GLS University

Faculty of Computer Application & IT

TyiMSc-IT, Sem-V

221601507 Practicals on PHP

"Class and Object" Lab Session Exercise

1. Employee Management (Class & Objects)

Create a class Employee with attributes name, id, salary.

- Create methods to set and get details.
- Create objects for 3 employees and display their details.

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2. Bank Account System (Constructors & Methods)

Create a BankAccount class with attributes accountNumber, balance.

- Constructor initializes account with balance.
- Methods: deposit(), withdraw(), and getBalance().
- Create 2 accounts and perform transactions.

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3. Product Inventory (Static & Constants)

Create a class Product with attributes name, price.

- Add a static property count to track number of products created.
- Define a constant DISCOUNT = 0.1.
- Method to calculate final price after discount.
- Show total number of products created.

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4. Student Grade System (Inheritance)

Create a class Student with attributes name, rollNo, and marks.

- Create a subclass Result that calculates grade (A, B, C, Fail) using marks.
- Display details and grade.

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5. Vehicle Showroom (Polymorphism & Inheritance)

Create a base class Vehicle with method displayInfo().

- Subclasses: Car, Bike, Truck overriding the method.

- Store all objects in an array and display details using a loop.

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6. Library Management (Abstract Class)

Create an abstract class LibraryItem with methods getDetails() and borrowItem().

- Subclasses: Book and Magazine implementing methods.

- Demonstrate borrowing items.

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7. Online Payment System (Interface)

Create an interface PaymentGateway with method processPayment($amount).

- Implement it in classes PayPal and CreditCard.

- Create objects and process payments.

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8. College Management (Final Keyword)

Create a base class Department with method displayDept().

- Use final keyword on method to prevent overriding.

- Create subclass CSEDepartment and attempt overriding (should show restriction).

- Demonstrate usage.

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9. E-Commerce Cart System

Create a class CartItem with name, price, quantity.

- Add a method getTotalPrice().

- Create multiple cart items and calculate grand total.

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10. Shape Area Calculator (Abstract + Interface)

- Abstract class Shape with abstract method area().

- Interface Printable with method printDetails().

- Implement Circle, Square, Triangle.

- Demonstrate with multiple shapes in an array, showing polymorphism.