1. Write a Python class that has two methods: get_String and print_String , get_String accept a string from the user and print_String prints the string in upper case.
2. Write a Python program to create a calculator class. Include methods for basic arithmetic operations.
3. Write a Python class named Circle constructed from a radius and two methods that will compute the area and the perimeter of a circle.
4. Write a Python class to implement pow(x, n).
5. Write a Python program to create a class representing a shopping cart. Include methods for adding and removing items, and calculating the total price.
6. Write a Python class Employee with attributes like emp_id, emp_name, emp_salary, and emp_department and methods like calculate_emp_salary, emp_assign_department, and print_employee_details.
   Sample Employee Data:
   "ADAMS", "E7876", 50000, "ACCOUNTING"
   "JONES", "E7499", 45000, "RESEARCH"
   "MARTIN", "E7900", 50000, "SALES"
   "SMITH", "E7698", 55000, "OPERATIONS"

   - Use 'assign_department' method to change the department of an employee.
   - Use 'print_employee_details' method to print the details of an employee.
   - Use 'calculate_emp_salary' method takes two arguments: salary and hours_worked, which is the number of hours worked by the employee. If the number of hours worked is more than 50, the method computes overtime and adds it to the salary. Overtime is calculated as following formula:
   - overtime = hours_worked - 50
     Overtime amount = (overtime * (salary / 50))

7. Write a Python class BankAccount with attributes like account_number, balance, date_of_opening and customer_name, and methods like deposit, withdraw, and check_balance.

8. Create a class hierarchy for different types of geometric shapes, including circles, rectangles, and triangles, using inheritance.

Tasks:

   A. Define a base class called Shape with common attributes like colour and area.
   B. Implement subclasses for specific shape types such as Circle, Rectangle, and Triangle. Each subclass should inherit from the Shape class.
   C. Incorporate additional attributes and methods specific to each shape type. For example, a Circle class might have attributes like radius and methods like calculate_area.

D. Use inheritance to create subclasses representing variations within each shape type. For example, within the Rectangle class, create subclasses for Square and Parallelogram.
E. Implement methods or attributes in the subclasses to demonstrate how inheritance allows for the sharing of attributes and methods from parent classes.
F. Create instances of the various shape classes and test their functionality to ensure that attributes and methods work as expected.

9. Create a Bus child class that inherits from the Vehicle class. The default fare charge of any vehicle is seating capacity * 100. If Vehicle is Bus instance, we need to add an extra 10% on full fare as a maintenance charge. So total fare for bus instance will become the final amount = total fare + 10% of the total fare.
   Note: The bus seating capacity is 50. so the final fare amount should be 5550.
   You need to override the fare() method of a Vehicle class in Bus class.