1.Employee Managenent System

```
public class person {
   String name;
   int age;
   String address;

   person(String name, int age, String address) {
      this.name = name;
      this.age = age;
      this.address = address;
   }
}

   class Employee extends person {
      int id;
      double salary;
      String designation;

      Employee(String name, int age, String address, int id, double salary, String designation) {
         super(name, age, address);
         this.id = id;
         this.salary = salary;
         this.designation = designation;
      }
   }

   class DepartmentEmployee extends Employee {
      String departmentName;
      String managerName;
```

```
    DepartmentEmployee(String name, int age, String address, int id, double salary, String
designation, String departmentName, String managerName) {
        super(name, age, address, id, salary, designation);
        this.departmentName = departmentName;
        this.managerName = managerName;
    }

    void displayDetails() {
        System.out.println("Employee Details:");
        System.out.println("Name: " + name);
        System.out.println("Age: " + age);
        System.out.println("Address: " + address);
        System.out.println("ID: " + id);
        System.out.println("Salary: " + salary);
        System.out.println("Designation: " + designation);
        System.out.println("Department Name: " + departmentName);
        System.out.println("Manager Name: " + managerName);
    }
  }
import java.util.Scanner;

public class EmployeeManagementSystem {
  public static void main(String[] args) {
    DepartmentEmployee[] employees = new DepartmentEmployee[10];
    int employeeCount = 0;
    Scanner scanner = new Scanner(System.in);

    while (true) {
      System.out.println("Employee Management System");
```

```
        System.out.println("1. Add a new employee");
        System.out.println("2. Display employee details");
        System.out.println("3. Update employee information");
        System.out.println("4. Exit");
        System.out.print("Enter your choice: ");

        int choice = scanner.nextInt();

        switch (choice) {
            case 1:

                System.out.print("Enter employee name: ");
                String name = scanner.next();
                System.out.print("Enter employee age: ");
                int age = scanner.nextInt();
                System.out.print("Enter employee address: ");
                String address = scanner.next();
                System.out.print("Enter employee ID: ");
                int id = scanner.nextInt();
                System.out.print("Enter employee salary: ");
                double salary = scanner.nextDouble();
                System.out.print("Enter employee designation: ");
                String designation = scanner.next();
                System.out.print("Enter department name: ");
                String departmentName = scanner.next();
                System.out.print("Enter manager name: ");
                String managerName = scanner.next();

                DepartmentEmployee employee = new DepartmentEmployee(name, age,
address, id, salary, designation, departmentName, managerName);
```

```
    employees[employeeCount++] = employee;
    break;

case 2:

    if (employeeCount == 0) {
        System.out.println("No employees added yet.");
    } else {
        for (int i = 0; i < employeeCount; i++) {
            employees[i].displayDetails();
            System.out.println();
        }
    }
    break;

case 3:

    if (employeeCount == 0) {
        System.out.println("No employees added yet.");
    } else {
        System.out.print("Enter employee ID to update: ");
        int updateId = scanner.nextInt();

        for (int i = 0; i < employeeCount; i++) {
            if (employees[i].id == updateId) {
                System.out.println("Update Options:");
                System.out.println("1. Update Name");
                System.out.println("2. Update Age");
                System.out.println("3. Update Address");
```

```
System.out.println("4. Update Salary");
System.out.println("5. Update Designation");
System.out.println("6. Update Department Name");
System.out.println("7. Update Manager Name");
System.out.println("8. Update All");

System.out.print("Enter your choice: ");
int updateChoice = scanner.nextInt();

switch (updateChoice) {
   case 1:
      System.out.print("Enter new employee name: ");
      employees[i].name = scanner.next();
      break;
   case 2:
      System.out.print("Enter new employee age: ");
      employees[i].age = scanner.nextInt();
      break;
   case 3:
      System.out.print("Enter new employee address: ");
      employees[i].address = scanner.next();
      break;
   case 4:
      System.out.print("Enter new employee salary: ");
      employees[i].salary = scanner.nextDouble();
