

This is CS50



```
#include <stdio.h>

int main(void)
{
    printf("hello, world\n");
}
```

```
print("hello, world")
```



say

hello, world



say

hello, world

```
printf("hello, world\n");
```



say

hello, world

```
print("hello, world")
```







```
string answer = get_string("What's your name? ");
printf("hello, %s\n", answer);
```



```
answer = get_string("What's your name? ")
print("hello, " + answer)
```



```
answer = get_string("What's your name? ")
print("hello, " + answer)
```



```
answer = get_string("What's your name? ")
print("hello, " + answer)
```



```
answer = get_string("What's your name? ")
print(f"hello, {answer}")
```







```
int counter = 0;
```



```
counter = 0
```

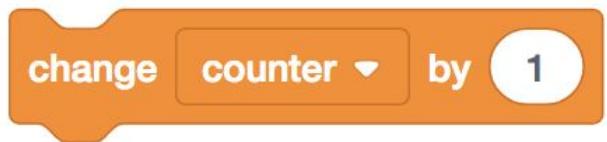




```
counter = counter + 1;
```



```
counter = counter + 1
```



```
counter += 1;
```



```
counter += 1
```





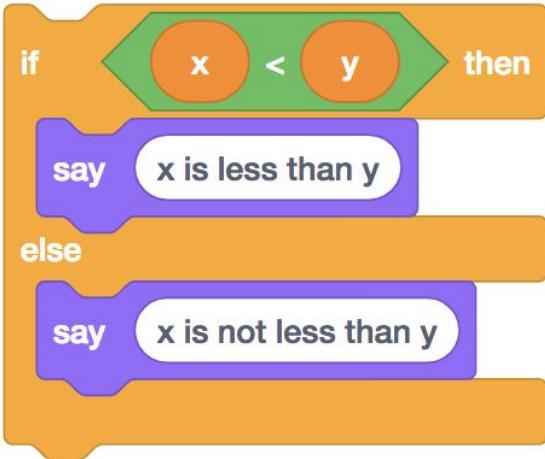


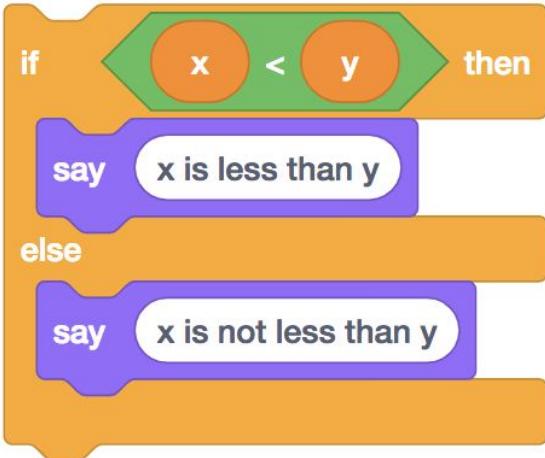
```
if (x < y)
{
    printf("x is less than y\n");
}
```



```
if x < y:  
    print("x is less than y")
```







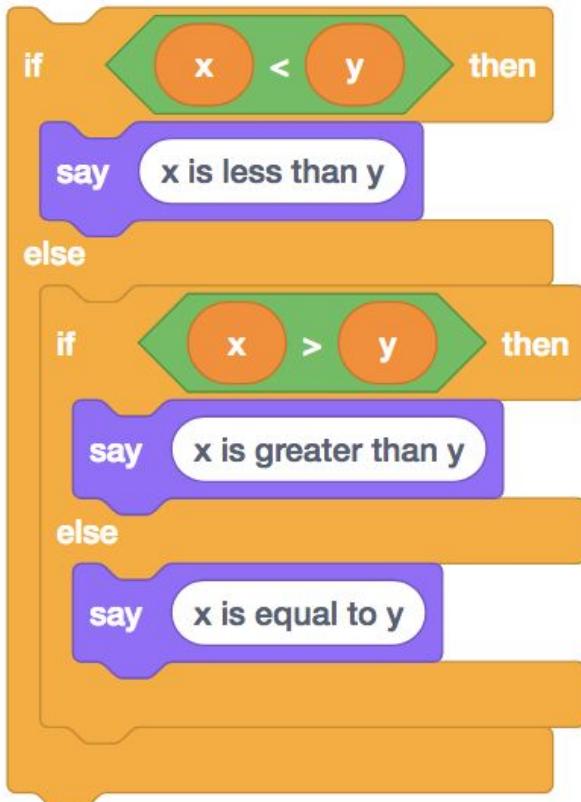
```
if (x < y)
{
    printf("x is less than y\n");
}
else
{
    printf("x is not less than y\n");
}
```



