Lab 01

Memory

    Code   Data

Program
Process
↓
an executing
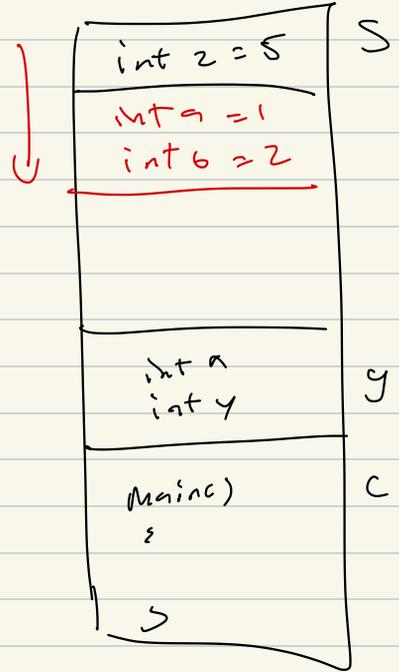program

OS

N

STACK
↓

↑

HEAP

GLOBALS

CODE
↓
V

0
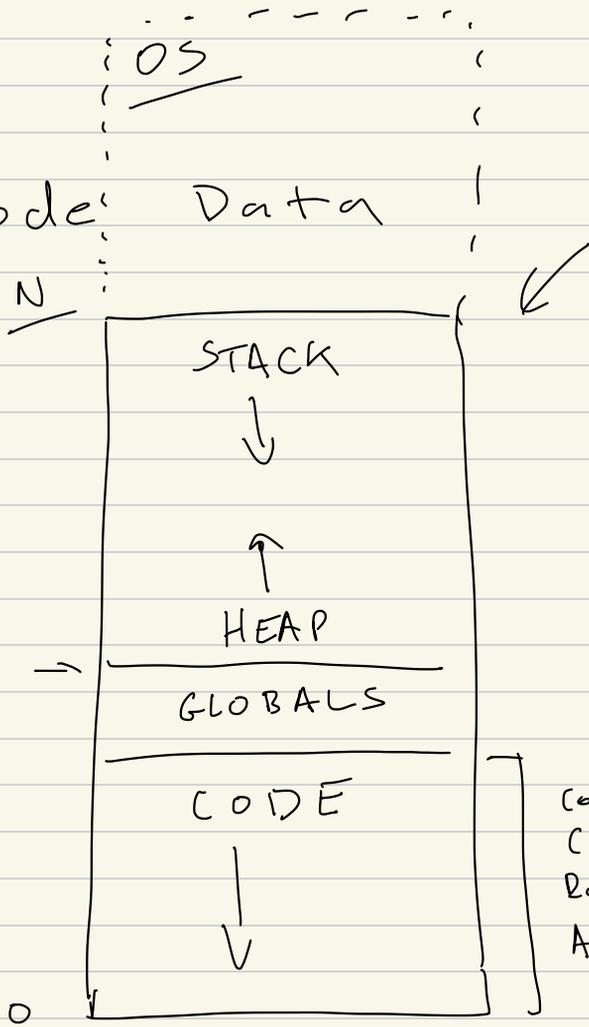
compiled
C code
Rust Code
Assembled
   machine code

C globals

```
int x = 3;
int y = 4;

main() {
    int z = 5;
    z = foo(z);
}

int foo (int x) {
    int a = 1;
    int b = 2;

    return a+b+x;
}
```

int z = 5

int a = 1
int b = 2

S

int a
int y

y

main()
{

C

C heap

char *str_p;

str_p = (char *) malloc (sizeof(char) * 32);

str_p (0) ... str_p (31)

free (str_p);

Rust heap

let s = String::new();

S

3>

F

Strp

G

CODE