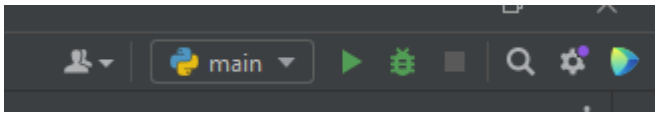
Project 1
Variables, Data Types, and Print Function
We are going to make a program that does some math.

Try running your program to check if it works for each line.

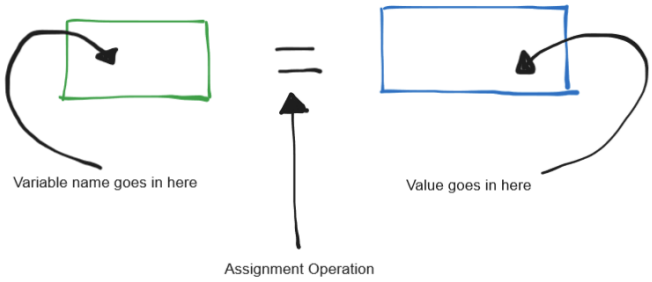
There's a green play button at the top right which is for running the program:



If you see red lines at the bottom after running your program then it means you encountered ERRORS and something went wrong. Try looking back at your code and changing some things.

Each step represents its own line in the program.
Step 0: Create a new python project in your IDE (**I will help**)

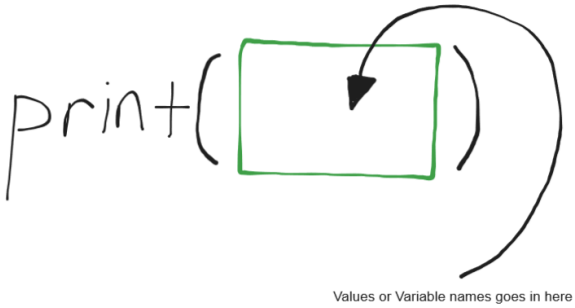
Step 1: Create a variable named *Length* assigned to an **integer** value



Hint: Integers are ..., -2, -1, 0, 1, 2,...

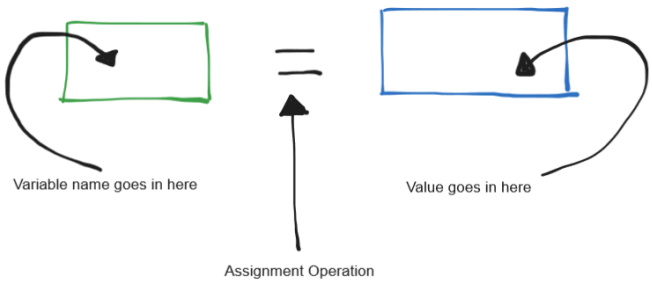
Step 2: Create a variable named *Perimeter* assigned to the value of ***Length* * 4**

Step 3: Print out the following **string** value: "The Perimeter is:" **using the print() function**

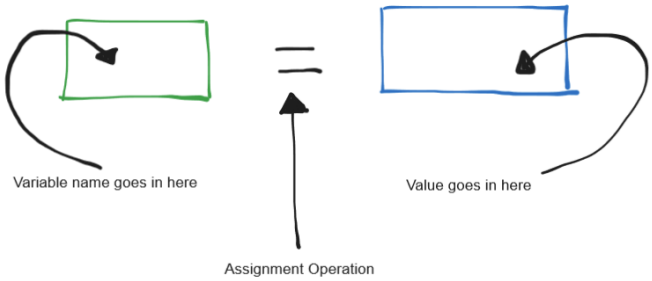


Step 4: Print out the value assigned to the *Perimeter* variable **using the print() function**

Step 5: Now change the value assigned to the *Length* variable to a **float** value



Hint: Floats are ..., -3.6, -34933.3420, 5.0, 2123.6, 324234234.5, ..."
Step 6: Create a variable named *Area* assigned to the value of ***Length * Length***



Step 7: Print out the following **string** value: "The Area is:" **using the print() function**
EX: print("HELLO WORLD!") **# TRY THIS!** This prints out HELLO WORLD!

Step 8: Print out the value assigned to the *Area* variable **using the print() function**

CONGRATULATIONS! You made a program to calculate the Perimeter & Area of Square given the Length!!!

Practice

We are going to make a program that calculates the Area and Circumference of a circle given the radius.

NOTE: The **#** symbol is for making single line comments. Anything *right* of the **#** symbol is invisible to your program on that line only.
Make sure to write your code to the left of the **#** symbol.

Step 0: Create a new python file in your IDE (**I will help**)

Step 1: *Copy the following code below*

```
# Fill in the missing pieces of code to make the program work!

Radius1 = # <---- Place the appropriate value for a radius here
PI_01 = 3.14

# Circumference of a Circle = 2 * PI * Radius
Circumference = # <---- Write the formula to calculate the circumference here

print("The Radius for this calculation is: " + Radius1)
print() # Print out the area by writing something in between the parenthesis




"""
Radius2 = # <---- Place the appropriate value for a radius here
PI_02 = 3.14159

# Area = PI * Radius * Radius
Area = # <---- Write the formula to calculate area here

print("The Radius for this calculation is: " + Radius2)
print() # Print out the area by writing something in between the parenthesis
"""
```

Step 2: Try your best to fill in the code line by line. Read the comments and enter what you think is best.

Step 3: Run the program with the green play button to top right to check if it works once you feel it is done. Call if you ever get stuck.

Step 4: Call for my assistance when your program works so I can uncomment the next section for you to work on.

Try It On Your Own -- Call For Help If You're Stuck

The program is meant to be like a calculator. It will show the results of *adding two numbers*, *subtracting two numbers*, *multiplying two numbers*, and *dividing two numbers*.

Step 0: Create a new python file in your IDE

Step 1: Create a variable named *Number01* assigned to a numerical value (Integer, Float)

Step 2: Create a variable named *Number02* assigned to a numerical value (Integer, Float)

Step 3: Create a variable named *Sum* assigned to the result of adding *Number01* and *Number02* together

Step 4: Print out the *Sum* with a message like, "The result of adding two numbers is *Sum*"
Hint: print("The result of adding two numbers is " + ___) # Something goes in ____

Step 5: Create a variable named *Diff* assigned to the result of subtracting *Number01* and *Number02*

Step 6: Print out the *Diff* variable like in step 4. **EX:** "The result of subtracting two numbers is *Diff*"

Step 7: Create a variable named *Product* assigned to the result of multiplying *Number01 and Number02*

Step 8: Print out the *Product* variable like in step 4. **EX:** "The result of multiplication is *Product*"

Step 9: Create a variable named *Quotient* assigned to the result of dividing *Number01* and *Number02*

Step 10: Print out the *Quotient* variable like instep 4. **EX:** "The result of division is "*Quotient*"

YOU DID IT!!!! You finished the program to do all sorts of MATH!!!!

Try going back and changing the values assigned to *Number01* and *Number02* and running your program again. This will get different results!!!! WOW :)