EX NO: **CAESAR CIPHER USING JAVA** REG NO:210701290

DATE :

AIM:-

To implement Caesar cipher substitution technique using Java.

ALGORITHM:-

STEP 1: Get the plain text from the user.

STEP 2: Get the shift value between 1 & 25 from the user.

STEP 3: Create a new alphabet by shifting each letter by the shift value.

STEP 4: Replace each letter of the message with the corresponding letter of the new alphabet.

STEP 5: Print the encrypted message as output.

PROGRAM:-

```
import java.util.Scanner;
public class Main {
   public static void main(String[] args){
      System.out.print("1. Encryption\n2. Decryption\nChoose(1,2): ");
      Scanner in = new Scanner(System.in);
      int choice = in.nextInt();
      if (choice == 1){
         System.out.println("Encryption");
         in.nextLine();
         System.out.println("Message can only be lower or uppercase alphabet");
```

```
        System.out.print("Enter Message: ");
        String msg = in.nextLine();
        System.out.print("Enter key (0-25): ");
        int key = in.nextInt();
        String encrypMsg = "";
        for (int i = 0; i < msg.length(); i++) {
            if ((int)msg.charAt(i) == 32){
                encrypMsg += (char)32;
            } else if ((int)msg.charAt(i) + key > 122){
                int temp = ((int)msg.charAt(i) + key) - 122;
                encrypMsg += (char)(96 + temp);
            } else if ((int)msg.charAt(i) + key > 90 && (int)msg.charAt(i) < 96){
                int temp = ((int)msg.charAt(i) + key) - 90;
                encrypMsg += (char)(64+temp);
            } else {
                encrypMsg += (char)((int)msg.charAt(i) + key);
            }
        }
        System.out.println(encrypMsg);
    } else if (choice == 2){
        System.out.println("Decryption");
        in.nextLine();
```

```
        System.out.println("Message can only be upper or lowercase alphabet");
        System.out.print("Enter encrypted Text: ");
        String encypText = in.nextLine();
        System.out.println("Enter key (0-25): ");
        int dcyptkey = in.nextInt();
        String decrypMsg = "";
        for (int i = 0; i < encypText.length(); i++) {
            if((int)encypText.charAt(i) == 32){
                decrypMsg += (char)32;
            } else if (((int)encypText.charAt(i) - dcyptkey) < 97 &&
((int)encypText.charAt(i) - dcyptkey) > 90) {
                //lower case
                int temp = ((int)encypText.charAt(i) - dcyptkey) + 26;
                decrypMsg += (char)temp;
            } else if ((encypText.charAt(i) - dcyptkey) < 65) {
                // upper case
                int temp = ((int)encypText.charAt(i) - dcyptkey) + 26;
                decrypMsg += (char)temp;
            } else {
                decrypMsg += (char)((int)encypText.charAt(i) - dcyptkey);
            }
        }
        System.out.println(decrypMsg);
```

```
        } else {
            System.out.println("Wrong Choice");
        }
    }
}
```

OUTPUT:-

```
1. Encryption
2. Decryption
Choose(1,2): 1
Encryption
Message can only be lower or uppercase alphabet
Enter Message: Kris
Enter key (0-25): 5
Pwnx
```

RESULT:-