WEEK 11 lab

1. There are two types of people in the school, teachers and students, and the postgraduate students are both teachers and students, and their management of students and the responsibility management of teachers are reflected in them.
   1) Design two information management interfaces StudentInterface and TeacherInterface. Among them, the StudentInterface interface includes the setFee() method and the getFee() method, which are used to set and obtain the student's tuition fees respectively; the TeacherInterface interface includes the setPay() method and the getPay() method, which are used to set and obtain the teacher's salary respectively.
   2) Define a graduate class Graduate, which implements the StudentInterface and TeacherInterface interfaces. The member variables it defines are name (name), sex (gender), age (age), fee (tuition fee per semester), pay (monthly salary), and Add a method f() that returns a float, this method is used to calculate the annual income. Its annual income algorithm is: total annual salary minus one year's tuition.
   3) Create a graduate student named "TomGreen" in the test class, and count his annual income and tuition according to the tuition and monthly salary income of each semester. If the income minus tuition is less than 2,000 yuan, output "Need loan" information

2. Write a Java program that checks if a given string is a palindrome (reads the same forwards and backwards).

Requirements:
   1) Prompt the user to enter a string.
   2) Remove any non-alphanumeric characters and convert the string to lowercase.
   3) Determine if the cleaned string is a palindrome and print the result.

3. **Task:** Create a superclass Employee with subclasses Manager and Developer. The Employee class should have attributes like name and salary, while the Manager class should have an additional attribute for department.

Requirements:
   - Implement a method in Employee to print the employee details.
   - Override this method in subclasses to display additional information.
   - Demonstrate polymorphism by creating a list of Employee objects and printing their details.