Studio 2 - REDOWNLOAD CODE FROM CANVAS WHEN YOU GET HERE

Variables, Math, & If Statements

Goals for Today

- 1. More practice changing variables
- 2. Practice translating math to code
- 3. Intro to If statements



PART 1: Mathematical Expressions in Python

Operator	Name	Example
+	Addition	x + y
-	Subtraction	x - y
*	Multiplication	x * y
/	Division	x / y
%	Modulus	x % y
**	Exponentiation	x ** y
//	Floor division	x // y

PART 2: Gallery Wall

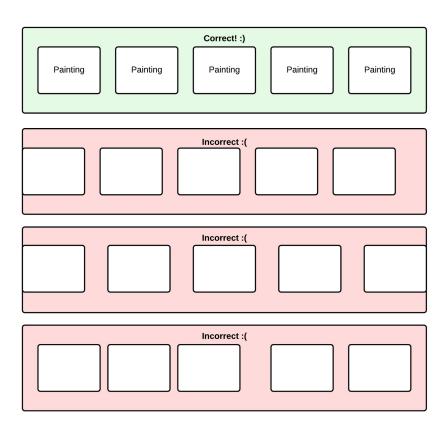
Given:

- a number of paintings of a certain size
- a set wall size

Calculate:

- Will the paintings fit on the wall?
 - o If so, how much space needs to be between each painting

PART 2: Gallery Wall



- If statements work by checking a given condition, and if that condition is true, the code below will be executed
- If the condition is false the code will continue running and pass the code within the if statement.
- For example:

```
if x == 2:
    print("hi")
print("bye")
```

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print("bye")
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For example:

```
if x == 2:
    print("hi") Will NOT print "hi"

print("bye") Will exit and print "bye"
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    wlll NOT ENTER ELSE
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    print("hi")
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• What if you only want your code to print "bye" if x is not equal to 2?

Multiple Conditions

- What if you have multiple conditions?
 - Way 1: Multiple If statements
 - Use this if you want to check all conditions regardless if multiple conditions are true
 - The code will go through every condition for each If statement
 - Way 2: If/Elif/Else statements
 - Use this if you want to check the conditions until one is true, then stop checking the rest of the conditions
 - The code will run through the if statements until one condition is true, then exit

```
if x == 2:
    print("hi")

if x%2 == 0:
    print("cat")

print("bye")
```

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if x == 2:
    print("hi")

if x%2 == 0:
    print("cat")

print("bye")
```

```
if x == 2:
    print("hi")

elif x%2 == 0:
    print("cat")

else:
    print("bye")
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