

This is CS50

Announcements

- **Masks are required.** Please do not put classmates in a position of risk or discomfort by not adhering to protocol. And please do not put staff in a position of having to remind or escalate. Step outside or watch online instead.
- **No food or drink in Sanders**, please!
- If you'd like to view the projector screen on your own laptop during class and/or ask Carter questions via chat, visit cs50.ly/sanders, which will open a Zoom webinar. **Be sure to mute your audio**, as this week's webinar also contains video for those in isolation or quarantine.

This is CS50

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

```
int main(void)
```

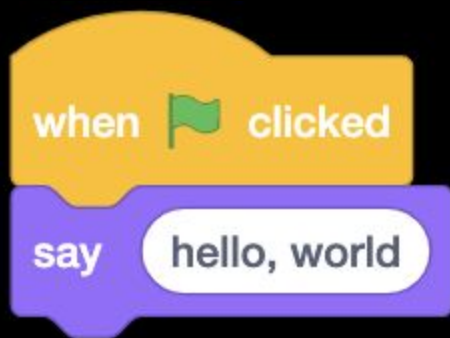
```
{
```

```
    printf("Thank you, Luke!\n");
```

```
}
```

```
print("Thank you, Luke!")
```

This is CS50



when  clicked

say 

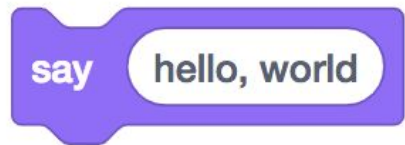
```
#include <stdio.h>

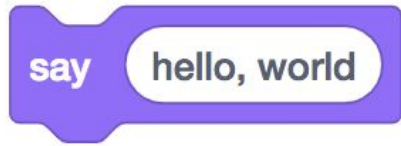
int main(void)
{
    printf("hello, world\n");
}
```



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







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



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



ask What's your name? and wait

say join hello, answer



```
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}")
```



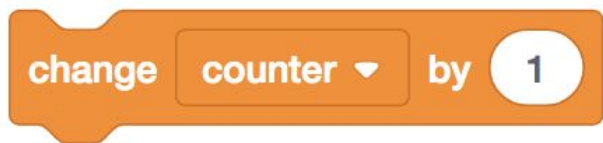




```
int counter = 0;
```



```
counter = 0
```



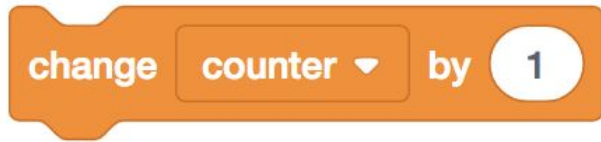
```
counter = counter + 1;
```



```
counter = counter + 1
```



```
counter += 1;
```



```
counter += 1
```







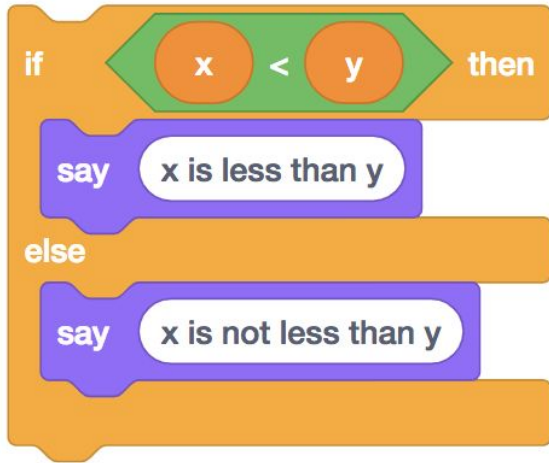
```
if (x < y)
{
    printf("x is less than y\n");
}
```




