VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI-**590018**

"Mobile Application Development"

(Subject Code: 18CSMP68)

"CIPHER- ENCRYPTION & DECRYPTION"

Submitted in partial fulfillment for 6th semester for the Award of Degree of

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE AND ENGINEERING

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CERTIFICATE

This is to certify that the **Mobile Application Development (18CSMP68)** entitled **"CIPHER-ENCRYPTION & DECRYPTION"** is a bonafide work carried out by ANANYA R**,** **bearing USN** 1EP19IS003**,** ASHA.K**,** **bearing USN** 1EP19IS010**,** ASHWAQULLA BAIG, **bearing USN** 1EP19IS011, BAL KISHAN REDDY **bearing USN** 1EP19IS013, in partial fulfilment of 6th semester for the award of, **Bachelor of Engineering in Information Science and Engineering** under **Visvesvaraya Technological University, Belagavi** during the year **2021-2022**. This report has been approved as it satisfies the academic requirements in respect of **Mobile Application Development** Mini Project work prescribed for the award of the said degree.

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ABSTRACT

The main objective of creating the project “Cipher- Encryption & Decryption” is to create an offline cryptography platform that allows any user to encrypt and decrypt any text offline based on title and subject. The layout for each page is designed in such a way that a user can easily interact with the particular page. The “Cipher- Encryption & Decryption” Application provides users with offline cryptography of a particular text through a offline-based application. The user can come to application Home page, where a user can see two buttons for specific Encryption and Decryption processes to take place. The user can proceed further for encoding the text by entering into the encrypter page and perform the desired operation. Using this application, the user can encode or decode any form of text.

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CHAPTER 1

INTRODUCTION

1.1 Problem definition

In a world like this, where technology is increasing its pace in every sector, and data has become a medium for welfare and development, with the increasing population there is an increasing demand for data, to store large data, we require data network storages, and these require layers of protection. According to the mentioned facts, we require our data to be safe and secure. Thus, the process of cryptography is necessary to handle these data accordingly at topmost priority. In briefly, this project describes about the two techniques for handling the data.

1.2 Purpose

With the offline Cryptography application, users can easily retrieve a particular information or code into desired form by using specific buttons. This offline cryptography application is timesaving, cost-reducing, occupies minimum space and bring convenience to everyone, but also to promote the development of the logistics industry, close ties between countries, more frequent exchanges, the economy tends to globalization, which promote the future development of cryptography, has some practical significance.

CHAPTER 2

REQUIREMENT SPECIFICATIONS

2.1 Hardware Requirements:

Processor Brand	: Intel
Processor Type	: Intel Core i5
Processor Speed	: 4 GHz
Processor Count	: 1
RAM Size	: 8 GB
Memory Technology	: DDR3
Computer Memory Type	: DDR3 SDRAM
Hard Drive Size	:1GB

2.2 Software Requirements:

Operating system	: Windows 11
Front end	: Android Studio Application
Browser	: Google Chrome
Connectivity	: Internet

CHAPTER 3

TOOL DESCRIPTION

3.1 OVERVIEW OF ANDROID STUDIO APPLICATION:

Android Studio is the official Integrated Development Environment (IDE) for Android app development, based on IntelliJ IDEA. On top of IntelliJ's powerful code editor and developer tools, Android Studio offers even more features that enhance your productivity when building Android apps, such as:

* A flexible Gradle-based build system
* A fast and feature-rich emulator
* A unified environment where you can develop for all Android devices
* Apply Changes to push code and resource changes to your running app without restarting your app
* Code templates and GitHub integration to help you build common app features and import sample code
* Extensive testing tools and frameworks
* Lint tools to catch performance, usability, version compatibility, and other problems
* C++ and NDK support
* Built-in support for Google Cloud Platform, making it easy to integrate Google Cloud Messaging and App Engine

3.2 IDLE(JAVA)

Java IDE (Integrated Development Environment) is a software application that enables users to write and debug Java programs more easily. Most IDEs have features such as syntax highlighting and code completion that helps users to code more easily. Usually, Java IDEs include a code editor, a compiler, a debugger, and an interpreter that the developer may access via a single graphical user interface. Java IDEs also provide language-specific elements such as Maven, Ant building tools, Junit, and TestNG for testing.

