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B.Tech. IT, Sem: VII

Submitted By

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Experiment 1: Write a C/C++/Java program to implement Ceaser and mono alphabetic cipher.

1. Code

```
#include<iostream>
#include<string.h>
#include<stdlib.h>
using namespace std;
string encryptionMessage(string Msg)
{
    string CTxt = "";
    int a = 3;
    int b = 6;
    for (int i = 0; i < Msg.length(); i++)
    {
        CTxt = CTxt + (char) (((a * Msg[i]) + b) % 26) + 65);
    }
    return CTxt;
}

string decryptionMessage(string CTxt)
{
    string Msg = "";
    int a = 3;
    int b = 6;
```

```

int a_inv = 0;
int flag = 0;
for (int i = 0; i < 26; i++)
{
    flag = (a * i) % 26;
    if (flag == 1)
    {
        a_inv = i;
    }
}
for (int i = 0; i < CTxt.length(); i++)
{
    Msg = Msg + (char) (((a_inv * ((CTxt[i] - b)) % 26)) + 65);
}
return Msg;
}

```

```

int main(int argc, char **argv)
{
    cout << "Enter the message: ";
    string message;
    cin >> message;
    cout << "Message is : " << message;
    cout << "\nEncrypted Message is : " << encryptionMessage(message);
    cout << "\nDecrypted Message is: " <<
    decryptionMessage(encryptionMessage(message));
}

```

2. Output

```
dmx@dmx ~/Sem 7 new/Sem-7/ECES <master*>  
└─> g++ monoalpha.cpp  
dmx@dmx ~/Sem 7 new/Sem-7/ECES <master*>  
└─> ./a.out  
Enter the message: Disahnt  
Message is :Disahnt  
Encrypted Message is : CJNLGYQ  
Decrypted Message is: DOYGNTZ%  
dmx@dmx ~/Sem 7 new/Sem-7/ECES <master*>  
└─> █
```