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





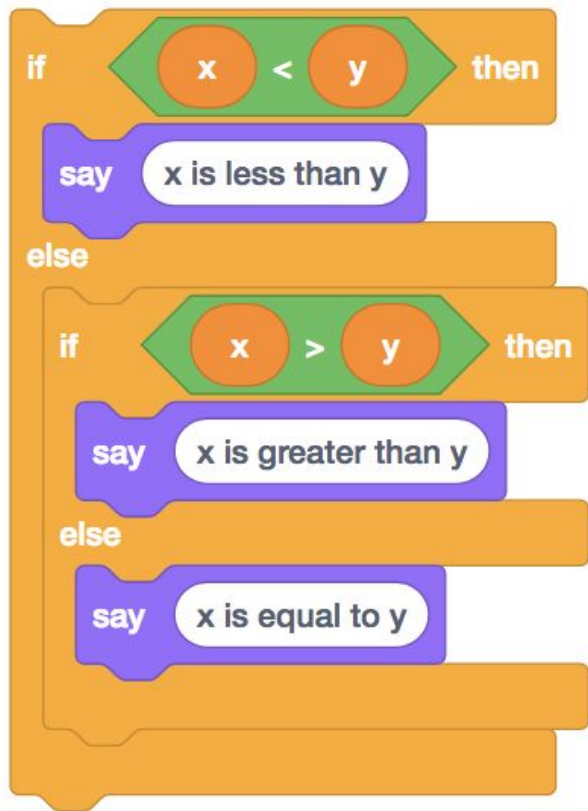


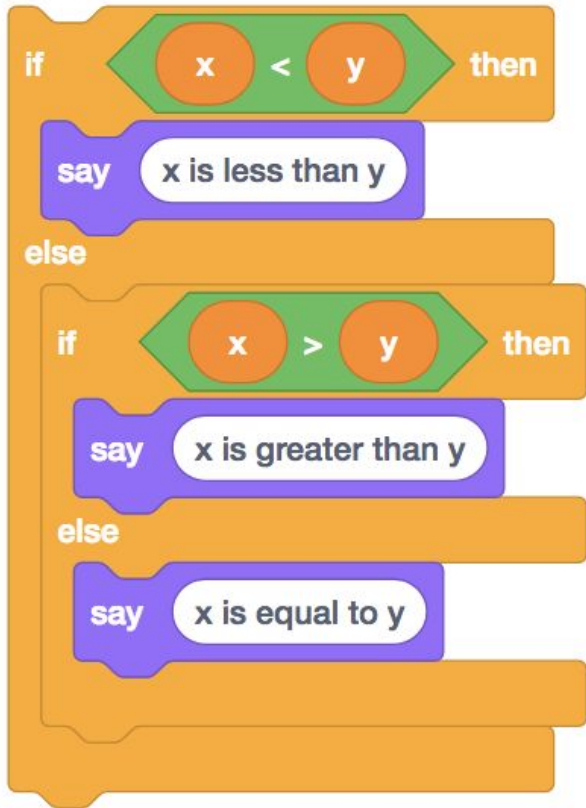
```
if (x < y)
{
    printf("x is less than y\n");
}
else
{
    printf("x is not less than y\n");
}
```



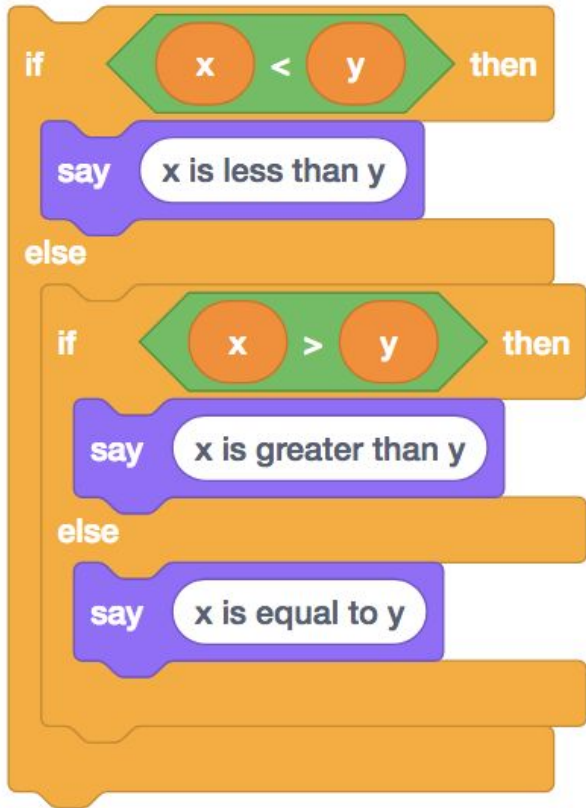
```
if x < y:  
    print("x is less than y")  
else:  
    print("x is not less than y")
```





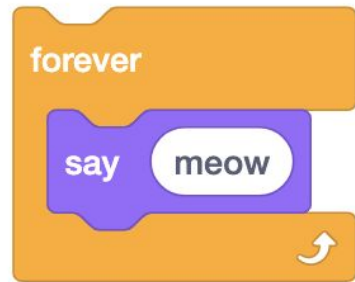


```
if (x < y)
{
    printf("x is less than y\n");
}
else if (x > y)
{
    printf("x is greater than y\n");
}
else
{
    printf("x is equal to y\n");
}
```

```
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("meow\n");
}
```



```
while True:  
    print("meow")
```







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




```
i = 0
while i < 3:
    print("meow")
    i += 1
```





```
for (int i = 0; i < 3; i++)  
{  
    printf("meow\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

...

<code>range</code>	sequence of numbers
<code>list</code>	sequence of mutable values
<code>tuple</code>	sequence of immutable values
<code>dict</code>	collection of key-value pairs
<code>set</code>	collection of unique values
<code>...</code>	

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
```