The Java IDE or Integrated Development Environment provides considerable support for the application development process. Through using them, we can save time and effort and set up a standard development process for the team or company. Eclipse, NetBeans, IntelliJ IDEA, and many other IDE's are most popular in the Java IDE's that can be used according to our requirements. In this topic, we will discuss the best Java IDE's that are used by the users.

CHAPTER 4

IMPLEMENTATION

4.1 Sample code

activity_main.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="@drawable/cipher"
    android:orientation="vertical"
    tools:context=".MainActivity">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_margin="5dp"
        android:orientation="vertical">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:textColor="#FFFFFF"
            android:textSize="40dp"
            android:textStyle="bold" />
     </LinearLayout>
```

```
<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_centerInParent="true"
    android:layout_gravity="center"
    android:layout_marginTop="30dp"
    android:orientation="vertical">

    <Button
        android:id="@+id/btVar1"
        android:layout_width="280dp"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_margin="50dp"
        android:background="@drawable/round_btn"
        android:text="Encryption"
        android:textColor="#FFFFFF"
        android:textSize="25dp"
        android:textStyle="bold" />

    <Button
        android:id="@+id/btVar2"
        android:layout_width="280dp"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_margin="50dp"
        android:background="@drawable/round_btn"
        android:text="Decryption"
        android:textColor="#FFFFFF"
        android:textSize="25dp"
        android:textStyle="bold" />
    </LinearLayout>
</RelativeLayout>
```

activity_encoder.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
xmlns:android="http://schemas.android.com/apk/res/android"
xmlns:tools="http://schemas.android.com/tools"
android:layout_width="match_parent"
android:layout_height="match_parent"
android:background="@drawable/cryptoui"
android:orientation="vertical"
tools:context=".Encoder">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginStart="5dp"
        android:layout_marginTop="5dp"
        android:layout_marginEnd="5dp"
        android:layout_marginBottom="5dp"
        android:orientation="vertical">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:layout_marginTop="55dp"
            android:text="Encrypter"
            android:textColor="#006F91"
            android:textSize="40dp"
            android:textStyle="bold" />
    </LinearLayout>
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_centerVertical="true"
        android:layout_marginStart="-200dp"
        android:layout_marginTop="-200dp"
        android:layout_marginEnd="-200dp"
        android:layout_marginBottom="-200dp"
        android:orientation="vertical">

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:layout_marginTop="5dp"
            android:orientation="vertical">
        </LinearLayout>

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_marginLeft="15dp"
            android:layout_marginTop="150dp"
            android:layout_marginRight="15dp"
            android:orientation="vertical">

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:layout_gravity="center"
                android:layout_marginTop="5dp"
                android:text="Enter Your Text Here:"
                android:textColor="#FFFFFF"
                android:textSize="20dp"
                android:textStyle="bold" />
            <EditText
                android:id="@+id/etVar1"
                android:layout_width="360dp"
                android:layout_height="70dp"
                android:layout_gravity="center"
                android:layout_marginTop="5dp"
                android:background="@drawable/field_round"
                android:textColor="#000000"
                android:textSize="20sp" />

            <Button
                android:id="@+id/btVar1"
                android:layout_width="230dp"
                android:layout_height="wrap_content"
                android:layout_gravity="center"
                android:layout_marginTop="20dp"
                android:background="@drawable/round_btn"
                android:onClick="enc"
                android:text="Encrypt"
                android:textColor="#FFFFFF"
                android:textSize="20dp"
                android:textStyle="bold" />
        </LinearLayout>

        <LinearLayout
            android:layout_width="match_parent"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:layout_marginTop="-40dp"
            android:orientation="vertical">
        </LinearLayout>

        <LinearLayout
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:layout_marginLeft="15dp"
            android:layout_marginTop="100dp"
            android:layout_marginRight="15dp"
            android:background="@drawable/section"
            android:orientation="vertical">

            <TextView
                android:layout_width="wrap_content"
                android:layout_height="wrap_content"
                android:layout_gravity="center"
                android:layout_marginTop="5dp"
                android:text="Your encrypted text here : "
                android:textColor="#006F91"
                android:textSize="20dp"
                android:textStyle="bold" />

            <TextView
                android:id="@+id/tvVar1"
                android:layout_width="260dp"
                android:layout_height="100dp"
```

```
            android:layout_gravity="center"
            android:layout_marginTop="5dp"
            android:background="@drawable/output"
            android:textColor="#ffffff"
            android:textSize="22dp" />

        <Button
            android:id="@+id/btVar3"
            android:layout_width="230dp"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:layout_marginTop="20dp"
            android:background="@drawable/round_btn"
            android:onClick="cp2"
            android:text="Copy Text"
            android:textColor="#FFFFFF"
            android:textSize="20sp"
            android:textStyle="bold" />
    </LinearLayout>
  </LinearLayout>
</RelativeLayout>
```

