

DS2000

9/24 - Tues.

Admin

- Hw2 due Fri 9pm
- next Fri 10/4 mini exam #1!!
↳ DAS accommodation - reach out to them!

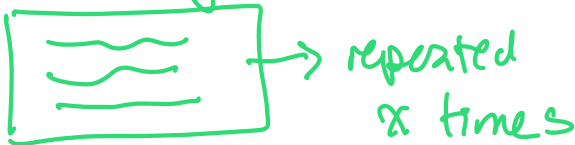
Agenda

1. Conditionals !!
2. Booleans
3. Python

0. Review

- read from a file that's big

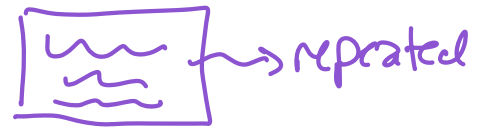
for i in range(x):



with open(filename, "r") as int:

for line in int:

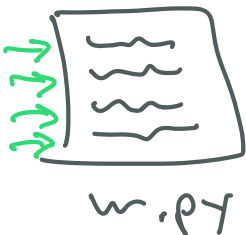
repeats



preview!

1. Conditionals

Flow of Control



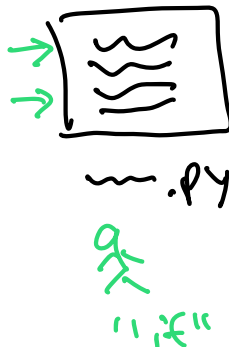
if [condition1]:

do if cond 1 is true

elif [condition 2]:

do if cond 2 is true

But sometimes!



"otherwise, if"

DS program

1. gather data

2. comp

3. communicate

random numbers

import random

random.randint(x, y)

else:

do if nothing was true

'otherwise'

↳ catchall

if → one!, **elif** → zero or more **else** → zero or one

ex) 6-sided die

```
if {2, 4, 6}:  
    print("even")
```

```
else:  
    print("odd")
```

3 6 4

odd even even

if/else → exactly one block executes

ex) if {2, 4, 6}:
 print("even")

```
elif {3, 5}:  
    print("odd")
```

6 2 4 1

even even even ☐ ??

if/elif → at most one code block executes

ex) if {1, 3, 5}:
 print("odd")

```
if {2, 3, 5}:  
    print("prime")
```

2 4 5
prime ☐ odd
?? prime

if/elif → 0, 1, or both blocks execute

2. Booleans

↳ Fill in {2, 4, 6} or {condition}

if —:

elif —:

booleans!

True or False

<

<=

==

>

>=

!=

(ex) $6 < 7$ True
 $6 <= 7$ True
 $6 < 6$ False
 $6 <= 6$ True
 $3 == 3$ True
 $3 != 3$ False

~ and/or/not

$6 < 7$ and $6 <= 7$
T T
True

$3 == 3$ and $6 < 6$
T F
False

3. Python

`random.randint(1, 6)` → roll two dice!

Lazzy gets \$ in some cases!

What are our conditions? (Don't worry about Python yet!)

(ex) $\text{roll } 1 < \text{roll } 2$

$\text{roll } 1$ same as $\text{roll } 2$

$\text{roll } 1 + \text{roll } 2 \geq 6$

$\text{roll } 1$ same as $\text{roll } 2$ but sum is $\geq x$