Python Practical Assignment

Section A - Class & Constructor Based Programs

Q1. Write a Python program using a class and constructor to accept two numbers and display their addition, subtraction, multiplication, and division.

Q2. Write a Python class to calculate and display the area and perimeter of a rectangle using constructor initialization.

Q3. Write a Python class that calculates Simple Interest using the formula (P x R x T) / 100. Use constructor to accept P, R, and T.

Q4. Write a Python class named Circle to find the area and circumference of a circle using the radius given through constructor.

Q5. Write a class TimeConvert with a constructor that accepts minutes and displays the equivalent hours and remaining minutes.

Q6. Write a class SwapNumbers that accepts two numbers through a constructor and displays their values before and after swapping.

Q7. Write a Python class Marks to accept three subject marks through constructor and display total and average marks.

Q8. Write a class Time that takes total seconds as input and displays it in the format: Hours : Minutes : Seconds.

Q9. Write a Python class FullName to accept first name and last name and display the full name using a method.

Q10. Write a Python class Bill to calculate and display total amount after adding 5% GST to the given base price.

Section B - Constructor & Single Inheritance Based Programs

Q11. Create a class Student with a constructor that accepts name and age and displays them using a method.

Q12. Create a class Employee that accepts name and salary through a constructor and displays the same using a method.

Q13. Create a base class Father with a method show_father(). Create a derived class Son that inherits from Father and adds a method show_son(). Demonstrate inheritance using an object of Son.

Q14. Write a program using constructor chaining where a base class constructor executes first, followed by a derived class constructor. (Use super() to call parent constructor.)

Q15. Create a class Book with title and author. Create another class Library that inherits from Book and adds publisher name. Display all the details using appropriate methods.

Section C - Git Practice

For each question:

1. Create a Python file (e.g., Q1_addition.py)
2. Run and test your program
3. Save and commit it to your GitHub repository using:

```
git add Q1_addition.py
git commit -m "Added Q1 addition program"
git push origin main
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