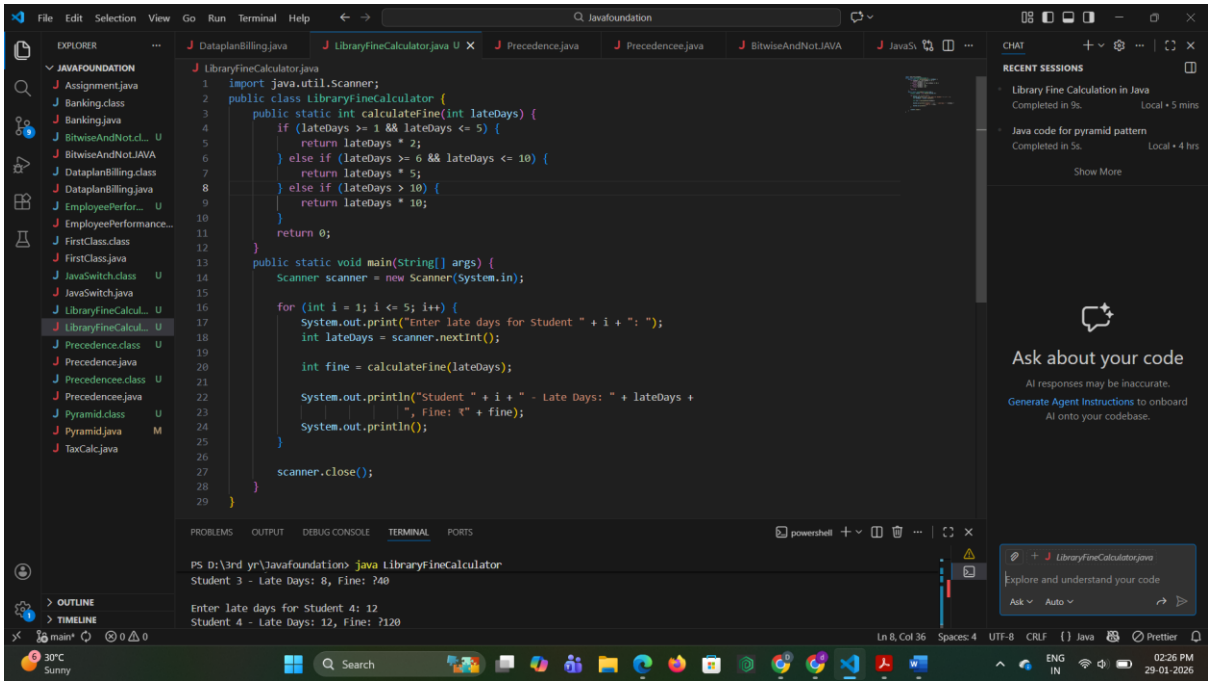
1).




```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS                    powershell

PS D:\3rd yr\Javafoundation> java LibraryFineCalculator
Enter late days for Student 1: 5
Student 1 - Late Days: 5, Fine: ?10

Enter late days for Student 2: 6
Student 2 - Late Days: 6, Fine: ?30
Student 2 - Late Days: 6, Fine: ?30

Enter late days for Student 3: 8
Student 3 - Late Days: 8, Fine: ?40

Enter late days for Student 4: 12
Student 4 - Late Days: 12, Fine: ?120
Student 4 - Late Days: 12, Fine: ?120

Enter late days for Student 5: 140
Student 5 - Late Days: 140, Fine: ?1400

PS D:\3rd yr\Javafoundation>
```

DataplanBilling.java | LibraryFineCalculator.java U | ATM.java U | Precedence.java | Precedencee.java

