```
#include <iostream>
#include <string>
using namespace std;

class Encryptor {
private:
    int key;

public:
    Encryptor(int k) : key(k) {}

    string encrypt(const string& text) const {
        string result = "";
        for (int i = 0; i < text.length(); i++) {
            char c = text[i];



            if (c >= 'A' && c <= 'Z') {
                result += (c - 'A' + key) % 26 + 'A';
            }

            else if (c >= 'a' && c <= 'z') {
                result += (c - 'a' + key) % 26 + 'a';
            }

            else {
                result += c;
            }
        }
        return result;
    }
```

```
    string decrypt(const string& text) const
        int decryptKey = 26 - key;
        string result = "";
        for (int i = 0; i < text.length(); i++) {
            char c = text[i];



            if (c >= 'A' && c <= 'Z') {
                result += (c - 'A' + decryptKey) % 26 + 'A';
            }
            else if (c >= 'a' && c <= 'z') {
                result += (c - 'a' + decryptKey) % 26 + 'a';
            }
            else {
                result += c;
            }
        }
        return result;
    }
};

int main() {
    string text;
    int key;
    int choice;

    cout << "Enter text: ";
    getline(cin, text);
```

```
    cout << "Enter key (1-25): ";
    cin >> key;

    Encryptor encryptor(key);

    cout << "Choose an option:\n1. Encrypt\n2. Decrypt\n";
    cin >> choice;

    if (choice == 1) {
        cout << "Encrypted text: " << encryptor.encrypt(text) << endl;
    } else if (choice == 2) {
        cout << "Decrypted text: " << encryptor.decrypt(text) << endl;
    } else {
        cout << "Invalid choice" << endl;
    }

    return 0;
}
```