import java.math.BigInteger;

import java.security.MessageDigest;

import java.security.NoSuchAlgorithmException;

import java.util.Scanner;

public class sha

{

public static String sha\_encryption(String input, int choice)

{

try

{

String text;

MessageDigest md=MessageDigest.getInstance("SHA-1");

byte[] messageDigest=md.digest(input.getBytes());

BigInteger num=new BigInteger(1, messageDigest);

if(choice==1)

text=num.toString(2);

else

text=num.toString(16);

while(text.length()<32)

text="0"+text;

return text;

}

catch (NoSuchAlgorithmException e)

{

throw new RuntimeException(e);

}

}

public static void main(String args[]) throws NoSuchAlgorithmException

{

String str, s;

int choice;

Scanner sc=new Scanner(System.in);

System.out.print("Enter the string : ");

str=sc.nextLine();

System.out.println("MENU : ");

System.out.println("1)Binary");

System.out.println("2)Hexadecimal");

System.out.print("Enter your choice : ");

choice=sc.nextInt();

if(choice==1)

s="Binary";

else

s="Hexadecimal";

System.out.println("Original : "+str);

System.out.println(s + " : "+sha\_encryption(str, choice));

}

}

OUTPUT:

1)Binary

Enter the string : Maitreya

MENU :

1)Binary

2)Hexadecimal

Enter your choice : 1

Original : Maitreya

Binary : 1000001011001101100110010110001010100101001101011100111011110010101100100011011001000011111110101101111111111111111000110001011010010010010100101101101001001010

2)Hexadecimal

Enter the string : Maitreya

MENU :

1)Binary

2)Hexadecimal

Enter your choice : 2

Original : Maitreya

Hexadecimal : 82cd9962a535cef2b23643fadfffe3169252da4a