Python-1 Homework

1. 🏆 **Create a variable `team_name` and assign your favorite IPL team name. Then create a variable `wins` and assign how many matches they won. Print a sentence like:**

```
"Chennai Super Kings have won 10 matches this season!"
```

2. 🧮 **Create variables for runs scored in 3 matches by a player: `match1`, `match2`, `match3`. Calculate total and average runs and print:**

```
"Virat Kohli scored a total of 210 runs with an average of 70.0".
```

3. 📊 **Declare a string variable `top_scorer = 'Shubman Gill'` and print the number of characters in his name using `len()`.**

4. 💬 **Use `format()` or f-strings to display this line:**

```
"In today's match, {player} hit {fours} fours and {sixes} sixes!"
```

5. 🔄 **Ask user to input the name of two IPL teams and swap them without using a third variable. Print swapped values.**

6. 💡 **Create a variable `speed_of_light = 299792458` (in m/s) and calculate how far light travels in 5 seconds. Print the distance.**

7. 🧲 **Create a variable `charge = -1.6e-19` and use `type()` to print its data type. Then convert it to a string and print its type again.**

8. 🔬 **Let `atom_name = "Oxygen"` and `atomic_number = 8`. Create a sentence like:**

```
"Oxygen has atomic number 8 and is essential for life."
```

9. 🤖 **Assign your favorite tech company to a variable `company` and use `upper()` to print it in uppercase.**

10. 📱 **Ask user to input the name of a gadget (like 'iPhone 15'), use `len()` to count characters and print the result.**

11. 📏 **Create a variable `side = 6` and compute the area and perimeter of a square. Print the result.**

12. 🧮 **Create a variable `base = 10`, `height = 5` and calculate the area of a triangle.**

13. 🧲 **Create a variable `mass = 60` and `gravity = 9.8`. Compute the weight (mass × gravity) and print in Newtons.**

14. 🧠 **Use `round()` to round π = 3.14159 to 2 decimal places and print it.**

15. 🧮 **Use `pow(base, exponent)` to calculate `2^8` and print:**

```
"2 raised to the power 8 is 256"
```

16. 🌐 **Ask the user for their internet speed in Mbps. Convert it to MBps (Megabytes per second) by dividing by 8 and print the result.**

17. 🔐 **Ask the user for their password input and print the number of characters using `len()`, but hide the actual password in the output.**

18. 🕹️ **Declare a variable `game_name = "Minecraft"`, and use slicing to print only the first 4 letters.**

19. 👩‍🏫 **Create 3 variables: `math = 92`, `science = 85`, `english = 88`. Calculate total and average marks and print the percentage.**

20. 🧠 **Ask the user to enter their name and favorite subject. Use `.capitalize()` to neatly format and print:**

```
"Hi Rahul! It's great to know you love Physics."
```