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Header :

*stack.h stack.cpp main.cpp

```cpp
#include <iostream>
#ifndef STACK_H_INCLUDED
#define STACK_H_INCLUDED
#define Top(S) (S).top
#define info(S) (S).info

using namespace std;

typedef char infotype;

struct stack {
    infotype info[14];
    int top;

};

void createStack(stack &S);

bool isEmpty(stack S);

bool isFull(stack S);

void push(stack &S, infotype x);

int pop(stack &S);

void printInfo(stack S);

#endif // STACK_H_INCLUDED

```

Stack.cpp

*stack.h stack.cpp main.cpp

```cpp
#include "stack.h"

using namespace std;

void createStack(stack &S) {
    Top(S) = 0;
}

bool isEmpty(stack S) {
    bool kosong;
    if (Top(S) == 0) {
        kosong = true;
    }else {
        kosong = false;
    }
    return kosong;
}

bool isFull(stack S) {
    bool penuh;
    if (Top(S) == 14) {
        penuh = true;
    }else {
        penuh = false;
    }
    return penuh;
}

void push(stack &S, infotype x) {
    if (isFull(S) == false) {
```

*stack.h stack.cpp main.cpp

```cpp
    bool penuh;
    if (Top(S) == 14) {
        penuh = true;
    }else {
        penuh = false;
    }
    return penuh;
}

void push(stack &S, infotype x) {
    if (isFull(S) == false) {
        Top(S) = Top(S) + 1;
        info(S)[Top(S)] = x;
    }
}

int pop(stack &S) {
    infotype x;
    x = info(S)[Top(S)];
    Top(S) = Top(S) - 1;
    return x;
}

void printInfo(stack S) {
    int i;
    for (i=Top(S);i>=0;i--) {
        cout << info(S)[i] << " ";
    }
}

```

Main :

*stack.h stack.cpp *main.cpp

```cpp
#include <iostream>
#include "stack.h"
using namespace std;
int main()
{
    stack S;
    createStack(S);
    push(S,'I');
    push(S,'R');
    push(S,'I');
    push(S,'D');
    push(S,'A');
    push(S,'Y');
    push(S,'A');
    push(S,'C');
    push(S,'R');
    push(S,'E');
    push(S,'P');
    printInfo(S);
    cout << endl;
    pop(S);
    pop(S);
    pop(S);
    pop(S);
    pop(S);
    pop(S);
    pop(S);
    printInfo(S);
}

```