      break;
   case 5:
      System.out.print("Enter new employee designation: ");
      employees[i].designation = scanner.next();
```

```
            break;
        case 6:
            System.out.print("Enter new department name: ");
            employees[i].departmentName = scanner.next();
            break;
        case 7:
            System.out.print("Enter new manager name: ");
            employees[i].managerName = scanner.next();
            break;
        case 8:
            System.out.print("Enter new employee name: ");
            employees[i].name = scanner.next();
            System.out.print("Enter new employee age: ");
            employees[i].age = scanner.nextInt();
            System.out.print("Enter new employee address: ");
            employees[i].address = scanner.next();
            System.out.print("Enter new employee salary: ");
            employees[i].salary = scanner.nextDouble();
            System.out.print("Enter new employee designation: ");
            employees[i].designation = scanner.next();
            System.out.print("Enter new department name: ");
            employees[i].departmentName = scanner.next();
            System.out.print("Enter new manager name: ");
            employees[i].managerName = scanner.next();
            break;
        default:
            System.out.println("Invalid choice. Please try again.");
    }
    System.out.println("Employee information updated successfully.");
```

```
                    employees[i].displayDetails();
                    return;
                }
            }
            System.out.println("Employee not found.");
        }
        break;

    case 4:
        System.out.println("Exittion the program.....");
    }

  }

}
```

2//<u>Bank ManageMent System</u>

```
public class person {
   String name;
   int age;
   String address;
   person(String name,int age, String address){
      this.name=name;
      this.age=age;
      this.address=address;
   }
```

```
}
class bankAccount extends person{
   String Account_number;
   double balance;
   String accountType;
   bankAccount(String name,int age, String address,String Account_number,double
balance,String accountType){
      super(name,age,address);
      this.Account_number=Account_number;
      this.accountType=accountType;
      this.balance=balance;

   }
   void deposit(double amount){
      balance+=amount;
      System.out.println("money deposited successfully,balance is"+balance);
   }
   void widthdraw(double amount){
      if(amount<balance){
      balance-=amount;
      System.out.println("money  withdrawn successfully,balance is"+balance);
   }
   else{
      System.out.println("insufficient Balance");
   }
}
   void displayDetails(){
      System.out.println("Account holder name is "+name);
      System.out.println("Account holder age is "+age);
      System.out.println("Account holder address is "+address);
```

```
        System.out.println("Account number is "+Account_number);
        System.out.println("total balance  is "+balance);
        System.out.println("account type is "+accountType);

    }
}
class SavingAccount extends bankAccount{
    double intrestRate;
    double minBalance;
    SavingAccount(String name,int age, String address,String Account_number,double
balance,String accountType,double intrestRate,
    double minBalance){
        super(name, age, address, Account_number,balance, accountType);
        this.intrestRate=intrestRate;
        this.minBalance=minBalance;

    }
    void applyIntrest(){
      double intrest=balance*intrestRate/100;
      balance+=intrest;
      System.out.println("intrest applied successfully .new balance is "+balance);

    }
    void widthdraw(double amount){
        if(balance-amount>=minBalance){
          super.widthdraw(amount);
        }
        else{
           System.err.println("Minimum amount requirement...");
        }
```

```
    }

}
package Employ;
import java.util.Scanner;

public class EmployeeManagementSystem {
    public static void main(String[] args) {
        DepartmentEmployee[] employees = new DepartmentEmployee[10];
        int employeeCount = 0;
        Scanner scanner = new Scanner(System.in);

        while (true) {
            System.out.println("Employee Management System");
            System.out.println("1. Add a new employee");
            System.out.println("2. Display employee details");
            System.out.println("3. Update employee information");
            System.out.println("4. Exit");
            System.out.print("Enter your choice: ");

            int choice = scanner.nextInt();

            switch (choice) {
                case 1:

                    System.out.print("Enter employee name: ");
                    String name = scanner.next();
                    System.out.print("Enter employee age: ");
```

```