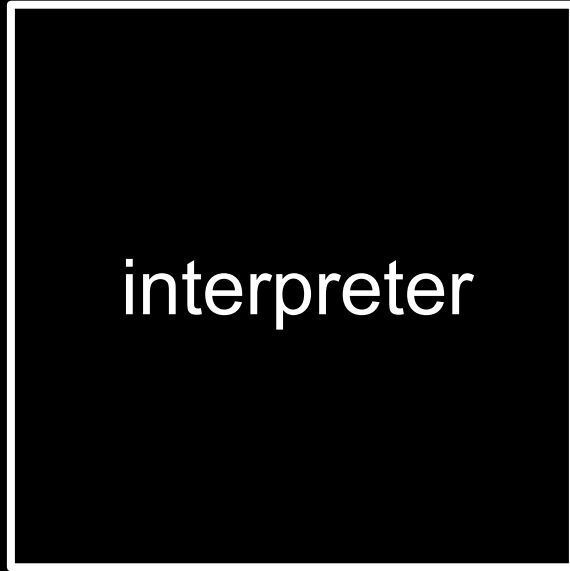
```
clang -o hello hello.c -lcs50
```

```
./hello
```

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

```
python hello.py
```

source code →



- 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
```

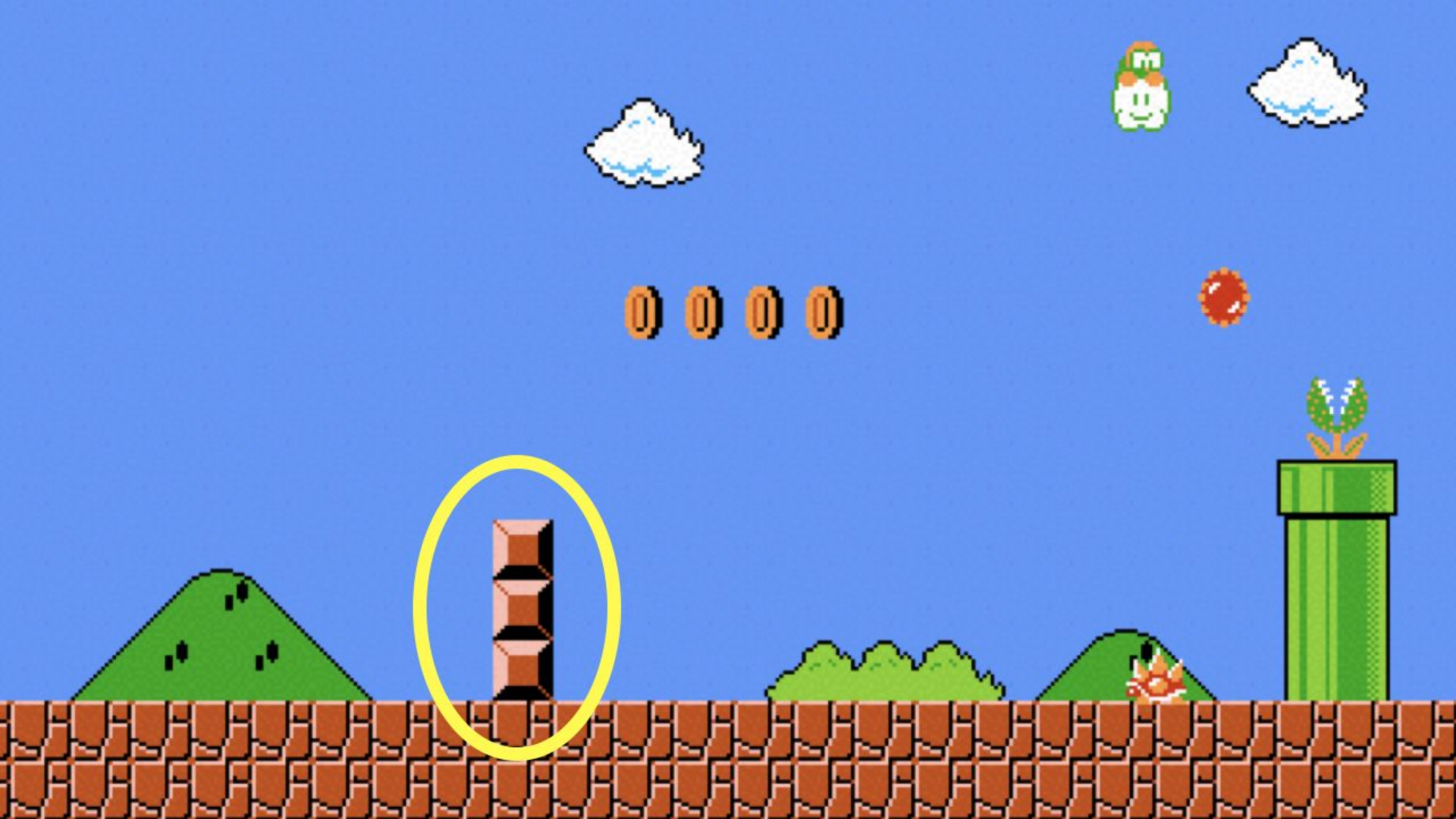
This is CS50

input