activity_decoder.xml:

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
  xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:tools="http://schemas.android.com/tools"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:background="@drawable/cryptoui"
  android:orientation="vertical"
```

```
tools:context=".Decoder">

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="5dp"
    android:orientation="vertical">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="55dp"
        android:text="Decrypter"
        android:textColor="#006F91"
        android:textSize="40dp"
        android:textStyle="bold" />
</LinearLayout>

<LinearLayout
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_centerInParent="true"
    android:layout_marginStart="5dp"
    android:layout_marginTop="5dp"
    android:layout_marginEnd="5dp"
    android:layout_marginBottom="5dp"
    android:orientation="vertical">

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="5dp"
        android:orientation="vertical">
    </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginLeft="15dp"
        android:layout_marginTop="150dp"
        android:layout_marginRight="15dp"
        android:orientation="vertical">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:layout_marginTop="5dp"
            android:text="Enter Your Text Here:"
            android:textColor="#FFFFFF"
            android:textSize="20sp"
            android:textStyle="bold" />

        <EditText
            android:id="@+id/etVar1"
            android:layout_width="360dp"
            android:layout_height="70dp"
            android:layout_gravity="center"
            android:layout_marginTop="5dp"
            android:background="@drawable/field_round"
            android:textColor="#000000"
            android:textSize="20sp" />

        <Button
            android:id="@+id/btVar1"
            android:layout_width="230dp"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:layout_marginTop="20dp"
            android:background="@drawable/round_btn"
            android:onClick="dec"
            android:text="Decrypt"
            android:textColor="#FFFFFF"
            android:textSize="20sp"
            android:textStyle="bold" />
    </LinearLayout>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:layout_marginTop="-40dp"
        android:orientation="vertical">
    </LinearLayout>

    <LinearLayout
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:background="@drawable/section"
        android:layout_marginLeft="15dp"
```

```
android:layout_marginTop="100dp"
android:layout_marginRight="15dp"
android:orientation="vertical">

<TextView
   android:layout_width="wrap_content"
   android:layout_height="wrap_content"
   android:layout_gravity="center"
   android:layout_marginTop="5dp"
   android:text="Your decrypted text here : "
   android:textColor="#006F91"
   android:textSize="20sp"
   android:textStyle="bold" />

<TextView
   android:id="@+id/tvVar2"
   android:layout_width="260dp"
   android:layout_height="100dp"
   android:layout_gravity="center"
   android:layout_marginTop="5dp"
   android:background="@drawable/output"
   android:textColor="#ffffff"
   android:textSize="22dp" />

<Button
   android:id="@+id/btVar2"
   android:layout_width="230dp"
   android:layout_height="wrap_content"
   android:layout_gravity="center"
   android:layout_marginTop="20dp"
   android:background="@drawable/round_btn"
```