            int age = scanner.nextInt();
            System.out.print("Enter employee address: ");
            String address = scanner.next();
            System.out.print("Enter employee ID: ");
            int id = scanner.nextInt();
            System.out.print("Enter employee salary: ");
            double salary = scanner.nextDouble();
            System.out.print("Enter employee designation: ");
            String designation = scanner.next();
            System.out.print("Enter department name: ");
            String departmentName = scanner.next();
            System.out.print("Enter manager name: ");
            String managerName = scanner.next();

            DepartmentEmployee employee = new DepartmentEmployee(name, age,
address, id, salary, designation, departmentName, managerName);
            employees[employeeCount++] = employee;
            break;

        case 2:

            if (employeeCount == 0) {
                System.out.println("No employees added yet.");
            } else {
                for (int i = 0; i < employeeCount; i++) {
                    employees[i].displayDetails();
                    System.out.println();
                }
            }
            break;
```

```
case 3:

    if (employeeCount == 0) {
        System.out.println("No employees added yet.");
    } else {
        System.out.print("Enter employee ID to update: ");
        int updateId = scanner.nextInt();

        for (int i = 0; i < employeeCount; i++) {
            if (employees[i].id == updateId) {
                System.out.println("Update Options:");
                System.out.println("1. Update Name");
                System.out.println("2. Update Age");
                System.out.println("3. Update Address");
                System.out.println("4. Update Salary");
                System.out.println("5. Update Designation");
                System.out.println("6. Update Department Name");
                System.out.println("7. Update Manager Name");
                System.out.println("8. Update All");

                System.out.print("Enter your choice: ");
                int updateChoice = scanner.nextInt();

                switch (updateChoice) {
                    case 1:
                        System.out.print("Enter new employee name: ");
                        employees[i].name = scanner.next();
                        break;
```

```
case 2:
    System.out.print("Enter new employee age: ");
    employees[i].age = scanner.nextInt();
    break;
case 3:
    System.out.print("Enter new employee address: ");
    employees[i].address = scanner.next();
    break;
case 4:
    System.out.print("Enter new employee salary: ");
    employees[i].salary = scanner.nextDouble();
    break;
case 5:
    System.out.print("Enter new employee designation: ");
    employees[i].designation = scanner.next();
    break;
case 6:
    System.out.print("Enter new department name: ");
    employees[i].departmentName = scanner.next();
    break;
case 7:
    System.out.print("Enter new manager name: ");
    employees[i].managerName = scanner.next();
    break;
case 8:
    System.out.print("Enter new employee name: ");
    employees[i].name = scanner.next();
    System.out.print("Enter new employee age: ");
    employees[i].age = scanner.nextInt();
```

```
                    System.out.print("Enter new employee address: ");
                    employees[i].address = scanner.next();
                    System.out.print("Enter new employee salary: ");
                    employees[i].salary = scanner.nextDouble();
                    System.out.print("Enter new employee designation: ");
                    employees[i].designation = scanner.next();
                    System.out.print("Enter new department name: ");
                    employees[i].departmentName = scanner.next();
                    System.out.print("Enter new manager name: ");
                    employees[i].managerName = scanner.next();
                    break;
                default:
                    System.out.println("Invalid choice. Please try again.");
                }
                System.out.println("Employee information updated successfully.");
                employees[i].displayDetails();
                return;
              }
            }
            System.out.println("Employee not found.");
          }
          break;

        case 4:
          System.out.println("Exittion the program.....");
      }

}
```

```
    }

}
```

3.Student Grading System

```
public class person {
     String name;
    int age;
    String address;
    person(String name,int age, String address){
        this.name=name;
        this.age=age;
        this.address=address;
    }
}
class Student extends person{
    int rollNo;
    double marks;
    String courseName;
    Student(String name,int age, String address,int rollNo,double marks,String courseName){
