# EXERCISES

1. Define a class named Account with details such as acc-no, holder's name, acc-type, balance. Use the following methods:
   Credit: to deposit a particular amount
   Debit: to withdraw a particular amount. Make sure that the minimum balance is to be ₹1000 always.
   Balance check: to view the balance.
   Create 2 objects and perform the above transactions.
2. Define a class 'product' with data members pcode, pname and price. Create 3 objects of the class and find the product having the lowest price.
3. Define a class called Employee that includes three data members- employee id, name and a monthly salary. Provide a read method and a display method. Create two Employee objects and display each employee's yearly salary.
4. Define a class to represent complex numbers. Create 2 objects of the class and add them.
5. Define a class named Student with data members such as name, rollno, marks of 3 subjects. Create 3 objects and find out the student who scored the highest marks.
6. Write a program to create a room class, the attributes of this class are roomno, roomtype and roomarea. Create 2 objects of this class using default and parameterized constructors. Display the details of each room.
7. Write a program in Java with class Rectangle with the data fields width, length, area and color .The length, width and area are of double type and color is of string type. Use constructors and the method to find the area. Create two objects of Rectangle and compare their area and color. If area and color both are the same for the objects then display "Matching Rectangles" otherwise display "Non matching Rectangle".

8. Create a class named CPU with attribute price. Create inner class Processor (no. of cores, manufacturer) and static nested class RAM (memory, manufacturer). Create an object of CPU and print information of Processor and RAM.
9. Read 2 matrices from the console and perform matrix addition.
10. Read a matrix from the console and check whether it is symmetric or not.
11. Program to create a class for Employee having attributes eNo, eName eSalary. Read n employ information and Search for an employee given eNo, using the concept of Array of Objects.
12. Define a class named Book with details such as ISBN, title, author, price and publisher. Create an array of 5 book objects. Display the book details after sorting based on title.
13. Define a class for performing string manipulations. Write a menu-driven program to perform the following operations (without using built-in functions):
    a) Count the number of occurrences of each word in the given sentence.
    b) Replace a particular word with another word.
    c) Reverse each word in a sentence.
14. Create a class ‘Employee’ with data members Empid, Name, Salary, Address and constructors to initialize the data members. Create another class ‘Teacher’ that inherit the properties of class employee and contain its own data members department, Subjects taught and constructors to initialize these data members and also include display function to display all the data members. Use array of objects to display details of N teachers.
15. Create a class ‘Person’ with data members Name, Gender, Address, Age and a constructor to initialize the data members and another class ‘Employee’ that inherits the properties of class Person and also contains its own data members like Empid, Company_name, Qualification, Salary and its own constructor. Create another class ‘Teacher’ that inherits the properties of

class Employee and contains its own data members like Subject, Department, Teacherid and also contains constructors and methods to display the data members. Use an array of objects to display details of N teachers.

16. Create classes Student and Sports. Create another class Result inherited from Student and Sports. Display the academic and sports score of a student.

17. Create an interface having prototypes of functions area() and perimeter(). Create two classes Circle and Rectangle which implement the above interface. Create a menu driven program to find the area and perimeter of objects.