

# TP MODUL 7

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header.h

```
header.h x header.cpp x main.cpp x
1  #ifndef HEADER_H_INCLUDED
2  #define HEADER_H_INCLUDED
3
4  #include <iostream>
5  using namespace std;
6
7  #define top(S) S.top
8  #define info(S) S.info
9
10 typedef char infotype;
11 struct stack{
12     infotype info[15];
13     int top;
14 };
15
16 void createStack_103012300239(stack &S);
17 bool isEmpty_103012300239(stack S);
18 bool isFull_103012300239(stack S);
19 void push_103012300239(stack &S, infotype x);
20 int pop_103012300239(stack &S);
21 void printInfo_103012300239(stack S);
22
23 #endif // HEADER_H_INCLUDED
```



header.cpp

```
header.h x header.cpp x main.cpp x
1  #include "header.h"
2  #include <iostream>
3
4  void createStack_103012300239(stack &S){
5      top(S) = 0;
6  }
7
8  bool isEmpty_103012300239(stack S){
9      if (top(S) == 0){
10         return true;
11     } else {
12         return false;
13     }
14 }
15
16 bool isFull_103012300239(stack S){
17     if (top(S) == 15){
18         return true;
19     } else {
20         return false;
21     }
22 }
23
24 void push_103012300239(stack &S, infotype x){
25     if (isFull_103012300239(S) == false){
26         top(S) = top(S) + 1;
27         info(S)[top(S)] = x;
28     }
29 }
30
31 int pop_103012300239(stack &S){
32     infotype x;
33
34     x = info(S)[top(S)];
35     top(S) = top(S) - 1;
36     return x;
37 }
38
39 void printInfo_103012300239(stack S){
40     int i;
41
42     for(i = top(S); i >= 1; i--){
43         cout << info(S)[i];
44     }
45 }
46
```

## main.cpp

```
1  #include "header.h"
2  #include <iostream>
3
4  using namespace std;
5
6  int main() {
7      // NIM saya 103012300239 digit terakhir 9 mod 4 = 1
8      stack S, S2;
9      infotype pop;
10     createStack_103012300239(S);
11     createStack_103012300239(S2);
12
13     // input HALOBANDUNG
14     push_103012300239(S, 'H');
15     push_103012300239(S, 'A');
16     push_103012300239(S, 'L');
17     push_103012300239(S, 'O');
18     push_103012300239(S, 'B');
19     push_103012300239(S, 'A');
20     push_103012300239(S, 'N');
21     push_103012300239(S, 'D');
22     push_103012300239(S, 'U');
23     push_103012300239(S, 'N');
24     push_103012300239(S, 'G'); //top
25
26     while (!isEmpty_103012300239(S)) {
27         pop = pop_103012300239(S);
28         push_103012300239(S2, pop);
29     }
30     printInfo_103012300239(S2);
31     cout << endl;
32
33     // pop HALO
34     pop = pop_103012300239(S2); //H
35     pop = pop_103012300239(S2); //A
36     pop = pop_103012300239(S2); //L
37     pop = pop_103012300239(S2); //O
38
39     printInfo_103012300239(S2);
40
41
42     return 0;
43 }
44
```

Running

```
HALOBANDUNG
BANDUNG
Process returned 0 (0x0)    execution time : 0.012 s
Press any key to continue.
```