        super(name,age,address);
        this.rollNo=rollNo;
        this.marks=marks;
        this.courseName=courseName;

    }
}
class GradedStudent extends Student{
```

```
  char grade;
  GradedStudent(String name,int age, String address,int rollNo,double marks,String
courseName)
 {
      super(name, age, address, rollNo,marks,courseName);
     CalcuteGrade();

   }
  void CalcuteGrade(){
      if(marks>=90){
         grade='O';
      }
    else if(marks>=80 && marks<90){
         grade='E';
      }

     else if(marks>=70 && marks<80){
         grade='A';
      }
      else if(marks>=60 && marks<70){
         grade='B';
      }
     else if(marks>=50 && marks<60){
         grade='C';
      }
     else if(marks>=40 && marks<50){
         grade='D';
      }

      else{
```

```
            grade='F';
        }

    }
    void DisplayGrade(){
        System.out.println("grade of the student is "+grade);
    }



    void displayDetails(){
        System.out.println("Account holder name is "+name);
        System.out.println("Account holder age is "+age);
        System.out.println("Account holder address is "+address);
        System.out.println("Rollno is "+rollNo);
        System.out.println("total marks  is "+marks);
        System.out.println("course name is "+courseName);


    }
}
import java.util.Scanner;
public class GradingSystem {
    public static void main(String[] args) {
        GradedStudent[] students=new GradedStudent[10];


        Scanner scanner = new Scanner(System.in);
        int studentCount=0;
        while (true) {
            System.out.println("----Student Grading System----");
            System.out.println("1.Add a new Student");
```

```
System.out.println("2. Display student details");
System.out.println("3. Calculate the grade of the student and display");
System.out.println("4. update the information of student");
System.out.println("5. exit");
System.out.print("Enter your choice: ");

int choice = scanner.nextInt();
switch (choice) {
   case 1:

      System.out.print("Enter student name: ");
      String name = scanner.next();
      scanner.nextLine();
      System.out.print("Enter student age: ");
      int age = scanner.nextInt();
      scanner.nextLine();
      System.out.print("Enter student address: ");
      String address = scanner.next();
      scanner.nextLine();
      System.out.print("Enter student rollno: ");
      int rollNo= scanner.nextInt();
      scanner.nextLine();
      System.out.print("Enter the student marks: ");
      double marks = scanner.nextDouble();
      scanner.nextLine();
      System.out.print("Enter the course name: ");
      String courseName = scanner.next();
      scanner.nextLine();
   GradedStudent   student = new  GradedStudent(name, age, address,
rollNo,marks,courseName);
```

```
   students[studentCount++]=student;
    break;

case 2:

   if (studentCount==0) {
      System.out.println("No student added yet.");
   } else {
      for(int i=0;i<studentCount;i++){
     students[i].displayDetails();
      }
      }

   break;

case 3:

   if (studentCount==0) {
      System.out.println("No student added yet.");
   } else {
      students[studentCount-1].CalcuteGrade();
      students[studentCount-1].DisplayGrade();
   }
   break;
case 4:
System.out.print("Enter student roll no to update: ");
int updateroll = scanner.nextInt();
scanner.nextLine();
for (int i = 0; i < studentCount; i++) {
```

```
if (students[i].rollNo == updateroll) {
    System.out.println("Update Options:");
    System.out.println("1. Update Name");
    System.out.println("2. Update Age");
    System.out.println("3. Update Address");
    System.out.println("4. Update mark");
    System.out.println("5. Update course name");
    System.out.println("6. Update All");

    System.out.print("Enter your choice: ");
    int updateChoice = scanner.nextInt();

    switch (updateChoice) {
        case 1:
            System.out.print("Enter new student name: ");
           students[i].name = scanner.next();
           scanner.nextLine();
            break;
        case 2:
            System.out.print("Enter new student age: ");
            students[i].age = scanner.nextInt();
            break;

        case 3:
            System.out.print("Enter new student address: ");
            students[i].address = scanner.next();
            scanner.nextLine();
            break;
        case 4:
```

```
    System.out.print("Enter new student mark: ");
    students[i].marks = scanner.nextDouble();
    scanner.nextLine();
    break;
case 5:
    System.out.print("Enter new course name: ");
    students[i].courseName = scanner.nextLine();
    scanner.nextLine();
    break;
case 8:
    System.out.print("Enter new student name: ");
    students[i].name = scanner.next();
    System.out.print("Enter new student age: ");
