

32-bit Address

Variable

Main memory

0
1
2
⋮
15
16

x

p

y

main	
7	
⋮	
address to int x that is 2	
7	

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

```
int main(void) {
```

① `int x = 7;` data type of x is int

② `int *p;` data type of p is int*

③ `p = &x;` p is assigned the address of x

④ `int y;` declare variable y

⑤ `y = *p;` y is assigned the value stored at address p — x

```
return 0;
```

```
}
```

Dereference operator: this means “value at”
address p