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Roll No : 19

Cryptography And System Security
Experiment No. : 01

Aim : Design and Implementation of Caesar Cipher.
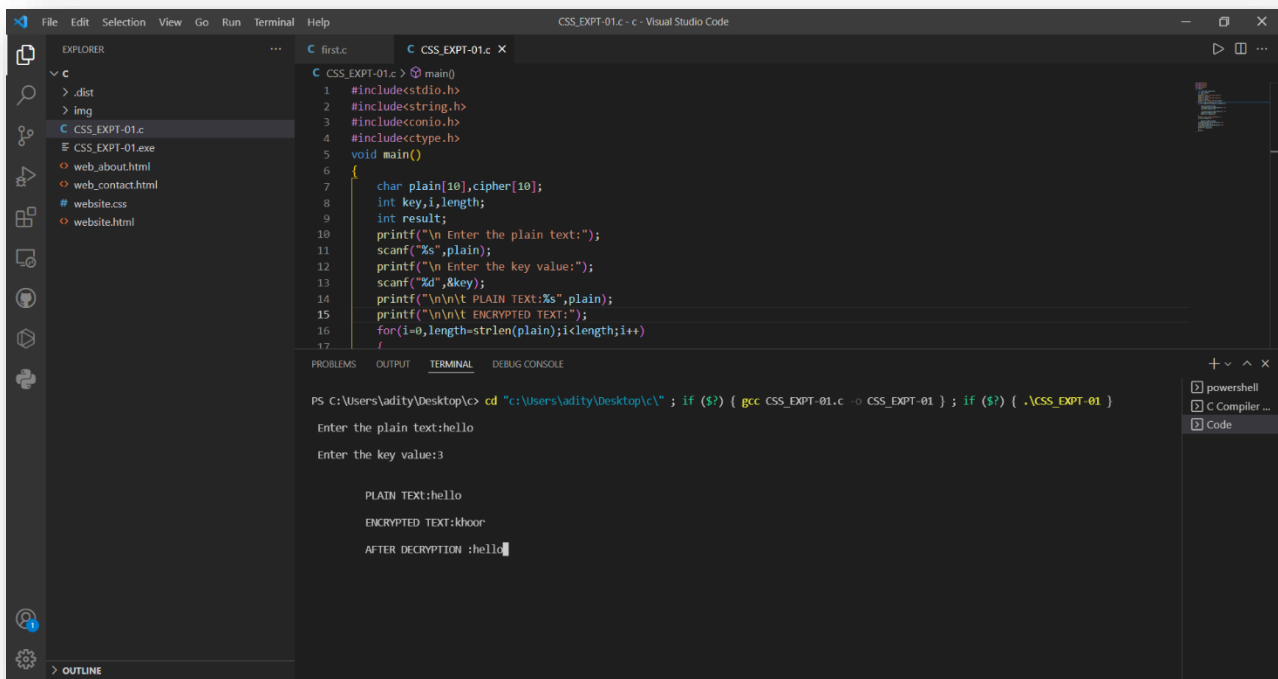
Program :

```c
#include<stdio.h>
#include<string.h>
#include<conio.h>
#include<ctype.h>
void main()
{
    char plain[10],cipher[10];
    int key,i,length;
    int result;
    printf("\n Enter the plain text:");
    scanf("%s",plain);
    printf("\n Enter the key value:");
    scanf("%d",&key);
    printf("\n\n\t PLAIN TEXt:%s",plain);
    printf("\n\n\t ENCRYPTED TEXT:");
    for(i=0,length=strlen(plain);i<length;i++)
    {
        cipher[i]=plain[i]+key;
        if(isupper(plain[i])&&(cipher[i]>'z'))
        cipher[i]=cipher[i]-26;

        if(islower(plain[i])&&(cipher[i]>'z'))
        cipher[i]=cipher[i]-26;
        printf("%c",cipher[i]);
    }
    printf("\n\n\t AFTER DECRYPTION :");
    for(i=0;i<length;i++)
    {
        plain[i]=cipher[i]-key;
    if(isupper(cipher[i])&&(plain[i]<'A'))
    plain[i]=plain[i]+26;
    if(islower(cipher[i])&&(plain[i]<'a'))
    plain[i]=plain[i]+26;
    printf("%c",plain[i]);
    }
    getch();
}
```

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Output :