

AHMAD RAFIANSYAH

103012400153

IF-48-11

```
-----  
#ifndef STACK_H_INCLUDED  
#define STACK_H_INCLUDED  
#include <iostream>  
using namespace std;  
  
const int MAXSTACK = 10;  
  
typedef int infotype;  
  
struct stack{  
    infotype info[MAXSTACK];  
    int top;  
};  
  
void createStack_103012400153(stack &S);  
bool isEmpty_103012400153(stack S);  
bool isFull_103012400153(stack S);  
void push_103012400153(stack &S, infotype x);  
infotype pop_103012400153(stack &S);  
int sumStack_103012400153(stack S);  
  
#endif // STACK_H_INCLUDED
```

```
pp X stack.cpp X stack.h X
1 #include "stack.h"
2
3 void createStack_103012400153(stack &S) {
4     S.top = 0;
5 }
6
7 bool isEmpty_103012400153(stack S) {
8     return S.top == 0;
9 }
0
10 bool isFull_103012400153(stack S) {
11     return S.top == MAXSTACK;
12 }
13
14 void push_103012400153(stack &S, infotype x) {
15     if (!isFull_103012400153(S)) {
16         S.info[S.top] = x;
17         S.top++;
18     }
19 }
20
21 infotype pop_103012400153(stack &S) {
22     infotype x;
23     S.top--;
24     x = S.info[S.top];
25     return x;
26 }
27
28 int sumStack_103012400153(stack S) {
29     int total;
30     total = 0;
31
32     while (!isEmpty_103012400153(S)) {
33         total += pop_103012400153(S);
34     }
35
36     return total;
37 }
```

```
X stack.cpp X stack.h X
#include "stack.h"
int main()
{
    stack S;
    infotype x;
    int i, hasil;

    createStack_103012400153(S);

    for (i = 1; i <= MAXSTACK; i++) {
        cout << "input angka ke-" << i << ": ";
        cin >> x;
        push_103012400153(S, x);
        hasil = sumStack_103012400153(S);
    }
    cout << "Stack sudah penuh!" << endl;
    cout << endl;

    cout << "hasil penjumlahan elemen dalam stack: " << hasil;
    return 0;
}
```

```
C:\Users\USER\Documents\C- X + ▾
input angka ke-1: 1
input angka ke-2: 2
input angka ke-3: 3
input angka ke-4: 4
input angka ke-5: 5
input angka ke-6: 6
input angka ke-7: 7
input angka ke-8: 8
input angka ke-9: 9
input angka ke-10: 10
Stack sudah penuh!

hasil penjumlahan elemen dalam stack: 55
Process returned 0 (0x0) execution time : 6.751 s
Press any key to continue.
```