    students[i].age = scanner.nextInt();
    System.out.print("Enter new student address: ");
    students[i].address = scanner.next();
    System.out.print("Enter new student marks: ");
    students[i].marks = scanner.nextDouble();
    System.out.print("Enter new student course name: ");
    students[i].courseName = scanner.next();

        break;
    default:
        System.out.println("Invalid choice. Please try again.");
    }
    System.out.println("Employee information updated successfully.");
    students[i].displayDetails();
    return;
}
```

```
                System.out.println("Employee not found.");
            }
            case 5:
            System.out.println("Exitting.....");
        }









    }


  }

}
```

4//Product inventory management

```
public class product {
    int productID;
    String productName;
    double price;

    product( int productID,String productName,double price) {
        this.productID = productID;
        this.productName =productName;
        this.price = price;
    }
}
```

```
public class inventory extends product{


    int quantityStock;
    String supplier;


    inventory ( int productID,String productName,double price, int quantityStock, String supplier) {
        super(productID,productName,price);
       this.quantityStock=quantityStock;
       this.supplier=supplier;
    }
  }


public class ElectronicProduct extends inventory {
  int warentyPeriod;
  int powerRating;
  ElectronicProduct( int productID,String productName,double price, int quantityStock, String supplier,int warentyPeriod,int powerRating){
    super(productID,productName,price,quantityStock,supplier);
    this.warentyPeriod=warentyPeriod;
    this.powerRating=powerRating;


  }
  void display(){
    System.out.println("Product inventory System:");
    System.out.println("productId is: " +productID );
    System.out.println("product name is: " + productName);
    System.out.println("price of the product is: " + price);
    System.out.println("Stock quantity is : " + quantityStock);
    System.out.println("Supplier is : " + supplier);
```

```
        System.out.println("Warrenty period is : " + warentyPeriod);
        System.out.println("power rating is: " +powerRating);

    }
}

import java.util.Scanner;

public class Main {
    public static void main(String[] args) {
        ElectronicProduct product = null;
        Scanner input = new Scanner(System.in);

        while (true) {
            System.out.println("-------Product inventory System-----");
            System.out.println("1. Add a new Product");
            System.out.println("2. Display Product details");
            System.out.println("3. Update Product information");
            System.out.println("4. Exit");
            System.out.print("Enter your choice: ");

            int choice = input.nextInt();
            input.nextLine();

            switch (choice) {
                case 1:
                    System.out.print("Enter Product id: ");
                    int id = input.nextInt();
                    System.out.print("Enter product name: ");
```

```
            String name = input.next();
            System.out.print("Enter ProductPrice: ");
            double price = input.nextDouble();
            System.out.print("Enter the product quantity in stock: ");
            int stock = input.nextInt();
            System.out.print("Enter the supplier name: ");
            String supplier = input.next();
            System.out.print("Enter the warrenty period (years): ");
            int warrenty = input.nextInt();
            System.out.print("Enter the power Rating of the product: ");
            int rating = input.nextInt();

            product = new ElectronicProduct(id, name, price, stock, supplier, warrenty,
rating);
            break;

        case 2:
            if (product == null) {
                System.out.println("No product added yet.");
            } else {
                product.display();
                System.out.println();
            }
            break;

        case 3:
            if (product == null) {
                System.out.println("No product added yet.");
            } else {
                System.out.print("Enter new quantity in stock: ");
```

```
                product.quantityStock = input.nextInt();
            }
            break;

        case 4:
            System.out.println("Exiting the program.");
            return;
      }
    }
  }
}
```

5//Library book management System

```
public class Book {
   String title;
   String author;
   String ISBN;
   Book(String title,String author,String ISBN){
      this.title=title;
      this.author=author;
      this.ISBN=ISBN;
   }
   void displayDetails() {
      System.out.println("Book Details:");
      System.out.println("Title: " + title);
      System.out.println("Author: " + author);
