   <Button
     android:id="@+id/euro"
     android:layout_width="match_parent"
     android:layout_height="match_parent"
     android:layout_margin="5dp"
     android:layout_weight="1"
     android:background="#2F363F"
     android:text="€"
     android:textColor="#7B8788"
     android:textSize="30sp"
     />
   <Button
     android:id="@+id/dollar"
     android:layout_width="match_parent"
     android:layout_height="match_parent"
     android:layout_margin="5dp"
     android:layout weight="1"
     android:background="#2F363F"
     android:text="$"
     android:textColor="#7B8788"
     android:textSize="30sp"
     />
   < Button
     android:id="@+id/pound"
     android:layout_width="match_parent"
     android:layout_height="match_parent"
     android:layout_margin="5dp"
     android:layout_weight="1"
     android:background="#2F363F"
     android:text="f"
     android:textColor="#7B8788"
     android:textSize="30sp"
     />
 </LinearLayout>
```

```
<LinearLayout
  android:layout width="match parent"
  android:layout_height="120dp"
  android:layout marginStart="8dp"
  android:layout marginTop="8dp"
  android:layout_marginEnd="8dp"
  android:orientation="horizontal"
  android:background="#535C68"
  app:layout_constraintEnd_toEndOf="parent"
  app:layout_constraintHorizontal_bias="0.0"
  app:layout_constraintStart_toStartOf="parent"
  android:weightSum="3"
  app:layout constraintTop toBottomOf="@+id/linearLayout2">
  < Button
    android:id="@+id/rubel"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_margin="5dp"
    android:layout_weight="1"
    android:background="#2F363F"
    android:text="₽"
    android:textColor="#7B8788"
    android:textSize="30sp"
    />
  <Button
    android:id="@+id/ausdollar"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_margin="5dp"
    android:layout_weight="1"
    android:background="#2F363F"
    android:text="AUS$"
    android:textColor="#7B8788"
    android:textSize="30sp"
    />
  <Button
    android:id="@+id/candollar"
    android:layout_width="match_parent"
    android:layout height="match parent"
    android:layout_margin="5dp"
    android:layout weight="1"
    android:background="#2F363F"
    android:text="Can$"
    android:textColor="#7B8788"
    android:textSize="30sp"
    />
</LinearLayout>
<LinearLavout
  android:id="@+id/linearLayout2"
  android:layout width="match parent"
  android:layout height="120dp"
```

```
android:layout_marginStart="8dp"
    android:layout_marginTop="8dp"
    android:layout marginEnd="8dp"
    android:orientation="horizontal"
    android:background="#535C68"
    app:layout_constraintEnd_toEndOf="parent"
    app:layout_constraintStart_toStartOf="parent"
    android:weightSum="3"
    app:layout_constraintTop_toBottomOf="@+id/linearLayout">
    <Button
      android:id="@+id/yen"
      android:layout_width="match_parent"
      android:layout_height="match_parent"
      android:layout margin="5dp"
      android:layout_weight="1"
      android:background="#2F363F"
      android:text="\Y"
      android:textColor="#7B8788"
      android:textSize="30sp"
      />
<Button
    android:id="@+id/dinar"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout_margin="5dp"
    android:layout_weight="1"
    android:background="#2F363F"
    android:text="د.ع"
    android:textColor="#7B8788"
    android:textSize="30sp"
 />
<Button
    android:id="@+id/bitcoin"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:layout margin="5dp"
    android:layout_weight="1"
    android:background="#2F363F"
    android:text="BTC"
    android:textColor="#7B8788"
    android:textSize="30sp"
    />
  </LinearLayout>
</androidx.constraintlayout.widget.ConstraintLayout>
```





Code For EditText:





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```
euro=findViewById(R.id.euro);
       pound=findViewById(R.id.pound);
25
       dollar=findViewById(R.id.dollar);
26
       yen=findViewById(R.id.yen);
       dinar=findViewById(R.id.dinar);
27
28
       bitcoin=findViewById(R.id.bitcoin);
29
       rubel=findViewById(R.id.rubel);
30
       ausdollar=findViewById(R.id.ausdollar);
       candollar=findViewById(R.id.candollar);
31
32
       edittext=findViewById(R.id.editText);
33
       textview=findViewById(R.id.textView);
34 1
       euro.setOnClickListener((view) → {
37
                String z=edittext.getText().toString();
38
                if (TextUtils.isEmpty(z))
39
                    edittext.setError("Empty User Input !!! \n Please enter value in Rupees");
40
                else
43
                    double n,k;
45
                    n=Double.parseDouble(z);
                    textview.setText(null);
                    Formatter formatter=new Formatter();
48
                    k=n*0.012;
                    DecimalFormat numberFormat=new DecimalFormat( pattern: "#.##");
                    textview.setText(""+numberFormat.format(k));
                    textview.setText(""+k+" €");
51
52
53
```