ATM.java

```java
import java.util.Scanner;

public class ATM {
    private double balance;

    public ATM(double initialBalance) {
        this.balance = Math.max(0, initialBalance);
    }

    public void deposit(double amount) {
        if (amount <= 0) {
            System.out.println("Deposit amount must be positive.");
            return;
        }
        balance += amount;
        System.out.printf("Deposited: $%.2f%n", amount);
    }

    public void withdraw(double amount) {
        if (amount <= 0) {
            System.out.println("Withdrawal amount must be positive.");
            return;
        }
        if (amount > balance) {
            System.out.println("Insufficient funds.");
            return;
        }
        balance -= amount;
        System.out.printf("Withdrew: $%.2f%n", amount);
    }

    public void checkBalance() {
        System.out.printf("Current balance: $%.2f%n", balance);
    }

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        ATM atm = new ATM(0.0);

        while (true) {
            System.out.println("\nATM Menu:");
            System.out.println("1. Deposit");
            System.out.println("2. Withdraw");
            System.out.println("3. Check Balance");
            System.out.println("4. Exit");
            System.out.print("Choose an option (1-4): ");

            String choice = sc.nextLine().trim();
            switch (choice) {
                case "1":
                    System.out.print("Enter deposit amount: ");
                    try {
                        double amt = Double.parseDouble(sc.nextLine().trim());
                        atm.deposit(amt);
                    } catch (NumberFormatException e) {
                        System.out.println("Invalid amount.");
                    }
                    break;
                case "2":
                    System.out.print("Enter withdrawal amount: ");
                    try {
                        double amt = Double.parseDouble(sc.nextLine().trim());
                        atm.withdraw(amt);
                    } catch (NumberFormatException e) {
                        System.out.println("Invalid amount.");
                    }
                    break;
                case "3":
                    atm.checkBalance();
                    break;
                case "4":
                    System.out.println("Exiting. Goodbye.");
                    sc.close();
                    return;
                default:
                    System.out.println("Invalid selection. Please choose 1-4.");
            }
        }
    }
}
```

```
PS D:\3rd yr\Javafoundation> javac ATM.java
PS D:\3rd yr\Javafoundation> java ATM

ATM Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an option (1-4): 2
Enter withdrawal amount: 500
Insufficient funds.

ATM Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an option (1-4): 1
Enter deposit amount: 1000
Deposited: $1000.00

ATM Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an option (1-4): 2
Enter withdrawal amount: 500
Withdrew: $500.00

ATM Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an option (1-4): 3
Current balance: $500.00
Enter withdrawal amount: 500
Withdrew: $500.00

ATM Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an option (1-4): 3
Choose an option (1-4): 3
Current balance: $500.00
ATM Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an option (1-4): 3
Current balance: $500.00
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an option (1-4): 3
Current balance: $500.00
3. Check Balance
4. Exit
Choose an option (1-4): 3
Current balance: $500.00
Choose an option (1-4): 3
Current balance: $500.00

ATM Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an option (1-4): 4

ATM Menu:
1. Deposit
2. Withdraw
3. Check Balance
4. Exit
Choose an option (1-4): 4
2. Withdraw
3. Check Balance
4. Exit
Choose an option (1-4): 4
Exiting. Goodbye.
PS D:\3rd yr\Javafoundation>
```