```
                android:onClick="cpl"
                android:text="Copy Text"
                android:textColor="#FFFFFF"
                android:textSize="20sp"
                android:textStyle="bold" />

            </LinearLayout>
        </LinearLayout>
    </RelativeLayout>
```

Main_Activity.java:

```
package com.example.cipher;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

    Button enc, dec;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        // link both the button variables with its id
        enc = findViewById(R.id.btVar1);
        dec = findViewById(R.id.btVar2);

        // onClick function for encryption
        enc.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                // Intent function to move to another activity
                Intent intent = new Intent(MainActivity.this, Encoder.class);
                startActivity(intent);
            }
        });

        // onClick function for decryption
        dec.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                // Intent function to move to another activity
                Intent intent = new Intent (MainActivity.this, Decoder.Class);
                startActivity(intent);
            }
        });
    }
}
```

Encode.java:

```
package com.example.cipher;

public class Encode {
    public static String encode (String s) {
        // create a string to add in the initial
        // binary code for extra security
```

```
String ini = "11111111";
int cu = 0;

// create an array
int arr[] = new int[11111111];

// iterate through the string
for (int i = 0; i < s.length(); i++) {
    // put the ascii value of
    // each character in the array
    arr[i] = (int) s.charAt(i);
    cu++;
}
String res = "";

// create another array
int bin[] = new int[111];
int idx = 0;

// run a loop of the size of string
for (int i1 = 0; i1 < cu; i1++) {

    // get the ascii value at position
    // i1 from the first array
    int temp = arr[i1];

    // run the second nested loop of same size
    // and set 0 value in the second array
    for (int j = 0; j < cu; j++) bin[j] = 0;
    idx = 0;
    // run a while for temp > 0
    while (temp > 0) {
        // store the temp module
        // of 2 in the 2nd array
        bin[idx++] = temp % 2;
        temp = temp / 2;
    }
    String dig = "";
    String temps;

    // run a loop of size 7
    for (int j = 0; j < 7; j++) {

        // convert the integer to string
        temps = Integer.toString(bin[j]);

        // add the string using
        // concatenation function
        dig = dig.concat(temps);
    }
    String revs = "";

    // reverse the string
    for (int j = dig.length() - 1; j >= 0; j--) {
        char ca = dig.charAt(j);
        revs = revs.concat(String.valueOf(ca));
    }
    res = res.concat(revs);
}
// add the extra string to the binary code
res = ini.concat(res);
```

```
        // return the encrypted code
        return res;
    }
}
```

Decode.java:

```
package com.example.cipher;

import android.util.Log;

public class Decode {
    public static String decode(String s) {
        String invalid = "Invalid Code";

        // create the same initial
        // string as in encode class
        String ini = "11111111";
        Boolean flag = true;

        // run a loop of size 8
        for (int i = 0; i < 8; i++) {
            // check if the initial value is same
            if (ini.charAt(i) != s.charAt(i)) {
                flag = false;
                break;
            }
        }
        String val = "";

        // reverse the encrypted code
```

```
for (int i = 8; i < s.length(); i++) {
    char ch = s.charAt(i);
    val = val.concat(String.valueOf(ch));
}

// create a 2 dimensional array
int arr[][] = new int[11101][8];
int ind1 = -1;
int ind2 = 0;

// run a loop of size of the encrypted code
for (int i = 0; i < val.length(); i++) {

    // check if the position of the
    // string if divisible by 7
    if (i % 7 == 0) {
        // start the value in other
        // column of the 2D array
        ind1++;
        ind2 = 0;
        char ch = val.charAt(i);
        arr[ind1][ind2] = ch - '0';
        ind2++;
    } else {
        // otherwise store the value
        // in the same column
        char ch = val.charAt(i);
        arr[ind1][ind2] = ch - '0';
        ind2++;
    }
}
```

```
// create an array
int num[] = new int[11111];
int nind = 0;
int tem = 0;
int cu = 0;