      System.out.println("ISBN: " + ISBN);
   }
}
```

```
public class LibraryBook extends Book{
    boolean availability;
    String librarySedction;
    LibraryBook(String title,String author,String ISBN,boolean availability,String librarySedction){
        super(title,author,ISBN);
        this.availability=availability;
        this.librarySedction=librarySedction;

    }
    void displayLibraryBookDetails() {
        displayDetails();
        System.out.println("Availability: " + (availability ? "Yes" : "No"));
        System.out.println("Library Section: " + librarySedction);
    }
}
class GenreBook extends LibraryBook {
    String genre;
    int publicationYear;

    GenreBook(String title, String author, String ISBN, boolean availability, String librarySection, String genre, int publicationYear) {
        super(title, author, ISBN, availability, librarySection);
        this.genre = genre;
        this.publicationYear = publicationYear;
    }

    void displayGenreBookDetails() {
        displayLibraryBookDetails();
        System.out.println("Genre: " + genre);
```

```
        System.out.println("Publication Year: " + publicationYear);
    }
}

import java.util.Scanner;
public class Main {

    public static void main(String[] args) {
        GenreBook book = null;
        Scanner scanner = new Scanner(System.in);

        while (true) {
            System.out.println("Library Book Management");
            System.out.println("1. Add a new book");
            System.out.println("2. Display book details");
            System.out.println("3. Mark a book as borrowed/returned");
            System.out.println("4. Exit");
            System.out.print("Enter your choice: ");

            int choice = scanner.nextInt();
            switch (choice) {
                case 1:

                    System.out.print("Enter book title: ");
                    String title = scanner.next();
                    System.out.print("Enter book author: ");
                    String author = scanner.next();
                    System.out.print("Enter book ISBN: ");
                    String ISBN = scanner.next();
```

```
                System.out.print("Enter book availability (true/false): ");
                boolean availability = scanner.nextBoolean();
                System.out.print("Enter library section: ");
                String librarySection = scanner.next();
                System.out.print("Enter book genre: ");
                String genre = scanner.next();
                System.out.print("Enter publication year: ");
                int publicationYear = scanner.nextInt();

                book = new GenreBook(title, author, ISBN, availability, librarySection, genre,
publicationYear);
                break;

            case 2:

                if (book ==null){
                    System.out.println("No book added yet.");
                } else {
                    book.displayGenreBookDetails();
                      }
                    break;

                case 3:

                if (book == null) {
                    System.out.println("No book added yet.");
                        } else {
                            System.out.print("Enter new availability (true/false): ");
                        book.availability = scanner.nextBoolean();
                        }
```

```
                    break;

                    case 4:

                    System.out.println("Exiting the program.");
                     }
                    }
                  }
                }
```

6.Vehicle information System

```
public class Vehicle {
   String vehicleType;
   String brand;
   String licensePlate;

   public Vehicle(String vehicleType, String brand, String licensePlate) {
      this.vehicleType = vehicleType;
      this.brand = brand;
      this.licensePlate = licensePlate;
   }
}

   class MotorVehicle extends Vehicle {
      String model;
      int year;

      public MotorVehicle(String vehicleType, String brand, String licensePlate, String model,
int year) {
         super(vehicleType, brand, licensePlate);
```

```
        this.model = model;
        this.year = year;
    }

}
import java.util.Scanner;

public class Main {

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        LuxuryVehicle vehicle[] = new LuxuryVehicle[10];
        int count = 0;
        while (true) {
            System.out.println("Vehicle Information System");
            System.out.println("1. Add a new vehicle");
            System.out.println("2. Display vehicle details");
            System.out.println("3. Update vehicle details");
            System.out.println("4. Exit");
            System.out.print("Enter your choice: ");
            int choice = sc.nextInt();
            sc.nextLine();

            switch (choice) {
                case 1:
                    System.out.print("Enter vehicle type: ");
