

POLYMORPHISM

1. Implement a payment gateway system with multiple payment techniques (UPI, Card, NetBanking) using polymorphism.
2. Design a drawing application where different shapes (Circle, Rectangle, Triangle) implement a common draw() method.
3. Create a notification system that sends messages via Email and SMS using the same interface.
4. Create a multimedia player that plays audio and video using a single play() method.
5. Develop a transportation system that includes different vehicles (Car, Bike, Bus) with a common move() method.
6. Design a billing system that generates invoices for different user types (Retail, Wholesale, Online) using the same method.
7. Implement a shopping cart that handles different types of discount strategies (percentage, fixed amount, buy-one-get-one).
8. Create a social media app where different post types (Image, Video, Text) have a common display() method.
9. Create a banking system where account types (Saving, Current, Loan) use a common interest calculation method.
10. Implement a restaurant ordering system where various food items (Pizza, Burger, Salad) share a cook() method.
11. Design a vehicle rental system where each vehicle type calculates rental cost differently but via a common method.
12. Build a logistics app where different carriers (DHL, FedEx, UPS) implement the same ship() method.
13. Implement a chatbot where various bots (WeatherBot, NewsBot, JokeBot) implement the same reply() interface.
14. Create a stock market simulator where different asset types (Stock, Bond, Crypto) implement a value_change() method.
15. Develop a university system where staff types (Professor, Admin, Support) implement a work_schedule() method.
16. Design an e-learning app where content types (Video, PDF, Quiz) implement a start() method.
17. Create a travel booking system where booking types (Flight, Hotel, Cab) use a common book() method.

18. Simulate a zoo management system where animals like Lion, Elephant, and Snake implement a common 'make_sound()' method.
19. Create a meal ordering system where different meal types (VegMeal, NonVegMeal, VeganMeal) use 'prepare_meal()'.
20. Build a ride-sharing app where Vehicle types (Auto, Bike, Car) share a common 'calculate_fare()' method.
21. Develop a tax calculator with Employee, Freelancer, and BusinessOwner having a common 'compute_tax()' method.

OPERATOR OVERLOADING

1. Create a Fraction class and overload '+', '-', '*', '/' for basic fraction arithmetic.
2. Build a Score class where '+= ' adds new scores and '>' checks high scores.
3. Implement a Temperature class and overload '-' for temperature difference and '>' to compare
4. Implement a Playlist class that uses '+' to combine songs and 'len()' to count them.
5. Create a Book class and overload '==' and '<' to compare books by price and title.
6. Design a CurrencyConverter class that adds amounts of different currencies after conversion.
7. Create a GameCharacter class and overload '+' to merge strength or health points.
8. Design an Inventory class that supports '+' to combine items and '-' to remove them.
9. Implement a User class and overload '==' to compare based on email and user ID.