// run a loop of size of the column
for (int i = 0; i <= ind1; i++) {
    cu = 0;
    tem = 0;
    // convert binary to decimal and add them
    // from each column and store in the array
    for (int j = 6; j >= 0; j--) {
        int tem1 = (int) Math.pow(2, cu);
        tem += (arr[i][j] * tem1);
        cu++;
    }
    num[nind++] = tem;
}
String ret = "";
char ch;
// convert the decimal ascii number to its
// char value and add them to form a decrypted
// string using conception function
for (int i = 0; i < nind; i++) {
    ch = (char) num[i];
    ret = ret.concat(String.valueOf(ch));
}
Log.e("dec", "text 11 - " + ret);

// check if the encrypted code was
```

```
        // generated for this algorithm
        if (val.length() % 7 == 0 && flag == true) {
            // return the decrypted code
            return ret;
        } else {
            // otherwise return an invalid message
            return invalid;
        }
    }
}
```

Encoder.java:

```
package com.example.cipher;

import android.content.ClipData;
        import android.content.ClipboardManager;
        import android.content.Context;
        import android.os.Bundle;
        import android.view.View;
        import android.widget.EditText;
        import android.widget.TextView;
        import android.widget.Toast;

        import androidx.appcompat.app.AppCompatActivity;

public class Encoder extends AppCompatActivity {

    EditText etenc;
    TextView enctv;
    ClipboardManager cpb;
```

```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_encoder);

    // link the edittext and textview with its id
    etenc = findViewById(R.id.etVar1);
    enctv = findViewById(R.id.tvVar1);

    // create a clipboard manager variable to copy text
    cpb = (ClipboardManager) getSystemService(Context.CLIPBOARD_SERVICE);
}

// onClick function of encrypt button
public void enc(View view) {
    // get text from edittext
    String temp = etenc.getText().toString();

    // pass the string to the encryption
    // algorithm and get the encrypted code
    String rv = Encode.encode(temp);

    // set the code to the edit text
    enctv.setText(rv);
}

// onClick function of copy text button
public void cp2(View view) {
    // get the string from the textview and trim all spaces
    String data = enctv.getText().toString().trim();
```

```
        // check if the textview is not empty
        if (!data.isEmpty()) {

            // copy the text in the clip board
            ClipData temp = ClipData.newPlainText("text", data);
            cpb.setPrimaryClip(temp);

            // display message that the text has been copied
            Toast.makeText(this, "Copied", Toast.LENGTH_SHORT).show();
        }
    }
}
```

Decoder.java:

```
package com.example.cipher;

import android.content.ClipData;
import android.content.ClipboardManager;
import android.content.Context;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.EditText;
import android.widget.TextView;
import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class Decoder extends AppCompatActivity {

    EditText etdec;
    TextView dectv;
```

```
ClipboardManager cplboard;

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_decoder);

    // link the edittext and textview with its id
    etdec = findViewById(R.id.etVar1);
    dectv = findViewById(R.id.tvVar2);

    // create a clipboard manager variable to copy text
    cplboard = (ClipboardManager) getSystemService(Context.CLIPBOARD_SERVICE);
}

// onClick function of encrypt button
public void dec(View view) {
    // get code from edittext
    String temp = etdec.getText().toString();
    Log.e("dec", "text - " + temp);

    // pass the string to the decryption algorithm
    // and get the decrypted text
    String rv = Decode.decode(temp);

    // set the text to the edit text for display
    dectv.setText(rv);
    Log.e("dec", "text - " + rv);
}

// onClick function of copy text button
```

```
    public void cpl(View view) {

        // get the string from the textview and trim all spaces
        String data = dectv.getText().toString().trim();

        // check if the textview is not empty
        if (!data.isEmpty()) {

            // copy the text in the clip board
            ClipData temp = ClipData.newPlainText("text", data);

