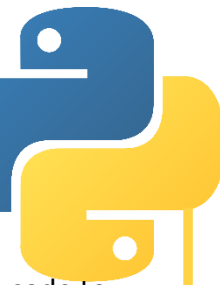# PYTHON DAY 1: CHALLENGES

TWO NAMES (_ / 1)
In class, we saw how to print a name received by a user using "input()". Using that knowledge, write code to do the following:

- [ ] Ask the user for two names and print out "Hello, ___ and ___" (printing the names instead of the blanks).

HINT: If you don't know how to start, look back at helloName.py when we asked for one name.

MATH CHECKER (_ / 1)
Write code that does that following:

- [ ] Ask the user a math problem and tell them if their answer is correct or incorrect.

HINT: When you get the user's input, it will be a string. To change it to a number, use myNumber = int(userInput). Also, you don't have to change their answer to a number to see if they are correct

PRINTER FUNCTION (_ / 2)
Today we saw how to print 3 bunnies using Python functions. Use that knowledge to do the following:

- [ ] Create a function that prints a message to the console.
- [ ] Call the function so that the message is printed when you run the code.

IF WITH MATH (_ / 3)
The code below does not print anything. Make the following changes to it:

- [ ] Change the if statement so that it will print what it's supposed to.
- [ ] Then, change it to something different that will still print "Yay math :)"
- [ ] Experiment with different if statements to see if they are true or false.

CODE:

```python
if(2 + 2 == 5):
    print("Yay math! :)")
```

MOVIE THEATER (_ / 4)
You're creating a mini python program that will sell tickets. Your code needs to do the following:

- [ ] Ask the user for their age.
- [ ] If the user is under 14, print "You are too young to see this movie"
- [ ] If the users age is between 14 a 16 print "You might be mature enough but ask your parents first"
- [ ] If the users age is 17 and up print "You are old enough for this movie have some popcorn on the house"

TABLE FOR 2? (_ / 3)

You and your friends went to dinner and now it's time to pay. Everyone agrees to spit the bill evenly, but they need you to code a Python project that will do this. Your code needs to do the following:

- ☐ Ask the user how many people were dining
- ☐ Ask the user how much was their total bill was
- ☐ Tell the user how much each person has to pay

HINT: Divide the total bill by the number of people dining

BONUS: Include the tax into how much each person pays (20% tax)

MONEY IN THE BANK (_ / 3)

Welcome to the Hyland International bank! We need you to code a mini ATM using Python. Your code should do the following:

- ☐ Ask the user how much money they would like to withdraw.
- ☐ If the user asks for more money than they have in their account, let them know that they can't take that much money out
- ☐ After the user takes money out of their account, tell them their new balance

NOTE: start each person with 200 dollars.

GUESS MY NUMBER (_ / 4)

It's time to use your python knowledge to make a mini game! Write python code that does the following:

- ☐ Have the computer come up with a random number
- ☐ Have the user enter a number.
- ☐ If the user guesses right, print "Yah you guessed my number"
- ☐ If the user guesses wrong print "Better Luck Next Time"

HINT: This site shows how to generate random numbers in Python:
https://stackoverflow.com/questions/3996904/generate-random-integers-between-0-and-9

BONUS: Have the user keep guessing until they guess the number correctly

BONUS: Have the user decide what the range is. Make your code accept 2 numbers from the user. The lowest number should be the lowest number that your computer can generate. The highest number should be the highest number the computer can generate.

CONCERT TICKET PRICES (_ / 3)

You've been asked to code a ticketing system for Beyoncé's next concert at Hyland Expo Center. Your code needs to do the following:

- ☐ Ask the user for their age
- ☐ Ask the user if they want VIP access
- ☐ Tell the user how much their ticket costs

NOTE: Here are the ticket prices your code will need to use:

Regular tickets are $20

Kids under 13 are $10

Seniors (60 and older) are $15

VIP access doubles the ticket price.

BONUS X2: Remember how many VIP tickets have been sold. Only 100 can be sold! One way to do this is to save the number of VIP tickets sold to a text file, and then update the number whenever someone purchases a VIP ticket.

HINT: Here is how you write and read a file in Python: http://www.pythonforbeginners.com/files/reading-and-writing-files-in-python

FUNCTION WITH PARAMETERS (_ / 2)

Today we saw how to print 3 bunnies using Python functions. We can code functions that accept values from earlier in our code. Use that knowledge to do the following:

- ☐ Create a function that takes two numbers as parameters and adds them together.
- ☐ Call your function to solve an addition problem, then print out the answer.

HINT: This function takes a word (string) from the user and prints the word with "You said: " in front:

```python
def printThis(str):
    print("You said: " + str)
    return;
```

TWO FUNCTIONS NUMBER GAME (_ / 5)

Using our immense knowledge of functions, let us make something useful! That's right, a mini calculator! Your code should do the following:

- ☐ Ask the user to input two numbers
- ☐ Ask the user if they want to add or multiply the two numbers
- ☐ If they choose "add", add the numbers
- ☐ If they choose "multiply" multiply the numbers
- ☐ Display the final answer to the user.

HINT: Ask the user for the first number, then ask for the second number

BONUS: Add the numbers in a function called add, and multiply the numbers in a function called multiply

FINAL SCORE!:

- Every 2 points = 1 piece of candy
- If you get 30 points, you get 1 piece of Hyland swag!

Points Earned: __ / 31