

Week 3 Java Practice questions – Classes and Object Creation

1. Create a class named Car with the following attributes:

- model (String)
- year (int)
- color (String)

Create a method display CarInfo() to print the car's information. Create two Car objects and display their information.

2. Create a class named Rectangle with attributes width and height (both double). Create methods to calculate the area and perimeter of the rectangle. Create a Rectangle object, set its dimensions, and calculate and print its area and perimeter.

3. Create a class named Student with attributes name, rollNumber, and marks. Create a method calculateGrade() to calculate the grade based on marks. Create a Student object, set its details, calculate the grade, and print the student's information along with the grade.

4. Create a class named BankAccount with attributes accountNumber, accountHolderName, and balance. Create methods to deposit and withdraw money. Create a BankAccount object, perform deposit and withdrawal operations, and print the final balance.

5. Create a class named Product with attributes name, price, and quantity. Create a class named ShoppingCart with an attribute items (ArrayList of Product objects).

Implement the following methods in the ShoppingCart class:

- addProduct(Product product): Adds a product to the cart.
- removeProduct(Product product): Removes a product from the cart.
- calculateTotal(): Calculates the total price of all items in the cart.

Constructor Creation(Default and Parameterized)

1. Create a class named Car with the following attributes:

- model (String)
- year (int)
- color (String)

Create a constructor to initialize these attributes. Create a method displayCarInfo() to print the car's information. Create two Car objects and display their information.

2. Create a class named Person with attributes name, age, and address. Create a default constructor and a parameterized constructor. Create a method displayPersonInfo() to print the person's information. Create two Person objects, one using the default constructor and the other using the parameterized constructor. Display information for both objects.