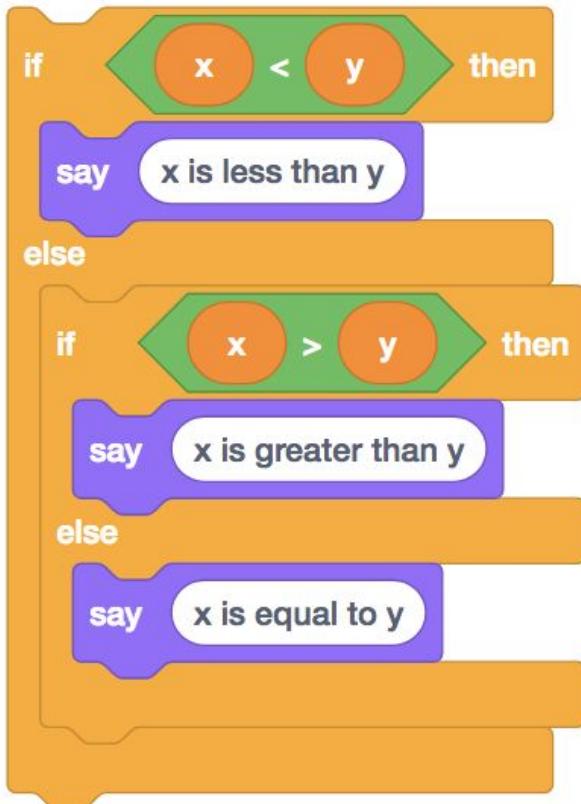
```
if x < y:  
    print("x is less than y")  
else:  
    print("x is not less than y")
```



```
if x < y then  
    say x is less than y  
else  
    if x > y then  
        say x is greater than y  
    else  
        say x is equal to y
```

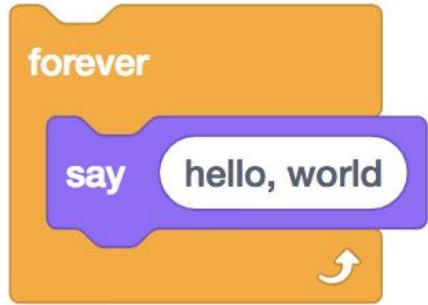


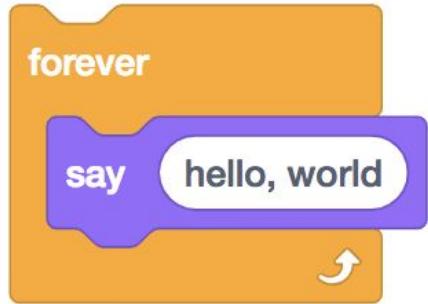
```
if (x < y)
{
    printf("x is less than y\n");
}
else if (x > y)
{
    printf("x is greater than y\n");
}
else
{
    printf("x is equal to y\n");
}
```



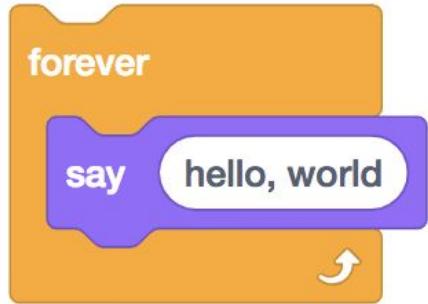
```
if x < y:  
    print("x is less than y")  
elif x > y:  
    print("x is greater than y")  
else:  
    print("x is equal to y")
```







```
while (true)
{
    printf("hello, world\n");
}
```



```
while True:  
    print("hello, world")
```







```
int i = 0;  
while (i < 3)  
{  
    printf("hello, world\n");  
    i++;  
}
```



```
i = 0
while i < 3:
    print("hello, world")
    i += 1
```





```
for (int i = 0; i < 3; i++)  
{  
    printf("hello, world\n");  
}
```



```
for i in [0, 1, 2]:  
    print("hello, world")
```



```
for i in range(3):  
    print("hello, world")
```

bool

char

double

float

int

long

string

...

`bool`

`float`

`int`

`str`

`...`

range

list

tuple

dict

set

...

`range` sequence of numbers

`list` sequence of mutable values

`tuple` sequence of immutable values

`dict` collection of key-value pairs

`set` collection of unique values

...

