1. Write a Java program that initializes an integer array with the values {5, 10, 15, 20, 25}. Print the sum of all elements in the array.
2. Write a Java program that takes a string input from the user and prints the string in reverse order. For example, if the input is "hello", the output should be "olleh".
3. Define a base class Animal with a method makeSound(). Create a derived class Dog that extends Animal and overrides the makeSound() method to print "Woof". Then, create another class Bulldog that extends Dog and overrides makeSound() to print "Growl". Instantiate a Bulldog object and call its makeSound() method.
4. Define a base class Shape with a method draw(). Create two derived classes Circle and Rectangle that override the draw() method to provide specific implementations for drawing a circle and a rectangle, respectively. Demonstrate polymorphism by creating an array of Shape references and initializing it with Circle and Rectangle objects. Iterate over the array and call the draw() method on each shape.
5. Design a class Employee with private fields name (String) and salary (double). Provide two constructors: one that initializes both fields and one that initializes only the name field with a default salary of 50000. Include methods for setting and getting the name and salary, and overload the setSalary method to accept either a double or a String representing the salary. Implement and demonstrate encapsulation by creating Employee objects and using the constructors and methods.