Mini-Project Description
Object Oriented Programming with JAVA

MINI-PROJECT 1

Write a package including some classes for a Bank Account Management System. There are 3 classes: Bank, Account and Customer

Bank

Account		Customers

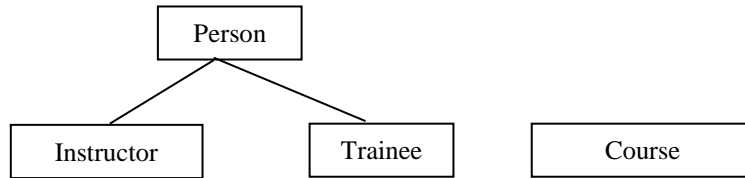Each class has sample fields and methods as follow (add your own code if needed)

- o **Bank:**
  - Fields: BankID, name, location
  - Methods: addBank, editBank …
- o **Account:**
  - Fields: AccountNo, CustomerID, Balance
  - Methods: getBalance, …

- o **Customer:**
  - Fields: ID, name, address, AccountNo
  - Methods: openAccount, closeAccount, depositMoney, withdrawMoney,

Provide a class Test which contains a Main method to execute following functions:
- Open a bank account for a customer
- Execute deposit and withdraw money, display the balance

MINI-PROJECT 2

Write a package including some classes for a Training Management System. There are four classes: Person, Instructor, Trainee and Course. The classes Instructor and Trainee are subclasses of the class Person

```
                    ┌──────────┐
                    │  Person  │
                    └──────────┘
                      ╱      ╲
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        ┌──────────────┐  ┌──────────┐    ┌──────────┐
        │  Instructor  │  │ Trainee  │    │  Course  │
        └──────────────┘  └──────────┘    └──────────┘
```

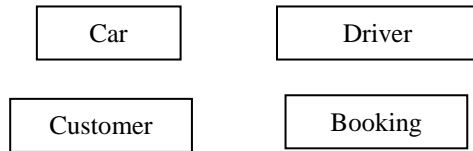Classes have sample fields and methods as follow (add your own code if needed)
- **Person**
    - Fields: *ID, name, dob, address*
- **Trainee**
    - Fields: *InstructorID (contain ID of his/her instructors), CourseID (contain ID of courses he/she is trained), CourseScore*
    - Methods: *addTrainedCourse, setCourseScore, getCourseScore*
- **Instructor**:
    - Fields: *Salary, CourseID, ...*
    - Methods: *getSalary, getTraineeList, ...*
- **Course**:
    - Fields: *CourseID, CourseName*
    - Methods: *insertCourse, removeCourse, editCourse, etc.*

Provide a class Test which contains a Main method to execute following functions:
- Create a training course "OOP" with an instructor and a list of Trainee
- Display information of trainee, get the score of trainees in this course

MINI-PROJECT 3

Write a package including some classes for a Car Booking System. There are four classes: Car, Driver, Customer, Booking

Car	Driver

Customer	Booking

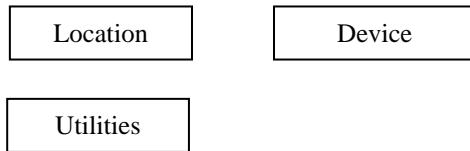Classes have sample fields and methods as follow (add your own code if needed)

- **Car:**
  - Fields: *RegistrationNo, Make, Model, Occupancy, DriverID*
  - Method: getFreeCar(), …
- **Driver:**
  - Fields: ID, name, phoneno, address, rate, …
  - Methods: getFreeDriver(), …

- **Customer:**
  - Fields: ID, name, email, phoneno, …
  - Methods: getCustomerInfor(), ..

- **Booking:**
  - Fields: booking_id, pickup_city, pickup_location, drop_location, CustomerID, DriverID
  - Methods: addbooking(), showbooking()

Provide a class Test which contains a Main method to execute following functions:
- Create a car booking from location A to location B
- Display the booking detail (customer, driver, car)

MINI-PROJECT 4

Write a package including some classes for a Geographical Information Management System. There are 3 classes: Location, Device, Utilities

Location	Device

Utilities

Classes have sample fields and methods as follow (add your own code if needed)

- **Location:**
    - Fields: *longitude, latitude, altitude, ...*
    - Method: getLongitude, getLatitude, getAltitude, setLongitude, …
- **Utilities:**
    - Fields: location, …
    - Methods: distanceBetween(), distanceTo, …
- **Device:**
    - Fields: ID, location, …
    - Methods: getLocation, setLocation, updataLocation, selectLocation, distanceLocationList(),…

Provide a class Test which contains a Main method to execute following functions:
- Select a travel of a device from A to B, update the location of this device during the travelling.
- Compute the distance that the device was travelled and update it in real time.