SalarySlip.JAVA

```java
import java.util.Scanner;
public class SalarySlip {
    static double calculateGross(double basic) {
        double hra = basic * 0.20;
        double da = basic * 0.10;
        return basic + hra + da;
    }
    static double calculateTax(double gross) {
        return gross > 50000 ? gross * 0.10 : 0;
    }
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter number of employees: ");
        int n = sc.nextInt();
        for (int i = 0; i < n; i++) {
            System.out.print("Enter basic pay: ");
            double basic = sc.nextDouble();
            double gross = calculateGross(basic);
            double pf = basic * 0.12;
            double tax = calculateTax(gross);
            double net = gross - pf - tax;

            System.out.printf("Gross: $%.2f | PF: $%.2f | Tax: $%.2f | Net: $%.2f%n", gross, pf, tax, net);
        }

        sc.close();
    }}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
Enter number of employees: 5
Enter basic pay: 1500
Enter number of employees: 5
Enter basic pay: 1500
Enter basic pay: 1500
Gross: $1950.00 | PF: $180.00 | Tax: $0.00 | Net: $1770.00
Gross: $1950.00 | PF: $180.00 | Tax: $0.00 | Net: $1770.00
Enter basic pay: 500
Gross: $650.00 | PF: $60.00 | Tax: $0.00 | Net: $590.00
Enter basic pay: 750
Gross: $975.00 | PF: $90.00 | Tax: $0.00 | Net: $885.00
Enter basic pay: 850
Gross: $1105.00 | PF: $102.00 | Tax: $0.00 | Net: $1003.00
Enter basic pay: 250
Gross: $325.00 | PF: $30.00 | Tax: $0.00 | Net: $295.00
PS D:\3rd yr\Javafoundation>
```

ShoppingCart.java

```java
import java.util.Scanner;

public class ShoppingCart {
    static double calculateDiscount(double bill) {
        if (bill >= 5000) return bill * 0.20;
        if (bill >= 3000) return bill * 0.10;
        return 0;
    }

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

        System.out.print("Enter number of items: ");
        int n = sc.nextInt();

        for (int i = 0; i < n; i++) {
            System.out.print("Enter bill amount: ");
            double bill = sc.nextDouble();

            double discount = calculateDiscount(bill);
            double payable = bill - discount;

            if (bill >= 5000) {
                System.out.printf("Bill: $%.2f | Discount (20%%): $%.2f | Payable: $%.2f%n", bill, discount, payable);
            } else if (bill >= 3000) {
                System.out.printf("Bill: $%.2f | Discount (10%%): $%.2f | Payable: $%.2f%n", bill, discount, payable);
            } else {
                System.out.printf("Bill: $%.2f | No Discount | Payable: $%.2f%n", bill, payable);
            }
        }

        sc.close();
    }
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
Enter basic pay: 250
Enter number of items: 4
Enter bill amount: 2500
Bill: $2500.00 | No Discount | Payable: $2500.00
Enter bill amount: 100
Bill: $100.00 | No Discount | Payable: $100.00
Enter bill amount: 2000
Bill: $2000.00 | No Discount | Payable: $2000.00
Enter bill amount: 250
Bill: $250.00 | No Discount | Payable: $250.00
PS D:\3rd yr\Javafoundation>
```

StudentResultSystem.java

```java
import java.util.Scanner;

public class StudentResultSystem {

    static double calculateAverage(int[] marks) {
        int sum = 0;
        for (int mark : marks) {
            sum += mark;
        }
        return sum / 5.0;
    }

    static char determineGrade(double average) {
        if (average >= 90) return 'A';
        else if (average >= 80) return 'B';
        else if (average >= 70) return 'C';
        else if (average >= 60) return 'D';
        else return 'F';
    }

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

        System.out.print("Enter number of students: ");
        int n = sc.nextInt();

        for (int i = 0; i < n; i++) {
            int[] marks = new int[5];

            System.out.println("\nStudent " + (i + 1));
            for (int j = 0; j < 5; j++) {
                System.out.print("Subject " + (j + 1) + ": ");
                marks[j] = sc.nextInt();
            }

            double avg = calculateAverage(marks);
            char grade = determineGrade(avg);

            System.out.printf("Average: %.2f, Grade: %c\n", avg, grade);
        }
    }
}
```

```
PS D:\3rd yr\Javafoundation> java StudentResultSystem
Enter number of students: 2

Student 1
Subject 1: 94
Subject 2: 95
Subject 3: 96
Subject 4: 97
Subject 5: 98
Average: 96.00, Grade: A

Student 2
Subject 1: 84
Subject 2: 85
Subject 3: 86
Subject 4: 87
Subject 5: 88
Average: 86.00, Grade: B
PS D:\3rd yr\Javafoundation>
```

