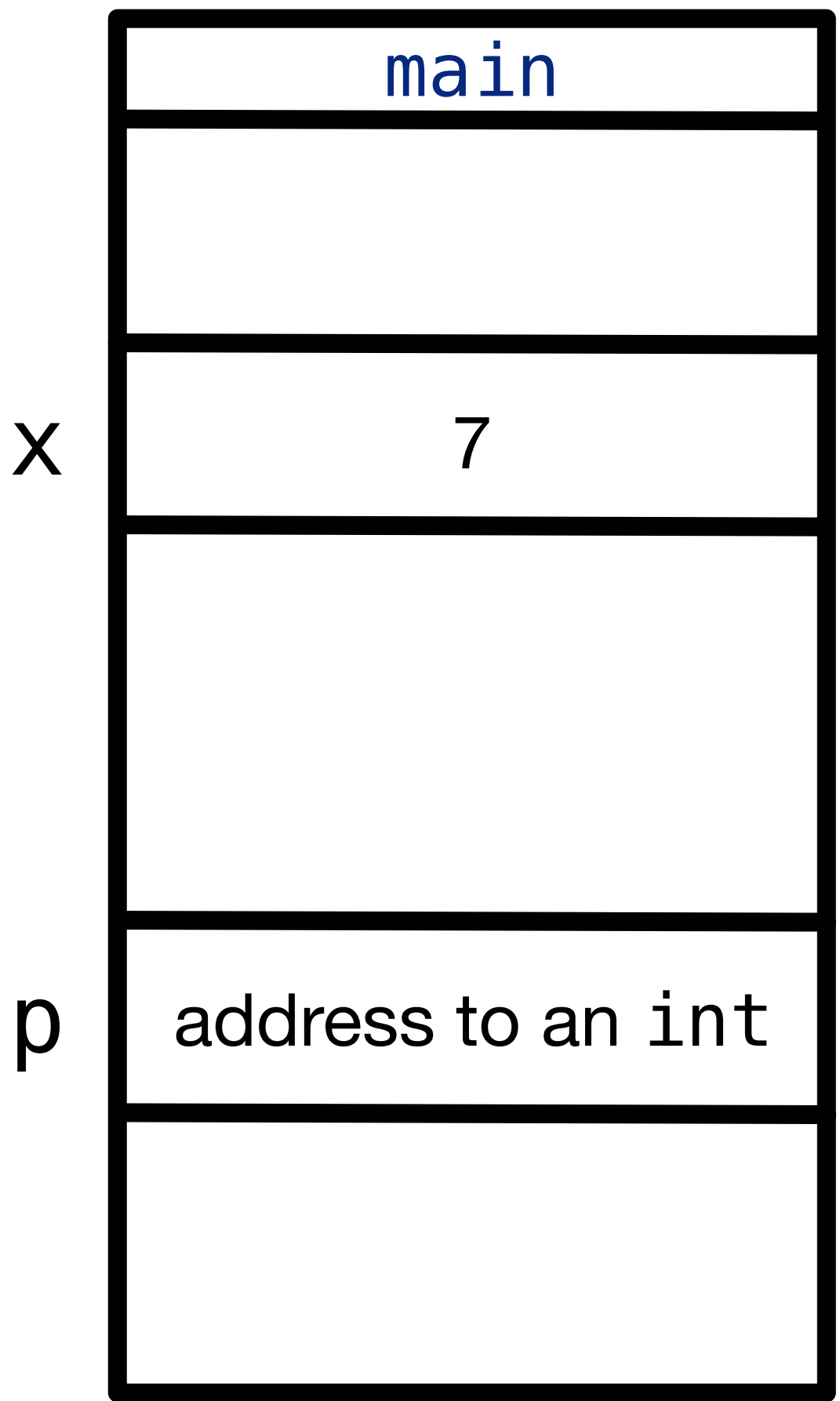


Main memory



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

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