            // display message that the text has been copied
            Toast.makeText(this, "Copied", Toast.LENGTH_SHORT).show();
        }
    }
}
```

CHAPTER 5

TESTING

System testing is the stage of implementation, which is aimed at ensuring that the system works accurately and efficiently before live operation commences. Testing is the process of executing the program with the intent of finding errors and missing operations and a complete verification to determine whetherthe objectives are met, and the user requirements are satisfied. The aim is quality assurance.

5.1 Unit Testing

The software units in a system are modules and routines that are assembled and integrated to perform a specific function. Unit testing focuses first on modules, independently of one another, to locate errors. This enables, to detect errors in coding and logic that are contained within each module. This testing includes entering data and ascertaining if the value matches to the type and size supported by python. The various controls are tested to ensure that each performs its action as required.

5.2 Integration Testing

Data can be lost across any interface, one module can have an adverse effect on another, sub functions when combined, may not produce the desired major functions. Integration testing is a systematic testing to discover errors associated within the interface. The objective is to take unit tested modules and build a program structure. All the modules are combined and tested as a whole. Here the Server module and Client module options are integrated and tested. This testing provides the assurance that the application is well integrated functional unit with smooth transition of data.

5.3 User Acceptance Testing

User acceptance of a system is the key factor for the success of any system. The system under consideration is tested for user acceptance by constantly keeping in touch with the system users at time of developing and making changes whenever required.

5.4 TEST CASES

Table 5.4: Test Cases

Test no	Test name	Input	Actual output	Expected output	Status
1	Encryption	Input the text and click on Encryption button.	The text getting converted to Binary digits is Successful.	The text getting converted to Binary digits is Successful.	Pass
2	Decryption	Input the text and click on Decryption button.	The text getting converted to normal text is Successful	The text getting converted to normal text is Successful	Pass
