

Department of Computer Science

Sub.:MCA103(Python)

Student Reg.No.:_____

Year : 2024-25

Subject Teacher : Dr. Ajay Parikh

Unit 3: Object Oriented Programming

1.	Write a Python program to create a person class. Include attributes like name, country and date of birth. Implement a method to determine the person's age.					
2.	Write a python programme to create two classes Person (parent class) and Employee (Child Class). The Employee class inherits from the Person class. Use the methods of the person class through the employee class as seen in the display function. A child class can also modify the behaviour of the parent class as seen through the details() method.					
3.	Create a parent class Vehicle with a method speed(). Create subclasses Car, Bike, and Train, each implementing the speed() method to return a unique message. Write a function show_speed (vehicle) to demonstrate polymorphism.					
4.	Write a python programme to create a BankAccount class with the following: 1. Private attributes: __account_number, __balance. 2. Methods: deposit(amount) to add money to the account. withdraw(amount) to withdraw money (ensure sufficient balance). get_balance() to check the account balance. 3. Create an instance of the class, deposit and withdraw money, and print the updated balance. demonstration of Encapsulation.					
5.	Define a class named Shape and its subclass Square. The Square class has an init function which takes a length as argument. Both classes have a area function which can print the area of the shape where Shape's area is 0 by default. (To override a method in super class, we can define a method with the same name in the super class.)					