

Ex No: 1	Implementation of Classical Encryption Techniques
Date:09/08/2021	

1. A. Write a program that performs Classical Encryption of Plain text to Cipher text for following cipher mechanisms.

a. Additive Cipher

1. B. Write a program that performs Classical Encryption of Cipher text to Plain text for following cipher mechanisms.

a. Additive Cipher

Aim:

- To understand the working of Additive Cipher
- Implement cipher mechanism as a program

Understanding & Implementation:

- Input : String plaintext
- Input : An integer between 0 and 25 representing the right shift of the character or, an integer between -25 and -1 representing the left shift of the characters.
- Traverse each character in the plaintext one at a time.
- Transform the given character depending on encryption or decryption.
- Print the ciphertext.

A. Plain text to Cipher text

PROGRAM :

```
#include<stdio.h>
```

```
#include<string.h>
```

```
int main(){
```

```
int key;
```

```
char pl_text[100];
```

```
scanf("%s",&pl_text);
```

```
printf("%s",pl_text);
```

```

scanf("%d",&key);

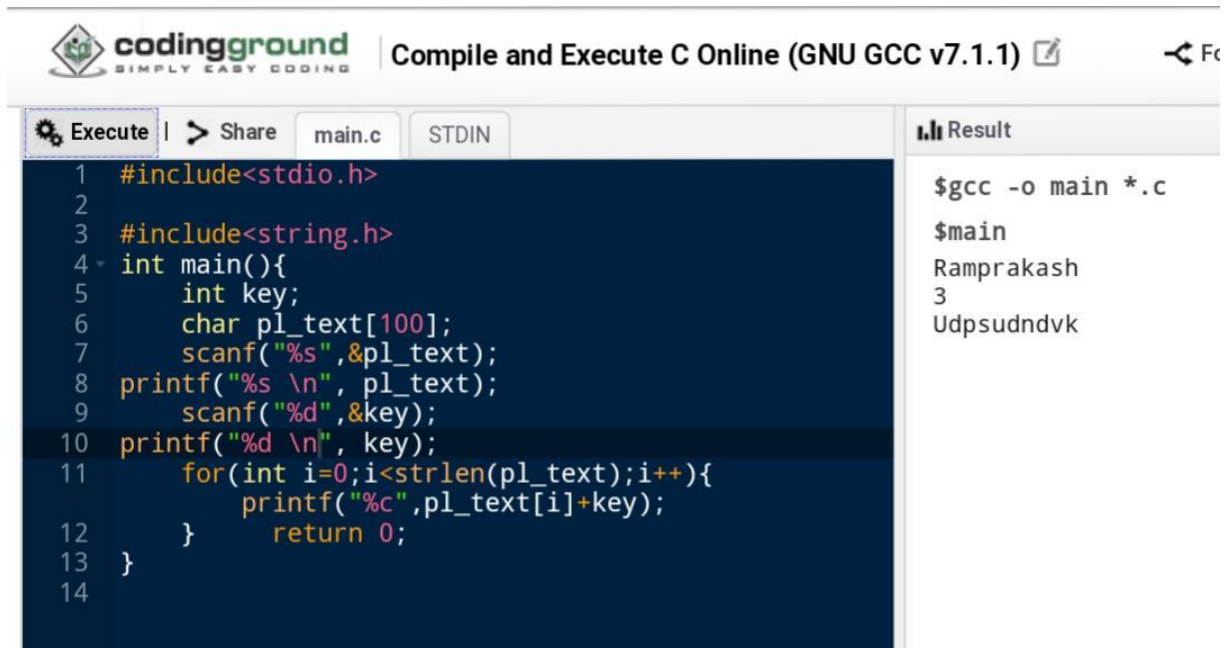
printf("%d", key) ;

for(int i=0;i<strlen(pl_text);i++){
printf("%c",pl_text[i]+key);

}
return 0;
}

```

OUTPUT:



The screenshot shows the CodingGround online C compiler interface. The top bar includes the logo, the text "Compiling and Executing C Online (GNU GCC v7.1.1)", and a share icon. Below the bar, there are tabs for "Execute", "Share", "main.c", and "STDIN". The "Execute" tab is active, showing a C program that reads a string and a key, then prints the string shifted by the key. The "Result" tab on the right shows the output of the program: "Ramprakash", "3", and "Udpsudndvk".

```

1 #include<stdio.h>
2
3 #include<string.h>
4 int main(){
5     int key;
6     char pl_text[100];
7     scanf("%s",&pl_text);
8     printf("%s \n", pl_text);
9     scanf("%d",&key);
10    printf("%d \n", key);
11    for(int i=0;i<strlen(pl_text);i++){
12        printf("%c",pl_text[i]+key);
13    }
14    return 0;

```

Result

```

$gcc -o main *.c
$main
Ramprakash
3
Udpsudndvk

```

B. Plain text to Cipher text

PROGRAM :

```

#include<stdio.h>

#include<string.h> +

int main(){

int key;

```

```

char cy_text[100];
scanf("%s",&cy_text);

printf("%s", cy_text) ;

scanf("%d",&key);

printf("%d", key) ;

for(int i=0;i<strlen(cy_text);i++){
printf("%c",cy_text[i]-key);

}
return 0;
}

```

OUTPUT:

The screenshot shows the CodingGround online compiler interface. The top bar includes the logo, the text 'Compile and Execute C Online (GNU GCC v7.1.1)', and links for 'Fork' and 'Project'. Below the bar, there are tabs for 'Execute', 'Share', 'main.c', and 'STDIN'. The main area displays the C code from the previous block. On the right, the 'Result' panel shows the compilation command '\$gcc -o main *.c', the execution command '\$main', and the output: 'Udpsudndvk', '3', and 'Ramprakash'.

Result:

The implementation of cipher mechanism as a program was successfully Executed.

Evaluation Criteria		
Criteria	Total Marks	Awarded Marks

Preparation	5	
Program Interpretation	10	
Viva	5	
Total	20	