

# 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.

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**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  $\pi = 3.14$ )

**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**