# 🐍 Python Homework Mission: The Data Detective

**Instructions:**

- You will complete this homework in **Google Colab**.
- For each task, create a **new code cell** and complete the entire task in that single cell.
- When you are finished, go to File > Download > Download .ipynb. This is the file you will submit on Google Classroom.

## Task 1: The String Challenge 📝

Your first mission is to use strings.

1. Use the input() function to ask for your favorite superhero's name.
2. On the next line, use a print() command to create a sentence that tells the computer their answer and a fun fact about that superhero.
3. In a third line, use the type() function to check the data type of your input.
    - Example: print(type("Batman"))

*Example:*

```
input("Who is your favorite superhero?")
print("My favorite superhero is Batman, because he has a lot of gadgets!")
print(type("Batman"))
```

## Task 2: Number Detective 🔢

Now, let's work with numbers.

1. In one print() command, type an **integer** and a **float** number separated by a comma.
2. In a second print() command, use the type() function to check the data type of the **integer** you just wrote.
3. In a third print() command, use the type() function to check the data type of the **float** you just wrote.
4. In a final print() command, show the result of a simple math problem that uses an **integer** and a **float** together, like 5 * 2.5. What kind of data type is the answer?

## Task 3: Boolean Brain Teasers 🤔

This task is all about **True** and **False**.

1. In the first print() command, type a question that makes a statement that is **True**. Use the > or < signs to compare two numbers.
    - *Example:* print(10 > 5)

2. In the second print() command, type a question that makes a statement that is **False**. Use the > or < signs to compare two numbers.
    - *Example:* print(100 < 50)
3. In the third print() command, print a sentence using three comma-separated words. The last word should be the True boolean value.
4. In the final print() command, try to print the word False **without** quotes and see what happens. This is a very important concept!

## Task 4: The Ultimate Mix-Up! 🚀

For your final challenge, combine all the data types and functions you've learned into a single code cell.

1. Create a print() command that prints a sentence about your day using the **\n** to create two new lines.
2. Use the input() command to ask for your favorite snack.
3. Create another print() command that prints a simple math problem that uses both an integer and a float.
4. Finally, print a boolean statement that is True.

Good luck, detectives!