**PRACTICAL NO-1 ROLL NO-05,46**

**(A)Caesar Cipher :**

**CODE :**

import java.io.\*;

import java.util.\*;

class caesercipher1{

public static StringBuffer encrypt(String text,int s){

StringBuffer sb=new StringBuffer();

for(int i=0;i<text.length();i++){

if(Character.isUpperCase(text.charAt(i))){

char ch=(char)(((int)text.charAt(i)+s-65)%26+65);

sb.append(ch);

}

else if(Character.isLowerCase(text.charAt(i))){

char ch=(char)(((int)text.charAt(i)+s-97)%26+97);

sb.append(ch);

}

else{

System.out.println("Error");

}

}

return sb;

}

public static void main(String args[]) throws Exception{

InputStreamReader is=new InputStreamReader(System.in);

BufferedReader sc=new BufferedReader(is);

System.out.println("Enter the text");

String text=sc.readLine();

System.out.println("Enter the key");

int s=Integer.parseInt(sc.readLine());

System.out.println("Cipher is " + encrypt(text,s));

}

}

**OUTPUT :**

C:\Users\abhijit>G:

G:\>cd "BSC (COMPUTER SCIENCE)"

G:\BSC (COMPUTER SCIENCE)>cd TYCS

G:\BSC (COMPUTER SCIENCE)\TYCS>cd INS

G:\BSC (COMPUTER SCIENCE)\TYCS\INS>cd ins

G:\BSC (COMPUTER SCIENCE)\TYCS\INS\ins>javac caesercipher1.java

G:\BSC (COMPUTER SCIENCE)\TYCS\INS\ins>java caesercipher1

Enter the text

Ashitosh

Enter the key

3

Cipher is Dvklwrvk

**(B)Monoalphabetic Cipher :**

**CODE :**

import java.io.\*;

import java.util.\*;

class monoalphabetic{

public static String doEncrypt(String PT,String key)

{

int idx;

char c;

StringBuffer sb=new StringBuffer(PT);

for(int i=0;i<sb.length();i++){

idx=sb.charAt(i)-65;

c=key.charAt(idx);

sb.setCharAt(i,c);

}

return new String(sb);

}

public static String doDecrypt(String PT,String key)

{

int idx;

char c;

StringBuffer sb=new StringBuffer(PT);

for(int i=0;i<sb.length();i++){

c=sb.charAt(i);

idx=getIndex(c,key);

c=(char)(idx+65);

sb.setCharAt(i,c);

}

return new String(sb);

}

public static int getIndex(char c,String key){

int idx=0;

for(int i=0;i<key.length();i++){

if(key.charAt(i)==c){

idx=i;

}

}

return idx;

}

public static void main(String args[]) throws Exception{

InputStreamReader is=new InputStreamReader(System.in);

BufferedReader sc=new BufferedReader(is);

System.out.println("Enter the text");

String text=sc.readLine().toUpperCase();

String key="QWERTYUIOPASDFGHJKLZXCVBNM";

System.out.println("Cipher is " + doEncrypt(text,key));

System.out.println("After Decrytion : "+doDecrypt(doEncrypt(text,key),key));

}

}

**OUTPUT :**

C:\Users\ashitosh>CD G:

G:\

C:\Users\ashitosh>G:

G:\>cd "BSC (COMPUTER SCIENCE)"

G:\BSC (COMPUTER SCIENCE)>cd TYCS

G:\BSC (COMPUTER SCIENCE)\TYCS>cd INS

G:\BSC (COMPUTER SCIENCE)\TYCS\INS>cd ins

G:\BSC (COMPUTER SCIENCE)\TYCS\INS\ins>javac monoalphabetic.java

G:\BSC (COMPUTER SCIENCE)\TYCS\INS\ins>java monoalphabetic

Enter the text

Harsh

Cipher is IQKLI