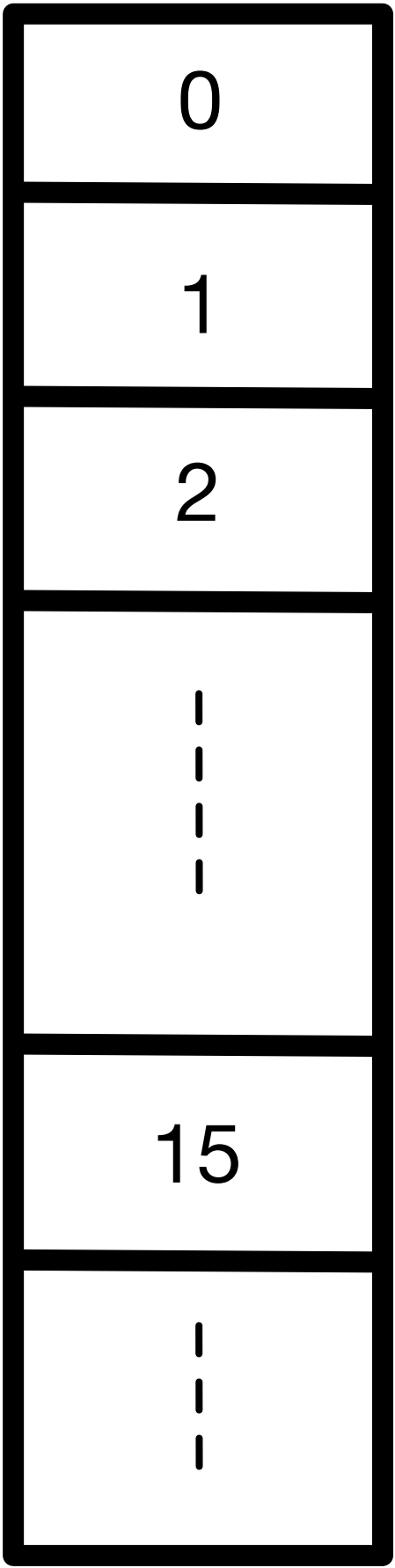
① `int x = 7;` data type of x is int

② `int *p;` data type of p is int*

```
    return 0;
```

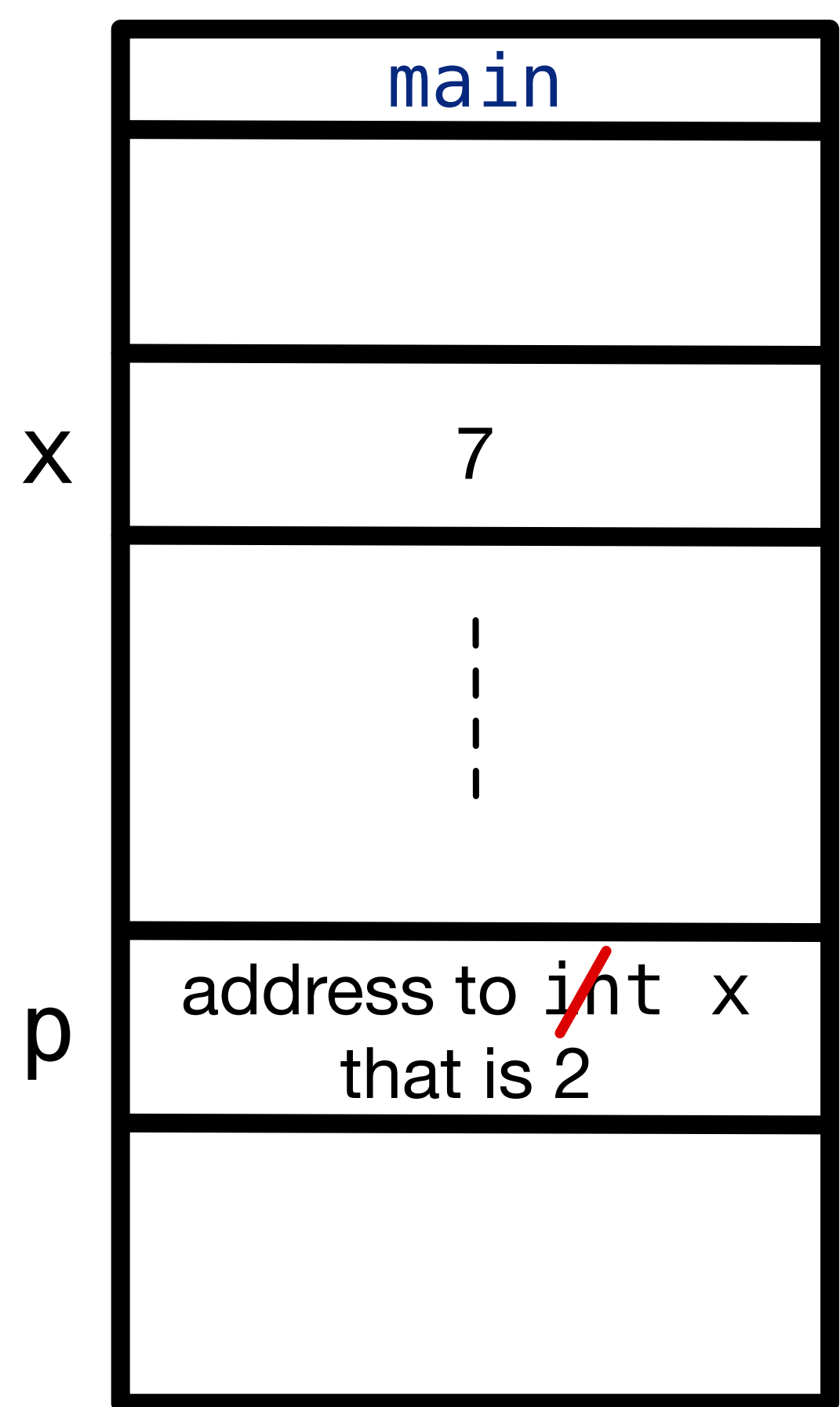
```
}
```