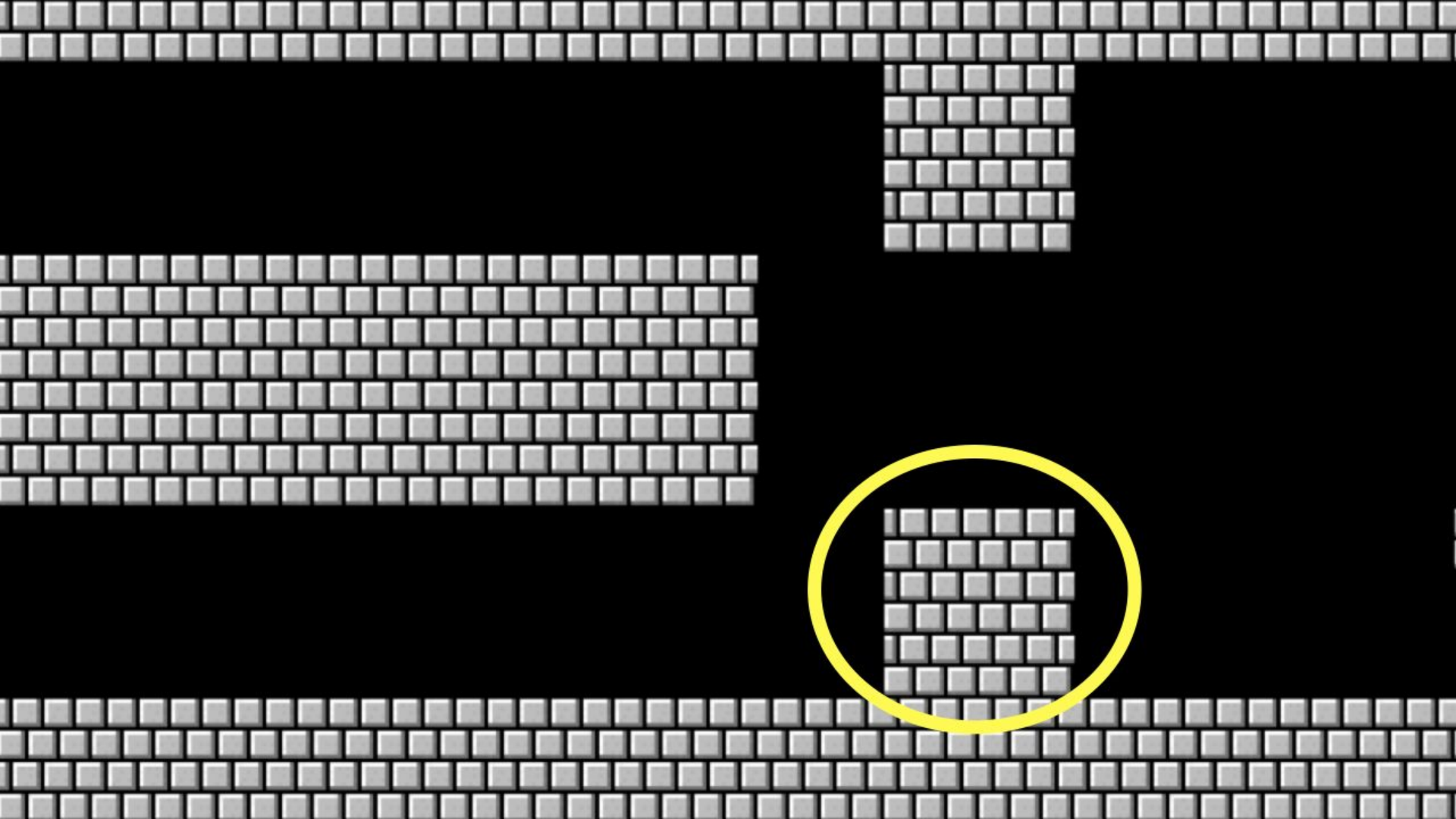
OOP

floating-point imprecision

exceptions







docs.python.org

~~integer overflow~~

cs50.ly/hogwarts

regular expressions

.	any character
.*	0 or more characters
.+	1 or more characters
?	optional
^	start of input
\$	end of input
...	

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