ElectricityBillGenerator.java

```java
import java.util.Scanner;

public class ElectricityBillGenerator {

    static double calculateBill(int units) {
        if (units <= 100) {
            return units * 2;
        } else if (units <= 300) {
            return units * 3;
        } else {
            return units * 5;
        }
    }

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

        System.out.print("Enter number of customers: ");
        int n = sc.nextInt();

        for (int i = 1; i <= n; i++) {
            System.out.print("Enter units for customer " + i + ": ");
            int units = sc.nextInt();
            double bill = calculateBill(units);
            System.out.println("Bill: ₹" + bill);
        }

        sc.close();
    }
}
```

```
PS D:\3rd yr\Javafoundation> javac ElectricityBillGenerator.java
PS D:\3rd yr\Javafoundation> java ElectricityBillGenerator
Enter number of customers: 2
Enter units for customer 1: 1010
Bill: ?5050.0
Enter units for customer 2: 12354
Bill: ?61770.0
PS D:\3rd yr\Javafoundation>
```

StudentAttendanceReport.java

```java
import java.util.Scanner;

public class StudentAttendanceReport {

    static double calculateAttendance(int attended, int total) {
        return (attended * 100.0) / total;
    }

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

        System.out.print("Enter number of students: ");
        int n = sc.nextInt();

        for (int i = 1; i <= n; i++) {
            System.out.print("Enter classes attended for student " + i + ": ");
            int attended = sc.nextInt();
            System.out.print("Enter total classes: ");
            int total = sc.nextInt();

            double percentage = calculateAttendance(attended, total);

            if (percentage >= 75) {
                System.out.println("Eligible for Exam ✓\n");
            } else {
                System.out.println("Not Eligible for Exam X\n");
            }
        }

        sc.close();
    }
}
```

Click to collapse the range.

```
PS D:\3rd yr\Javafoundation> java StudentAttendanceReport
Enter number of students: 2
Enter classes attended for student 1: 5
Enter total classes: 8
Not Eligible for Exam ?

Enter classes attended for student 2: 6
Enter total classes: 8
Eligible for Exam ?

PS D:\3rd yr\Javafoundation>
```

LoanEligibilityChecker.java

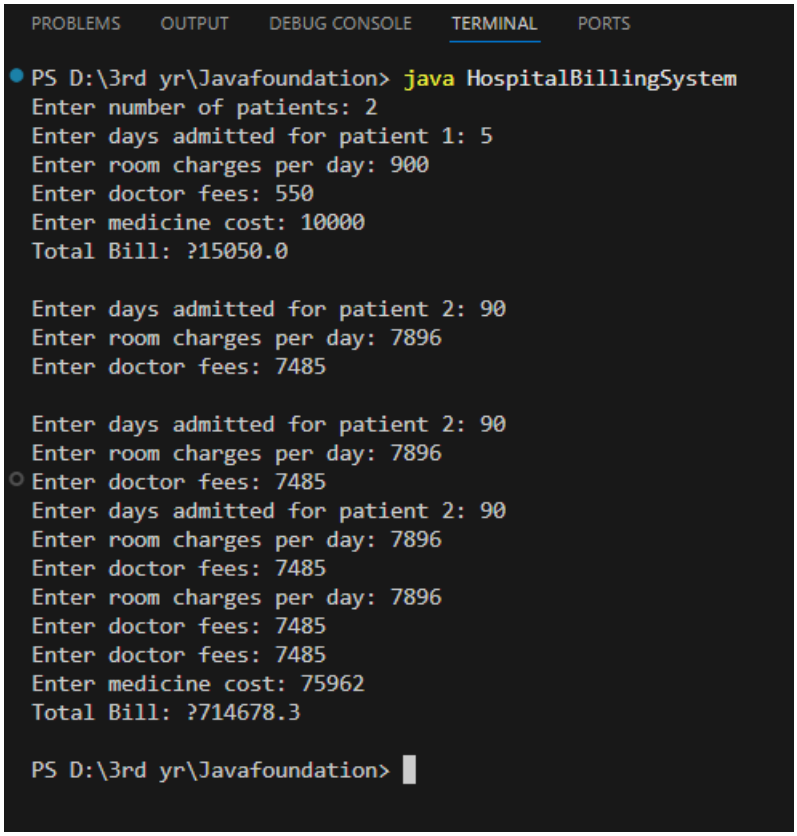
```java
import java.util.Scanner;

public class LoanEligibilityChecker {

    static boolean isEligible(int salary, int creditScore) {
        return salary >= 40000 && creditScore >= 700;
    }

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

        System.out.print("Enter number of customers: ");
        int n = sc.nextInt();

        for (int i = 1; i <= n; i++) {
            System.out.print("Enter salary for customer " + i + ": ");
            int salary = sc.nextInt();
            System.out.print("Enter credit score: ");
            int creditScore = sc.nextInt();

            if (isEligible(salary, creditScore)) {
                System.out.println("Eligible for Loan ✓\n");
            } else {
                System.out.println("Not Eligible for Loan ✗\n");
            }
        }

        sc.close();
    }
}
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS D:\3rd yr\Javafoundation> java LoanEligibilityChecker
Enter number of customers: 2
Enter salary for customer 1: 500
Enter credit score: 20
Not Eligible for Loan ?

Enter salary for customer 2: 70000
Enter credit score: 750
Eligible for Loan ?

PS D:\3rd yr\Javafoundation>
```