                    String vehicleType = sc.nextLine();
                    System.out.print("Enter vehicle brand: ");
                    String brand = sc.nextLine();
```

```
            System.out.print("Enter the licence plate: ");
            String licensePlate = sc.nextLine();
            System.out.print("Enter model name is: ");
            String model = sc.nextLine();
            System.out.print("Enter the year of manufacturing: ");
            int year = sc.nextInt();
            sc.nextLine();
            System.out.print("Enter the price: ");
            double price = sc.nextDouble();
            sc.nextLine();
            System.out.print("Enter the luxury features: ");
            String luxury = sc.nextLine();
            LuxuryVehicle gadi = new LuxuryVehicle(vehicleType, brand, licensePlate, model,
year, price, luxury);
            vehicle[count++] = gadi;
            break;

        case 2:
            if (count == 0) {
                System.out.println("No vehicle added yet.");
            } else {
                for (int i = 0; i < count; i++) {
                    vehicle[i].displayLuxary();
                }
            }
            break;

        case 3:
            System.out.print("Enter licence no to update: ");
            String updatelicence = sc.nextLine();
```

```
for (int i = 0; i < count; i++) {
    if (vehicle[i].licensePlate.equals(updatelicence)) {
        System.out.println("Update Options:");
        System.out.println("1. Update vehicle type");
        System.out.println("2. Update brand");
        System.out.println("3. Update model");
        System.out.println("4. Update year");
        System.out.println("5. Update price");
        System.out.println("6. Update luxury");

        System.out.print("Enter your choice: ");
        int updateChoice = sc.nextInt();
        sc.nextLine();

        switch (updateChoice) {
            case 1:
                System.out.print("Enter new vehicle type: ");
                vehicle[i].vehicleType = sc.nextLine();
                break;
            case 2:
                System.out.print("Enter new vehicle brand: ");
                vehicle[i].brand = sc.nextLine();
                break;
            case 3:
                System.out.print("Enter new vehicle model ");
                vehicle[i].model = sc.nextLine();
                break;
            case 4:
                System.out.print("Enter the new manufacturing year: ");
```

```
                        vehicle[i].year = sc.nextInt();
                        sc.nextLine();
                        break;
                    case 5:
                        System.out.print("Enter new price : ");
                        vehicle[i].price = sc.nextDouble();
                        sc.nextLine();
                        break;
                    case 6:
                        System.out.print("Enter new luxury features: ");
                        vehicle[i].luxuryFeatures= sc.nextLine();
                        break;
                }
            }
        }
        break;

      case 4:
        System.out.println("Exiting the program.");
        return;
      default:
        System.out.println("Invalid choice. Please try again.");
    }
  }
 }
}
```

7// Online Course Enrollment System

```
public class Course {
   String courseName;
   String courseCode;
   int durationWeek;
   Course( String courseName, String courseCode,int durationWeek){
      this.courseName=courseName;
      this.courseCode=courseCode;
      this.durationWeek=durationWeek;

   }
}
public class InstructorCourse extends Course {
   String instructorName;
   String instructorEmail;
   InstructorCourse(String courseName, String courseCode,int durationWeek,String
instructorName ,String instructorEmail){
      super(courseName,courseCode,durationWeek);
      this.courseName=instructorName;
      this.instructorEmail=instructorEmail;
   }
}
public class PaidCourse extends InstructorCourse {
   double fee;
   double discount;
   PaidCourse(String courseName, String courseCode,int durationWeek,String
instructorName ,String instructorEmail,double fee,double discount){
      super(courseName,courseCode,durationWeek,instructorName, instructorEmail);
      this.fee=fee;
```

```
        this.discount=discount;
    }
    void displayAll(){
        System.out.println("your course name is"+courseName);
        System.out.println("your course code is"+courseCode);
        System.out.println("your course duration(in week) is"+durationWeek);
        System.out.println("Your instructor Name is "+instructorName);
        System.out.println("Your instructor email is "+instructorEmail);
        System.out.println("your fee is "+fee);
        System.out.println("discount is"+discount);
    }
}
package OnlineCourseEnrol;
public class Main1 {
