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 "hello, world"
#include <stdio.h>

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

print("hello, world")
printf("hello, world");
printf("hello, world\n");
print("hello, world")
string answer = get_string("What's your name?\n");
printf("hello, %s\n", 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}"
set counter to 0
int counter = 0;
counter = 0
counter = counter + 1;
counter = counter + 1;
counter = counter + 1
counter += 1;
counter += 1
if (x < y) {
    printf("x is less than y\n");
}
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)
{
    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)
{
    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)
{
    printf("meow\n");
}
while True:
    print("meow")
int i = 0;
while (i < 3) {
    printf("meow\n");
    i++;
}
int i = 0;
while (i < 3) {
    printf("meow\n");
    i++;
}

```python
i = 0
while i < 3:
    print("meow")
    i += 1
```
for (int i = 0; i < 3; i++)
{
    printf("meow\n");
}
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

float

int

str

...
range
list
tuple
dict
set
...
...
<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>range</td>
<td>sequence of numbers</td>
</tr>
<tr>
<td>list</td>
<td>sequence of mutable values</td>
</tr>
<tr>
<td>tuple</td>
<td>sequence of immutable values</td>
</tr>
<tr>
<td>dict</td>
<td>collection of key-value pairs</td>
</tr>
<tr>
<td>set</td>
<td>collection of unique values</td>
</tr>
<tr>
<td>...</td>
<td></td>
</tr>
</tbody>
</table>
get_char
get_double
get_float
get_int
get_long
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 $\rightarrow$ 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
This is CS50
input
OOP
floating-point imprecision
exceptions
integer overflow
cs50.ly/hogwarts
regular expressions
any character
0 or more characters
1 or more characters
optional
start of input
end of input
This is CS50