



Stack  
local var

global

heap  
D.S.

int x[20]

sizeof(x) → 80

int \* x = malloc(20 \* sizeof(int))  
↑  
word \*  
(int \*)

sizeof(x) → 8

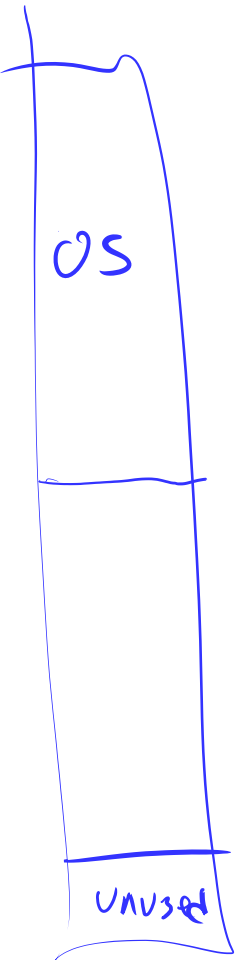
```
#define NULL ((void*)0)
```

```
int x = 3;
```

```
int *y = &x;
```

```
int *z = (int*)x;
```

```
if (x)
```



```
typedef struct {  
    char * first;  
    char * last;  
} name;
```

Syntactic Sugar  $x \rightarrow y \equiv (*x).y$

$\text{name * me} = (\text{name *}) \text{malloc}(\text{sizeof}(\text{name}))$

$(*me).first = \text{"Lusher"};$

$(* (*me).first).xyz$

$me \rightarrow first \rightarrow xyz$

