Assignment 4 - Object Oriented Programming (Java)

1. Employee Salary Calculation (File: EmployeeMain.java)

```
import java.util.Scanner;

public class Employee {
    private double salary;
    private int workHoursPerDay;

    public void getInfo(double salary, int workHoursPerDay) {
        this.salary = salary;
        this.workHoursPerDay = workHoursPerDay;
    }

    public void addSal() {
        if (salary < 500) {
            salary += 10;
        }
    }

    public void addWork() {
        if (workHoursPerDay > 6) {
            salary += 5;
        }
    }

    public void displaySalary() {
        System.out.println("Final Salary: $" + salary);
    }
}

public class EmployeeMain {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        Employee emp = new Employee();

        System.out.print("Enter salary: ");
        double sal = sc.nextDouble();

        System.out.print("Enter hours of work per day: ");
        int hours = sc.nextInt();

        emp.getInfo(sal, hours);
        emp.addSal();
        emp.addWork();
        emp.displaySalary();

        sc.close();
    }
}
```

2. Student Information (File: StudentMain.java)

```
import java.util.Scanner;

public class Student {
    private String name;
    private int yearOfJoining;
    private String address;

    public void setInfo(String name, int yearOfJoining, String address) {
        this.name = name;
        this.yearOfJoining = yearOfJoining;
        this.address = address;
    }

    public void displayInfo() {
```

```
        System.out.printf("%-10s %-15d %-20s\n", name, yearOfJoining, address);
    }
}

public class StudentMain {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        Student s1 = new Student();
        Student s2 = new Student();
        Student s3 = new Student();

        System.out.println("Enter details for 3 students:");

        System.out.print("Name: ");
        String name1 = sc.next();
        System.out.print("Year of Joining: ");
        int year1 = sc.nextInt();
        sc.nextLine();
        System.out.print("Address: ");
        String address1 = sc.nextLine();
        s1.setInfo(name1, year1, address1);

        System.out.print("Name: ");
        String name2 = sc.next();
        System.out.print("Year of Joining: ");
        int year2 = sc.nextInt();
        sc.nextLine();
        System.out.print("Address: ");
        String address2 = sc.nextLine();
        s2.setInfo(name2, year2, address2);

        System.out.print("Name: ");
        String name3 = sc.next();
        System.out.print("Year of Joining: ");
        int year3 = sc.nextInt();
        sc.nextLine();
        System.out.print("Address: ");
        String address3 = sc.nextLine();
        s3.setInfo(name3, year3, address3);

        System.out.println("\nName       Year of Joining   Address");
        s1.displayInfo();
        s2.displayInfo();
        s3.displayInfo();

        sc.close();
    }
}
```

3. Bank Account (Deposit & Withdraw) (File: BankAccountMain.java)

```
import java.util.Scanner;

public class BankAccount {
    private String accountHolderName;
    private double balance;

    public BankAccount(String accountHolderName, double initialBalance) {
        this.accountHolderName = accountHolderName;
        this.balance = initialBalance;
    }

    public void deposit(double amount) {
        if (amount > 0) {
            balance += amount;
            System.out.println("Deposited $" + amount + " successfully.");
        } else {
            System.out.println("Invalid deposit amount!");
        }
    }

    public void withdraw(double amount) {
        if (amount > 0 && amount <= balance) {
```

```
            balance -= amount;
            System.out.println("Withdrawn $" + amount + " successfully.");
        } else {
            System.out.println("Invalid or insufficient balance!");
        }
    }

    public void displayBalance() {
        System.out.println("Account Holder: " + accountHolderName);
        System.out.println("Current Balance: $" + balance);
    }
}

public class BankAccountMain {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter account holder name: ");
        String name = sc.nextLine();

        System.out.print("Enter initial balance: ");
        double initialBalance = sc.nextDouble();

        BankAccount account = new BankAccount(name, initialBalance);

        System.out.print("Enter amount to deposit: ");
        double depositAmount = sc.nextDouble();
        account.deposit(depositAmount);

        System.out.print("Enter amount to withdraw: ");
        double withdrawAmount = sc.nextDouble();
        account.withdraw(withdrawAmount);

        account.displayBalance();

        sc.close();
    }
}
```