

**CODE:**

```
#include <iostream>

#include <string>

using namespace std;

string encryptMessage(const string& message, int key) {

    string encryptedMessage = "";

    for (char ch : message) {

        if (isalpha(ch)) {

            char base = isupper(ch) ? 'A' : 'a';

            encryptedMessage += static_cast<char>((ch - base + key) % 26 + base);

        } else {

            encryptedMessage += ch;

        }

    }

    return encryptedMessage;

}

string decryptMessage(const string& message, int key) {

    return encryptMessage(message, -key);

}

int main() {

    string message;
```

```
cout << "Enter a message to encrypt: ";  
getline(cin, message);  
  
int key;  
  
cout << "Enter the encryption key: ";  
  
cin >> key;  
  
string encryptedMessage = encryptMessage(message, key);  
  
cout << "Encrypted Message: " << encryptedMessage << endl;  
  
string decryptedMessage = decryptMessage(encryptedMessage, key);  
  
cout << "Decrypted Message: " << decryptedMessage << endl;  
  
return 0;  
}
```

#### **OUTPUT:**

Enter a message to encrypt: this is a secret message

Enter the encryption key: 7

Encrypted Message: aopz pz h zljyla tlzzhnl

Decrypted Message: this is a secret message