`get_char`

`get_double`

`get_float`

`get_int`

`get_long`

`get_string`

`...`

`get_float`

`get_int`

`get_string`

```
#include <cs50.h>
```

```
import cs50
```

```
from cs50 import get_float  
from cs50 import get_int  
from cs50 import get_string
```

```
from cs50 import get_float, get_int, get_string
```

```
#include <stdio.h>

int main(void)
{
    printf("hello, world\n");
}
```

```
make hello
```

```
./hello
```

```
clang -o hello hello.c -lcs50
```

```
./hello
```

```
print("hello, world")
```

```
python hello.py
```

source code →

interpreter

- 1 Recoge guía telefónica
- 2 Abre a la mitad de guía telefónica
- 3 Ve la página
- 4 Si la persona está en la página
 - 5 Llama a la persona
- 6 Si no, si la persona está antes de mitad de guía telefónica
 - 7 Abre a la mitad de la mitad izquierda de la guía telefónica
 - 8 Regresa a la línea 3
- 9 Si no, si la persona está después de mitad de guía telefónica
 - 10 Abre a la mitad de la mitad derecha de la guía telefónica
 - 11 Regresa a la línea 3
- 12 De lo contrario
- 13 Abandona

- 1 Pick up phone book
- 2 Open to middle of phone book
- 3 Look at page
- 4 If person is on page
 - 5 Call person
- 6 Else if person is earlier in book
 - 7 Open to middle of left half of book
 - 8 Go back to line 3
- 9 Else if person is later in book
 - 10 Open to middle of right half of book
 - 11 Go back to line 3
- 12 Else
 - 13 Quit



```
for i in range(3):  
    print("hello, world")
```

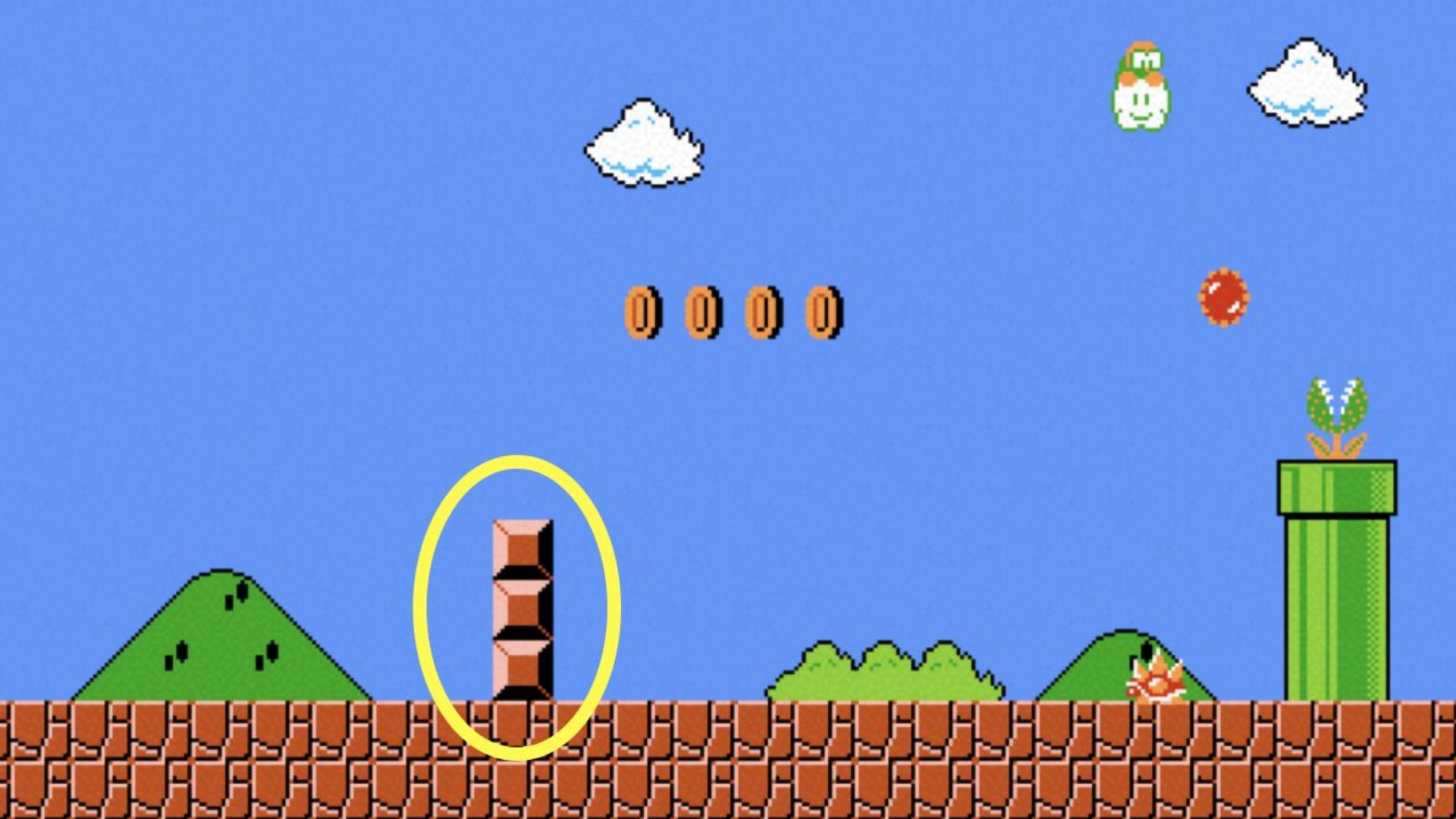
```
for i in range(101):  
    print(1)
```

```
for i in range(0, 101, 2):  
    print(1)
```