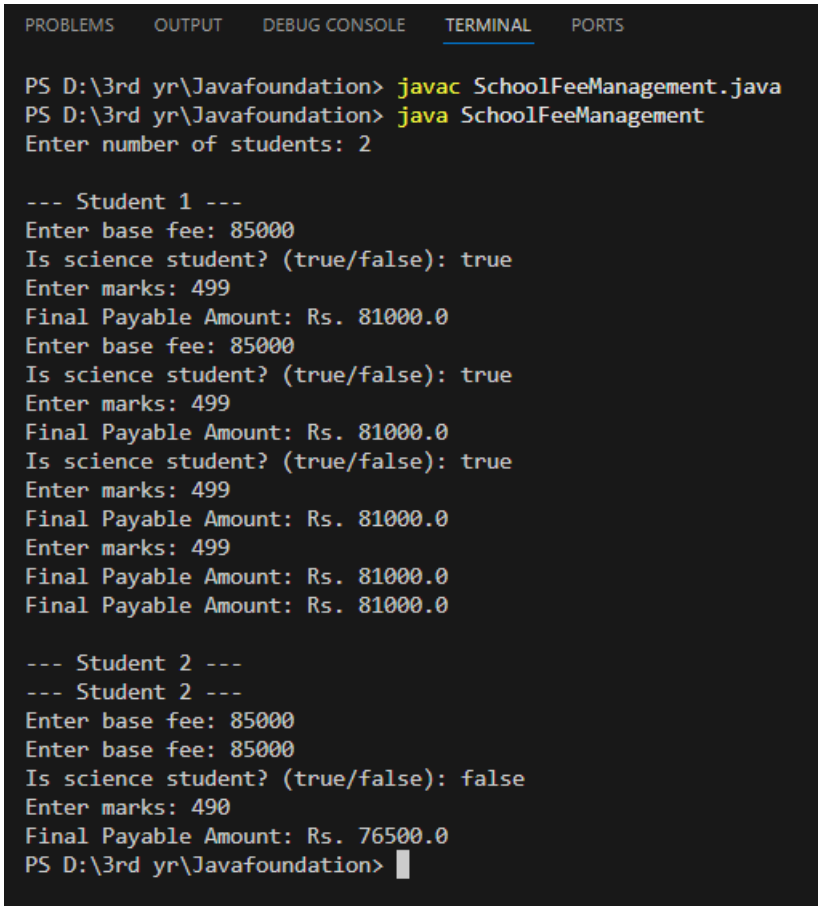
HospitalBillingSystem.java

```java
import java.util.Scanner;

public class HospitalBillingSystem {

    static double calculateBill(int days, double room, double doctor, double medicine) {
        double total = (room * days) + doctor + medicine;

        if (days > 7) {
            total = total * 0.9; // 10% discount
        }

        return total;
    }

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

        System.out.print("Enter number of patients: ");
        int n = sc.nextInt();

        for (int i = 1; i <= n; i++) {
            System.out.print("Enter days admitted for patient " + i + ": ");
            int days = sc.nextInt();
            System.out.print("Enter room charges per day: ");
            double room = sc.nextDouble();
            System.out.print("Enter doctor fees: ");
            double doctor = sc.nextDouble();
            System.out.print("Enter medicine cost: ");
            double medicine = sc.nextDouble();

            double bill = calculateBill(days, room, doctor, medicine);
            System.out.println("Total Bill: ₹" + bill + "\n");
        }

        sc.close();
    }
}
```


PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
PS D:\3rd yr\Javafoundation> java HospitalBillingSystem
Enter number of patients: 2
Enter days admitted for patient 1: 5
Enter room charges per day: 900
Enter doctor fees: 550
Enter medicine cost: 10000
Total Bill: ?15050.0
Enter days admitted for patient 2: 90
Enter room charges per day: 7896
Enter doctor fees: 7485
Enter days admitted for patient 2: 90
Enter room charges per day: 7896
Enter doctor fees: 7485
Enter days admitted for patient 2: 90
Enter room charges per day: 7896
Enter doctor fees: 7485
Enter room charges per day: 7896
Enter doctor fees: 7485
Enter doctor fees: 7485
Enter medicine cost: 75962
Total Bill: ?714678.3
PS D:\3rd yr\Javafoundation>

SchoolFeeManagement.java

```java
import java.util.Scanner;

public class SchoolFeeManagement {

    static double calculateFinalFee(double baseFee, boolean isScience, double marks) {
        double fee = baseFee;

        if (isScience) {
            fee += 5000;
        }
        if (marks >= 85) {
            fee = fee * 0.9;
        }

        return fee;
    }

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

        System.out.print("Enter number of students: ");
        int n = sc.nextInt();

        for (int i = 1; i <= n; i++) {
            System.out.println("\n--- Student " + i + " ---");

            System.out.print("Enter base fee: ");
            double baseFee = sc.nextDouble();

            System.out.print("Is science student? (true/false): ");
            boolean isScience = sc.nextBoolean();

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

            double finalFee = calculateFinalFee(baseFee, isScience, marks);

            System.out.println("Final Payable Amount: Rs. " + finalFee);
        }

        sc.close();
    }
}
```


PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
PORTS
PS D:\3rd yr\Javafoundation> javac SchoolFeeManagement.java
PS D:\3rd yr\Javafoundation> java SchoolFeeManagement
Enter number of students: 2
--- Student 1 ---
Enter base fee: 85000
Is science student? (true/false): true
Enter marks: 499
Final Payable Amount: Rs. 81000.0
Enter base fee: 85000
Is science student? (true/false): true
Enter marks: 499
Final Payable Amount: Rs. 81000.0
Is science student? (true/false): true
Enter marks: 499
Final Payable Amount: Rs. 81000.0
Enter marks: 499
Final Payable Amount: Rs. 81000.0
Final Payable Amount: Rs. 81000.0
--- Student 2 ---
--- Student 2 ---
Enter base fee: 85000
Enter base fee: 85000
Is science student? (true/false): false
Enter marks: 490
Final Payable Amount: Rs. 76500.0
PS D:\3rd yr\Javafoundation>