    public static void main(String[] args) {
        PaidCourse course = null;
        Scanner sc = new Scanner(System.in);
        int count = 0;
        PaidCourse[] courses = new PaidCourse[10];

        while (true) {
            System.out.println("-------- Welcome to the Online Course Enrollment System -------");
            System.out.println("1. Add a course");
            System.out.println("2. Display course details");
            System.out.println("3. Update course information");
            System.out.println("4. Exit...");
            System.out.println("Enter your choice:");
            int choice = sc.nextInt();
            sc.nextLine();
```

```
        switch (choice) {
            case 1:
                System.out.println("Thank you for choosing the online course enrollment system.");
                System.out.println("Enter the course name: ");
                String courseName = sc.nextLine();
                System.out.println("Enter the course code: ");
                String courseCode = sc.nextLine();
                System.out.println("Enter the duration of the course (in weeks): ");
                int week = sc.nextInt();
                sc.nextLine();
                System.out.println("Enter the instructor name: ");
                String instructorName = sc.nextLine();
                System.out.println("Enter the instructor email: ");
                String mail = sc.nextLine();
                System.out.println("Is the course paid (y/n)?");
                String accountType = sc.nextLine();

                double fee = 0.0;
                double discount = 0.0;

                if (accountType.equalsIgnoreCase("y")) {
                    System.out.println("Enter the fee: ");
                    fee = sc.nextDouble();
                    System.out.println("Enter the discount: ");
                    discount = sc.nextDouble();
                    sc.nextLine();
                }
```

```
            courses[count++] = new PaidCourse(courseName, courseCode, week,
instructorName, mail, fee, discount);
            System.out.println("Course enrolled successfully!");
            break;

        case 2:
            if (count == 0) {
                System.out.println("No course enrolled yet.");
            } else {
                for (int i = 0; i < count; i++) {
                    courses[i].displayAll();
                }
            }
            break;

        case 3:
            if (count == 0) {
                System.out.println("No courses available to update.");
            } else {
                System.out.print("Enter the course code to update: ");
                String updateCode = sc.nextLine();
                boolean found = false;

                for (int i = 0; i < count; i++) {
                    if (courses[i].courseCode.equalsIgnoreCase(updateCode)) {
                        found = true;
                        System.out.println("Update Options:");
                        System.out.println("1. Update course name");
                        System.out.println("2. Update course duration");
```

```
System.out.println("3. Update instructor name");
System.out.println("4. Update instructor email");
System.out.println("5. Update fee (paid course)");
System.out.println("6. Update discount (paid course)");
System.out.print("Enter your choice: ");
int updateChoice = sc.nextInt();
sc.nextLine();

switch (updateChoice) {
   case 1:
      System.out.print("Enter new course name: ");
      courses[i].courseName = sc.nextLine();
      break;
   case 2:
      System.out.print("Enter new course duration (weeks): ");
      courses[i].durationWeek = sc.nextInt();
      sc.nextLine();
      break;
   case 3:
      System.out.print("Enter new instructor name: ");
      courses[i].instructorName = sc.nextLine();
      break;
   case 4:
      System.out.print("Enter new instructor email: ");
      courses[i].instructorEmail = sc.nextLine();
      break;
   case 5:
      System.out.print("Enter new course fee: ");
      courses[i].fee = sc.nextDouble();
```

```
                    sc.nextLine();
                    break;
                case 6:
                    System.out.print("Enter new discount: ");
                    courses[i].discount = sc.nextDouble();
                    sc.nextLine();
                    break;
                default:
                    System.out.println("Invalid choice.");
                    break;
            }
            System.out.println("Course updated successfully.");
            break;
        }
    }

    if (!found) {
        System.out.println("Course not found.");
    }
  }
  break;

case 4:
  System.out.println("Exiting the program...");
  sc.close();
  return;

default:
  System.out.println("Invalid choice. Please try again.");
```

```
                break;
            }
        }
    }
}
```