32-bit Address



Variable

Main memory



```
#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*

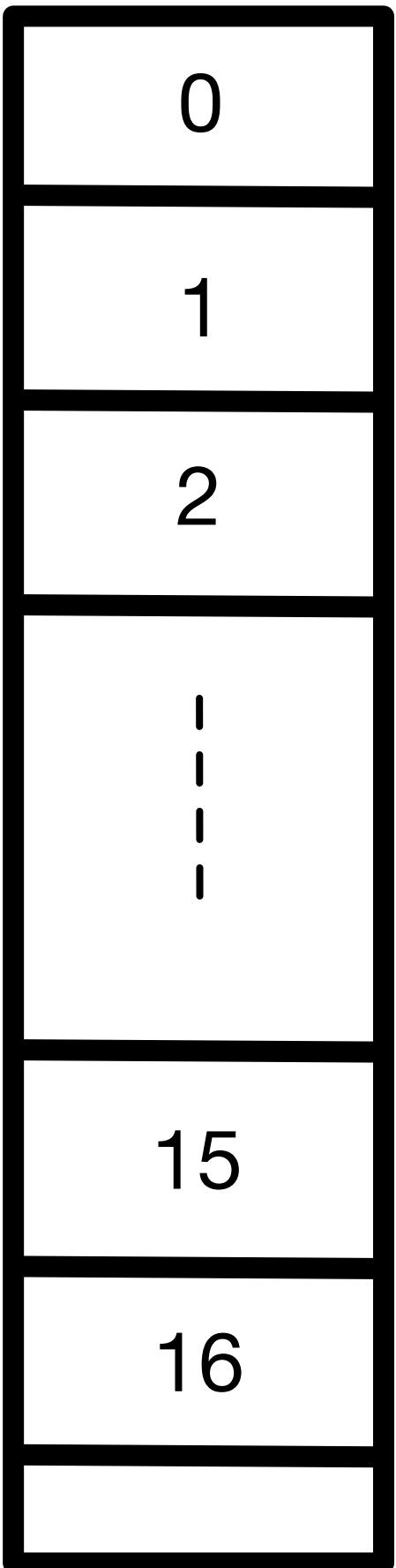
③ `p = &x;` p is assigned the address of x

