Exercises — Prototypes

version **#f6de30ca5ee18fb9a30e5fbfc9eb9a1de8e13354**

Assistants C/Unix 2023 <assistants@tickets.assistants.epita.fr>

Copyright

This document is for internal use at EPITA (website) only.

Contents

1 Goal 3

2 Example 3

*https://intra.assistants.epita.fr

File Tree

```
prototypes/
└── prototypes.sh  (to submit)
```

Authorized commands : You are only allowed to use the following commands

- sed(1)

Reminder : Grant execution permission to your scripts before pushing them

1 Goal

Write a shell script displaying, from a *C* file given as argument, the prototypes of the functions declared in the file. Obviously, the file follows the EPITA coding style, as it can be found on the Assistants' Intranet.

This exercise was not made to make you fail because of mistakes due to complicated regular expressions: consider that each prototype fits in a single line.

2 Example

```c
#include <assert.h>
#include <stdio.h>

struct test
{
    int i;
};

int fact(int *val)
{
    assert(val != NULL);

    if (*val > 1)
        return (*val * fact(val - 1));
    else
        return 1;
}

int main(void)
{
    int val = 2;
    scanf("%d", &val);
    printf("%d\n", fact(&val));
    return 0;
}
```

```
42sh$ ./prototypes.sh facto.c
int fact(int *val);
int main(void);
```

The way is lit. The path is clear. We require only the strength to follow it.