Python Fundamentals (Assignment1)

Assignment Problems

Q1. Write a program that asks the user for their name and age, then prints a sentence like:

```
Hello Shradha, you are 21 years old!
```

Q2. Take two numbers as input from the user and print their **sum, difference, product, and quotient**.

Q3. Ask the user to enter two integers and one float. Convert them all to floats and print their average.

Q4. The user enters a string containing a number (e.g., `"45"`). Convert it to:

- an integer
- a float
- a string again

  Print all three values with their types.

Q5. Evaluate and print the result of the following expression:

```
x = 10 + 3 * 2 ** 2
```

Based on what you learnt in the lecture explain why the output is what it is.

Q6. Write a program to **swap** values of two numbers entered by the user.

Q7. Ask the user for a temperature in Celsius (string input). Convert it to `float`, then calculate and print temperature in Fahrenheit.

Conversion formula: $FahrenheitTemp = (CelsiusTemp * (9/5)) + 32$

Q8. Take the radius (r) as user input and print the area.

Use the formula: $Area = \pi * r^2$ (value of π = 3.14)

Q9. Ask the user for: Principal (P), Rate (R), Time (T). Convert all to `float` and compute simple interest:

$$SI = (P * R * T)/100$$

Q10. Take a decimal number as input (like `45.78`) and output its:

- integer part – `45`
- fractional part – `.78`