```
    return 0;
```

```
}
```

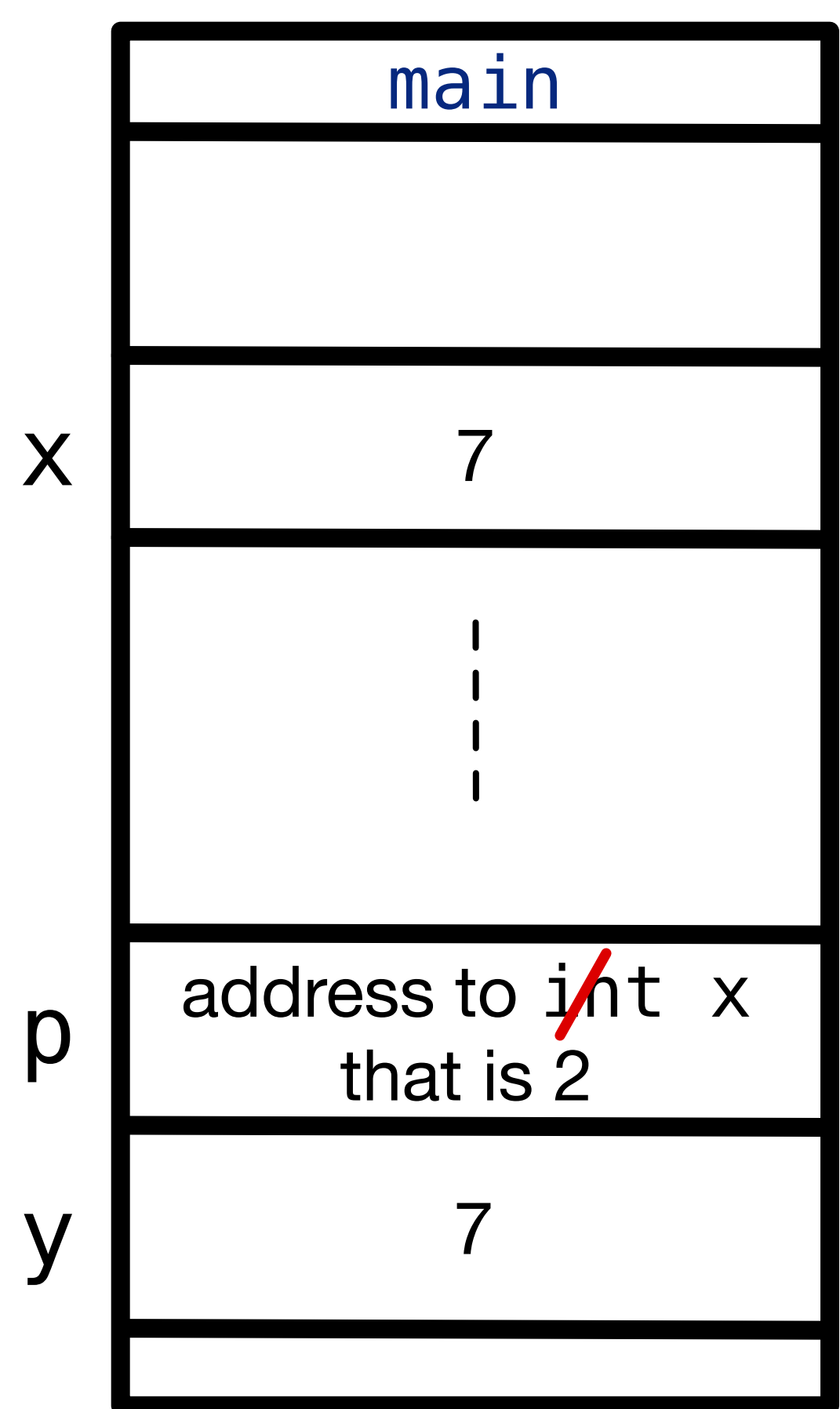
Reference operator: this means “address of”
Recall its usage in scanf

32-bit Address



Variable

Main memory



```
#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 of the variable stored in address p that is x

```
    return 0;
```

```
}
```

Dereference operator: this means “value at” address p