

913190

Modulos em C

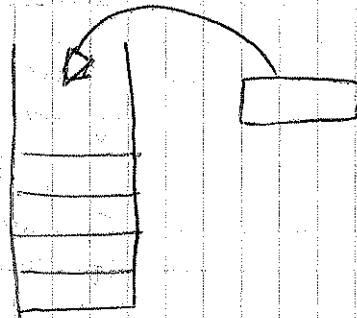
Interface
API

Implementação

Stack

LIFO

Last In First Out



funções:
vazia
topo
push
pop

Header files - *.h (interface API)
*.c (implementação)

stack.h

stack.c → gcc ~~stack.c~~ -c stack.c → stack.o

```
#include <stdio.h>
#include "stack.h"

int main ()
{
    stack s1;
    push (s1, 3);
    pop (s1);
    push (s1, 3);
    top (s1);
}
```

p1.c



gcc -o p1 p1.c stack.c

```
stack.h
/* -- stack.h -- */
#ifndef Stack
#define Stack
#include "Boo.h"
typedef struct sStack
{
    int sp;
    int s [Maxstack];
} Stack;
#endif
```

define Maxstack 100

```
boolean empty (stack s);
int top (stack s);
stack push (stack s, int elem);
stack pop (stack s);
```

```

Bool.h
# undef _Bool
# define _Bool
# define int Boolean
# define true 1
# define false 0
# endif
    
```

Produto Cartesiano

```

main()
{
    struct Ponto
    {
        int x;
        int y;
    };
    P1, P2;
    P1.x = 5;
    P1.y = 6;
    struct = P1.x + P1.y;
    ...
}
    
```

```

main()
{
    struct Fraç
    {
        int num;
        int den;
    };
    F1, F2;
    F1.num = 5;
    F1.den = 7;
    ...
}
    
```

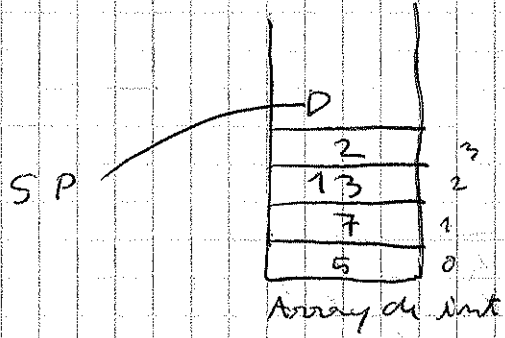
```

typedef < def. tipo > < nome. tipo >;
typedef struct struct
{
    int num;
    int den;
} Fraç;
    
```

```

main()
{
    Fraç f1, f2;
    ...
}
    
```

função em C: - tipo básico
 - struct



```

stack.c
# include "stack.h"
boolean empty (stack s)
{
    return (s.sp == 0) ? TRUE : FALSE;
}
    
```