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**CLASS: BECSEII**

**ROLL:63**

**AIM: WRITE A JAVA PROGRAM TO IMPLEMENT CAESAR CIPHER**

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import java.util.\*;

class CaesarCipher {

Scanner sc = new Scanner(System.in);

char alphabets[] = new char[26];

int i;

char j;

String input = new String();

int key;

char cipherText[] = new char[200];

char plainText[] = new char[200];

String strcipherText="";

CaesarCipher(){

for(i=0,j='A';i<26;i++,j++){

alphabets[i] = j;

}

}

void getInputs(){

System.out.println("\nEnter the Input String To Be Encrypted");

input = sc.nextLine();

input = input.toUpperCase();

// System.out.println(input);

}

void getKey(){

System.out.println("\nEnter the Key");

key = sc.nextInt();

// System.out.print(key);

}

int getIndex(char ch){

int temp = (int)ch;

int tmp=0;

int temp\_integer = 64;

if(temp<=90 & temp>=65)

{

tmp = temp - temp\_integer - 1;

return tmp;

}

return 0;

}

void cipher(){

int max = 25;

int i;

int index;

int replacement\_index;

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

if(Character.isLetter(input.charAt(i))){

index = getIndex(input.charAt(i));

if( (index+key) > max){

replacement\_index = (index+key) - max - 1;

cipherText[i] = alphabets[replacement\_index];

}

else{

cipherText[i] = alphabets[index + key];

}

}

else{

cipherText[i] = input.charAt(i);

}

}

System.out.print(input + " is Encrypted to ");

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

System.out.print(cipherText[i]);

}

System.out.println();

}

void decrypt(){

int min = 0;

int i;

int replacement\_index;

int index;

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

strcipherText += cipherText[i];

}

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

if(Character.isLetter(strcipherText.charAt(i))){

index = getIndex(strcipherText.charAt(i));

if( (index-key) < min){

replacement\_index = (index+key) - 1;

plainText[i] = alphabets[replacement\_index];

}

else{

plainText[i] = alphabets[index - key];

}

}

else{

plainText[i] = strcipherText.charAt(i);

}

}

System.out.print(strcipherText.trim() + " is Decrypted to ");

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

System.out.print(plainText[i]);

}

System.out.println();

}

}

class caesarFurkhan {

public static void main(String args[]){

CaesarCipher cs = new CaesarCipher();

cs.getInputs();

cs.getKey();

cs.cipher();

cs.decrypt();

} }

**+++++OUTPUT+++++**

**Enter the Input String To Be Encrypted**

**FURKHAN MUJIBODDEN SHAIKH**

**Enter the Key**

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**FURKHAN MUJIBODDEN SHAIKH is Encrypted to JYVOLER QYNMFSHHIR WLEMOL**

**JYVOLER QYNMFSHHIR WLEMOL is Decrypted to FURKHAN MUJIBODDEN SHAIKH**