3	Encode	Click on the Encode button for Encryption.	The text successfully gets encoded	The text successfully gets encoded	Pass
4	Decode	Click on the Decode button for Decryption.	The Binary text successfully gets decoded	The Binary text successfully gets decoded	Pass
5	Copy Text	Click on the copy button to copy the text in the output field.	The output in the field successfully gets copied.	The output in the field successfully gets copied.	Pass

CHAPTER 6

SNAPSHOTS

Home Page: This is the main layout for the Application, which provides a user interface for the processes- Encryption & Decryption. There are two clickable buttons provided for each process- Encryption & Decryption

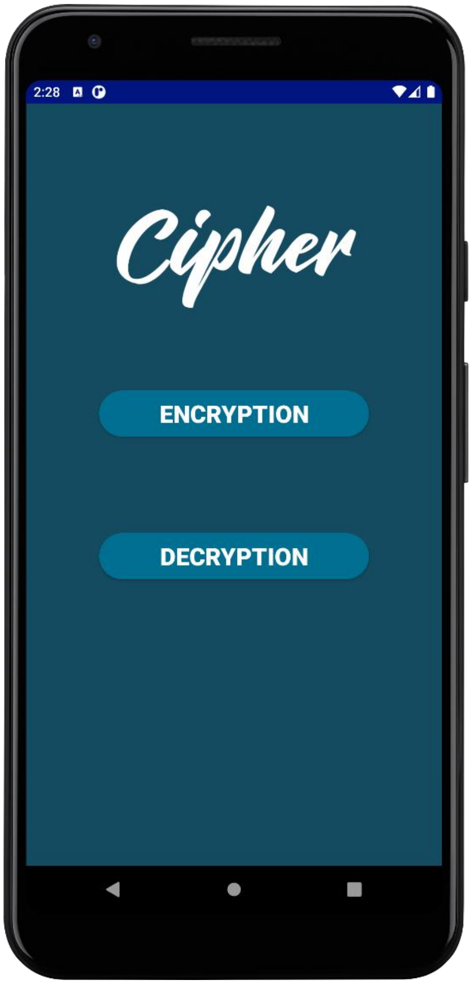

Fig6.1 Home Page

Encrypter: This layout in the Application, provides an user interface for a user to interact with the Encryption process of a normal text. The required text is entered in the text field and after that the Encrypt button is clicked on to encode the input text, we copy the output text by using copy button and move on to Decrypter page.

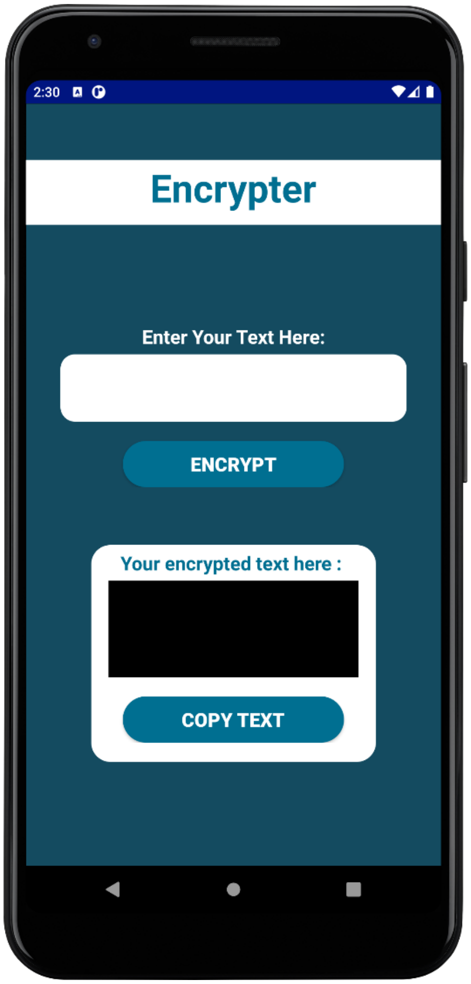

Fig6.2 Encrypter

Decrypter: This layout in the Application, provides a user interface for a user to interact with the Decryption process of a Binary text. This text is copied through copy button from output field and entered in the text field and after that the Dencrypt button is clicked on to decode the input text.

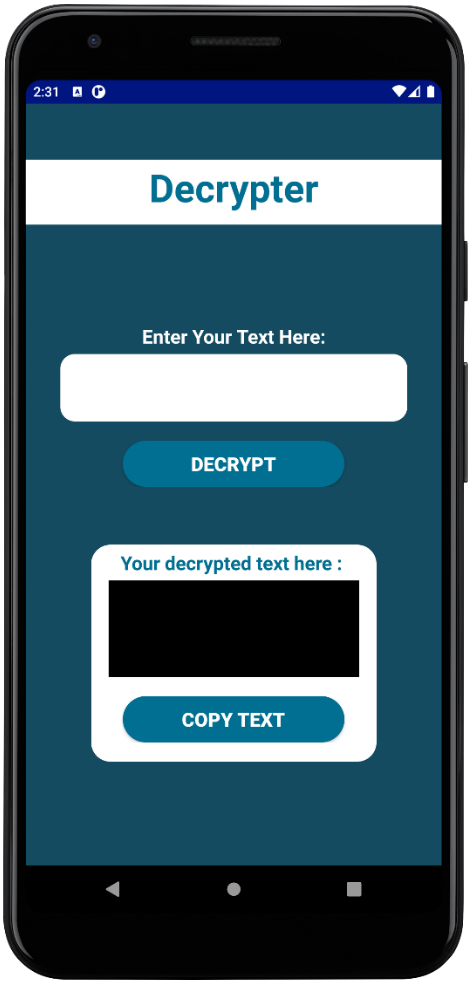

Fig6.3 Decrypter

CONCLUSION

Cryptography (Cipher- Encryption & Decryption) Application is an attempt to overcome the present issues and complications of the securing the data. Currently, many users want to have their message be encrypted for any transmission happening through them and in return to be decrypted for the receiver to read it. Through our application, we provide an easy way of encoding a message into the binary code and using the same binary code to decode the original message. User can be able to do encrypt and decrypt any information by using this application, developed with less complicated algorithm. Therefore, this kind of applications must be facilitated further for better and even more advanced implementation of cryptography.

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