

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  }
10
11 bool isFull_103012400153(stack S){
12     return S.top == MAXSTACK;
13 }
14
15 void push_103012400153(stack &S, infotype x){
16     if (!isFull_103012400153(S)) {
17         S.info[S.top] = x;
18         S.top++;
19     }
20 }
21
22 infotype pop_103012400153(stack &S){
23     infotype x;
24     S.top--;
25     x = S.info[S.top];
26     return x;
27 }
28
29 int sumStack_103012400153(stack S){
30     int total;
31     total = 0;
32
33     while (!isEmpty_103012400153(S)){
34         total += pop_103012400153(S);
35     }
36
37     return total;
38 }

```

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.
```