1. Write a Java program to create a class called Person with private instance variables name, age. and country. Provide public getter and setter methods to access and modify these variables.
2. Write a Java program to create a class called Rectangle with private instance variables length and width. Provide public getter and setter methods to access and modify these variables.
3. Write a Java program to create a class called Employee with private instance variables employee\_id, employee\_name, and employee\_salary. Provide public getter and setter methods to access and modify the id and name variables, but provide a getter method for the salary variable that returns a formatted string.
4. Write a Java program to create a class called Circle with a private instance variable radius. Provide public getter and setter methods to access and modify the radius variable. However, provide two methods called calculateArea() and calculatePerimeter() that return the calculated area and perimeter based on the current radius value.
5. Write a Java program to create a class called Car with private instance variables company\_name, model\_name, year, and mileage. Provide public getter and setter methods to access and modify the company\_name, model\_name, and year variables. However, only provide a getter method for the mileage variable.
6. Write a Java program to create a class called Student with private instance variables student\_id, student\_name, and grades. Provide public getter and setter methods to access and modify the student\_id and student\_name variables. However, provide a method called addGrade() that allows adding a grade to the grades variable while performing additional validation.
7. Write a Java program to create a class called “Book” with private instance variables title, author, and price. Provide public getter and setter methods to access and modify these variables. Add a method called applyDiscount() that takes a percentage as a parameter and reduces the price by that percentage.
8. Write a Java program to create a class called Smartphone with private instance variables brand, model, and storageCapacity. Provide public getter and setter methods to access and modify these variables. Add a method called increaseStorage() that takes an integer value and increases the storageCapacity by that value.
9. Write a Java program to create a class called Desktop with private instance variables brand, processor, and ramSize. Provide public getter and setter methods to access and modify these variables. Add a method called upgradeRam() that takes an integer value and increases the ramSize by that value.
10. Write a Java program to create a class called House with private instance variables address, numberOfRooms, and area. Provide public getter and setter methods to access and modify these variables. Add a method called calculatePrice() that returns the price of the house based on its area and a price per square meter.
11. Write a Java program to create a class called Account with private instance variables accountNumber, accountHolder, and balance. Provide public getter and setter methods to access and modify these variables. Add a method called deposit() that takes an amount and increases the balance by that amount, and a method called withdraw() that takes an amount and decreases the balance by that amount.
12. Write a Java program to create a class called Movie with private instance variables title, director, and duration. Provide public getter and setter methods to access and modify these variables. Add a method called getMovieDetails() that returns a formatted string containing the movie details.