

## TP MODUL 7 STRUKTUR DATA

## 1. stack.h

```
stack.h X stack.cpp X main.cpp X
1  #ifndef STACK_H_INCLUDED
2  #define STACK_H_INCLUDED
3
4  #include <iostream>
5  using namespace std;
6  #define Top(S) S.Top
7  #define info(S) S.info
8
9  typedef char infotype;
10
11  struct stack{
12      infotype info[15];
13      int Top;
14  };
15
16  void createStack_103032330095(stack &S);
17
18  bool isEmpty_103032330095(stack S);
19
20  bool isFull_103032330095(stack S);
21
22  void push_103032330095(stack &S, infotype x);
23
24  infotype pop_103032330095(stack &S);
25
26  void printInfo_103032330095(stack S);
27
28
29  #endif // STACK_H_INCLUDED
30
```

## 2. stack.cpp

```
stackh x stack.cpp x main.cpp x
1  #include "stack.h"
2
3  void createStack_103032330095(stack &S){
4      Top(S) = 0;
5  }
6
7  bool isEmpty_103032330095(stack S){
8      return Top(S) == 0;
9  }
10
11 bool isFull_103032330095(stack S){
12     return Top(S) == 15;
13 }
14
15 void push_103032330095(stack &S, infotype x){
16     if (!isFull_103032330095(S)) {
17         Top(S)++;
18         info(S)[Top(S)] = x;
19     }
20 }
21
22 infotype pop_103032330095(stack &S){
23     infotype x;
24     if (!isEmpty_103032330095(S)){
25         x = info(S)[Top(S)];
26         Top(S)--;
27     }
28     return x;
29 }
30
31 void printInfo_103032330095(stack S){
32     int i;
33     for (i = Top(S); i >= 1; i--){
34         cout << info(S)[i] << " ";
35     }
36     cout << endl;
37 }
```

### 3. main.cpp

```
stack.h x stack.cpp x main.cpp x
1  #include "stack.h"
2
3  int main()
4  {
5      stack S;
6      createStack_103032330095(S);
7      push_103032330095(S, 'G');
8      push_103032330095(S, 'N');
9      push_103032330095(S, 'U');
10     push_103032330095(S, 'D');
11     push_103032330095(S, 'N');
12     push_103032330095(S, 'A');
13     push_103032330095(S, 'B');
14     push_103032330095(S, 'O');
15     push_103032330095(S, 'L');
16     push_103032330095(S, 'A');
17     push_103032330095(S, 'H');
18
19     cout << "Isi stack Awal : ";
20     printInfo_103032330095(S);
21
22     for(int i = 1; i <= 4; i++){
23         pop_103032330095(S);
24     }
25     cout << "Isi stack sesudah pop : ";
26     printInfo_103032330095(S);
27 }
```

### 4. output

```
"D:\KuliahGena\SMT 3\Strukt x + v
Isi stack Awal : H A L O B A N D U N G
Isi stack sesudah pop : B A N D U N G

Process returned 0 (0x0)    execution time : 0.035 s
Press any key to continue.
```