ICE 1: Review of Python (Individual)

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Setting up the python Project:

You are required to save the file as ICE1_firstname.py. Failure to follow this naming format makes it more difficult for me to download and grade your solution, so attention to this detail is appreciated.

Program Requirements:

The aim of this ICE is to create a simple python application in selected IDE. For this project, were going to be writing a program to analyze some movie data.

We're going to finding the average budget of the films in our data set, and we're going to identify high budget films that exceed the average budget we calculate.

The brief:

Below you'll find a list which contains the relevant data about a selection of movies. Each item in the list is a tuple containing a movie name and movie budget in that order:

```python
movies = [
            ("Eternal Sunshine of the Spotless Mind", 20000000),
            ("Memento", 9000000),
            ("Requiem for a Dream", 4500000),
            ("Pirates of the Caribbean: On Stranger Tides", 379000000),
            ("Avengers: Age of Ultron", 365000000),
            ("Avengers: Endgame", 356000000),
            ("Incredibles 2", 200000000)
        ]
```

For this project, your program should do the following:

o Calculate the average budget of all movies in the data set.

o Print out every movie that has a budget higher than the average you calculated. You should also print out how much higher than the average the movie's budget was.

o Print out how many movies spent more than the average you calculated.

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Your program should allow users to add more movies to the data set before running the calculations.

You can do this by asking the user how many movies they want to add, which will allow you to use a for loop and range to repeat some code a given number of times. Inside the for loop, you can write some code that takes in some user input and appends a movie tuple containing the collected data to the movie list. The expected output is provided for your reference.

Expected Output:

```
Enter how many new movies you wish to add: 2
Enter new movie name: The Father
Enter new movie budget: 456790234
Enter new movie name: Raya and The Last Dragon
Enter new movie budget: 1234567

The average budget of the movies is:  199058311
Pirates of the Caribbean: On Stranger Tides cost $ 379000000 : $179941689 over average.
Avengers: Age of Ultron cost $ 365000000 : $165941689 over average.
Avengers: Endgame cost $ 356000000 : $156941689 over average.
Incredibles 2 cost $ 200000000 : $941689 over average.
The Father cost $ 456790234 : $257731923 over average.
There were 5 movies with over average budgets.

Process finished with exit code 0
```

Things to Explore:

You are welcome to explore beyond the mandatory requirements if you wish.

General Requirements of the submission:

- Include an opening comment with **your full name, Date, Type of document and a short description.**
- Attach the unzipped source code file(s) (*.py*) to the assignment folder.
- Make sure you are following PEP 8 standard guidelines of coding.
- Include appropriate comments in the program.