

Experiment 9

Code:

```

import java.lang.*;
import java.io.*;
import java.util.*;

class dsss {

    public static void main(String args[]) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter input string: "); String
        inputString = scanner.next();
        String barcaCode = "10110111000";

        // Encryption
        String eOutput = "";
        for(int i=0; i<inputString.length(); i++) {
            String a = getString(inputString.charAt(i));
            eOutput = eOutput + getEXOR(a, barcaCode);
        }
        System.out.println("\nEncrypted message: "+eOutput+"\n");

        // Decryption
        ArrayList<String> enStrings = new ArrayList();
        for(int i=0; i<eOutput.length(); i=i+11) {
            enStrings.add(eOutput.substring(i,i+11));
        }
        String dOutput = "";
        for(int i=0; i<enStrings.size(); i++) {
            String a = getEXOR(enStrings.get(i),barcaCode);
            if(getNoOfOnes(a)>7) {
                dOutput = dOutput + "1";
            } else if(getNoOfOnes(a)<3) {
                dOutput = dOutput + "0";
            }
        }
        System.out.println("Decrypted message: "+dOutput+"\n\n"); }

    // Method for getting 11111111111 or 00000000000
    public static String getString(char a) {
        if(a=='1') {
            return "11111111111";
        } else {
            return "00000000000"; }
    }

    // Method for performing ex-or

```

```

        public static String getEXOR(String x, String y) {

            String z = "";
            for(int i = 0; i<x.length(); i++) {
                if((x.charAt(i)=='1' && y.charAt(i)=='1') || (x.charAt(i)=='0' &&
y.charAt(i)=='0')) {
                    z = z + "0";
                } else if ((x.charAt(i)=='0' && y.charAt(i)=='1') || (x.charAt(i)=='1' &&
y.charAt(i)=='0')) {
                    z = z + "1";
                }
            }
            return z;
        }
    }
    /* Method for getting number of one's in string */
    public static int getNoOfOnes(String a) {
        int count = 0;
        for(int i=0; i<a.length();i++) {
            if(a.charAt(i) == '1') {
                count = count + 1;
            }
        }
        return count;
    }
}

```

Output 01:

PS D:\Engineering\sem 6\Ishita_Sem_6\MCC\Experiments\DSSS> java dsss

Enter input string: 100101

Encrypted message:

01001000111101101110001011011100001001000111101101110000100100011
1

Decrypted message: 100101

Output 02:

PS D:\Engineering\sem 6\Ishita_Sem_6\MCC\Experiments\DSSS> java dsss

Enter input string: 1110101

Encrypted message:

0100100011110100100011101001000111101101110000100100011110110111000010010001
1 1

Decrypted message: 1110101