input

docs.python.org

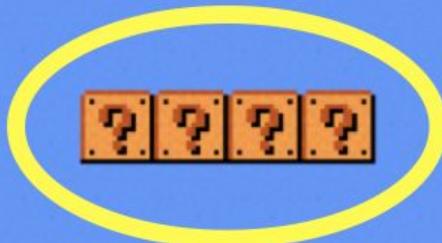
floating-point imprecision

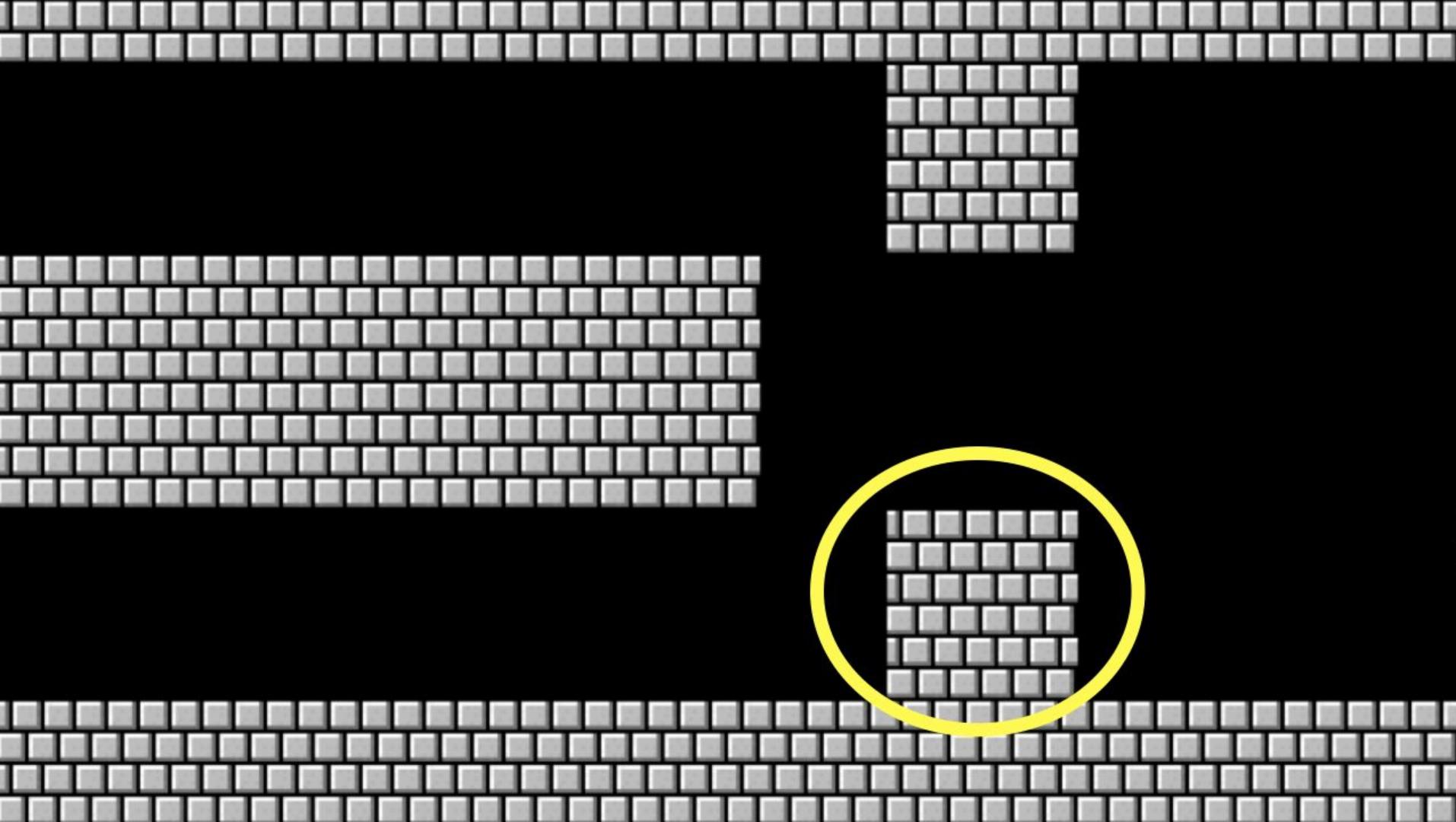


0 0 0 0



?????





integer overflow

regular expressions

.

any character

.*

0 or more characters

.+

1 or more characters

?

optional

^

start of input

\$

end of input

...

This is CS50