

Q1,

The screenshot shows an IDE interface with the title bar "Q_Uwingeliromo". The left sidebar displays a project structure under "UWINGELIROMEO" with files like Purchase.java, Sale.java, StockItem.java, StockReport.java, Supplier.java, and Warehouse.java. The main editor window shows the code for StockReport.java:

```
src > id28418 > q1 > J StockReport.java > Language Support for Java(TM) by Red Hat > StockReport > generateReport()
  3  public final class StockReport extends Inventory {
  4      public StockReport(int id, String c, String u,
  5          this.reportDate = reportDate;
  6          this.remarks = remarks;
  7      }
  8
  9      public void generateReport() {
 10          System.out.println("===== STOCK REPORT ===== " + "28418");
 11          System.out.println("Total Items: " + getTotalItems());
 12          System.out.println("Stock Value: " + getStockValue());
 13          System.out.println("Remarks: " + remarks);
 14          System.out.println(x: "=====End OF REPORT=====28418" );
 15      }
 16  }
```

The terminal window at the bottom shows the output of running the code:

```
doe@afnog:~/Uwingeliromo$ javac -d bin src/id28418/q1/*.java
doe@afnog:~/Uwingeliromo$ java -cp bin id28418.q1.Main
Enter total items: 100
Enter stock value: 10
===== STOCK REPORT ===== 28418
Total Items: 100
Stock Value: 10.0
Remarks: All Good
=====End OF REPORT=====28418
doe@afnog:~/Uwingeliromo$
```

Q2,

The screenshot shows an IDE interface with the title bar "Q_Uwingeliromo". The left sidebar displays a project structure under "UWINGELIROMEO" with files like Flight.java, Main.java, Passenger.java, Payment.java, Pilot.java, and Ticket.java. The main editor window shows the code for Ticket.java:

```
src > id28418 > q2 > J Ticket.java > Language Support for Java(TM) by Red Hat > Ticket > printTicket()
  1  final class Ticket extends Payment {
  2      : Ticket(int id, String createDate, String updatedDate, String airportName, String code, String
  3          flightNumber, departure, destination, basefare, ptoName, licenseNumber, experienceYears, c
  4          ies.ticketNumber = ticketNumber;
  5          ies.issueDate = issueDate;
  6      }
  7
  8      : double calculateFare() {
  9          double base = getBaseFareFromFlight();
 10          double multiplier = 1.0;
 11
 12          ' infer travelClass by checking a value in parent chain via getClass(). Not ideal but Main will p
 13          ' In practice, Booking stores travelClass – but inaccessible directly here; compute a simple fare
 14      }
 15  }
```

The terminal window at the bottom shows the output of running the code:

```
doe@afnog:~/Uwingeliromo$ javac -d bin src/id28418/q2/*.java
doe@afnog:~/Uwingeliromo$ java -cp bin id28418.q2.Main
== Flight Booking System (Q2) == 28293
Flight number: 23
Departure: 4
Destination: kigali
Base fare (>0): 3
Passenger name: Uwingeli
Passenger age (>0): 20
Travel class (Economy/Business/First): Economy
Seat number: 4
Payment method: Mono
Amount paid (>0): 100000
Calculated Fare: 3.3 28418
Ticket Number: TKT-0001 28418
Issue Date: 2025-11-19 28418
Payment recorded: 100000.0 28293
doe@afnog:~/Uwingeliromo$
```

Q3,

File Edit Selection View Go Run ... ← → Q_Uwingeliromeo

EXPLORER UWINGELIROMEO

```

src > id28418 > q3 > J TaxRecord.java > Language Support for Java(TM) by Red Hat > TaxRecord > computeTax()
  3   public final class TaxRecord extends Payment {
  4     public double computeTax() {
  5       double assessed = super.getAssessedTax();
  6       double computed;
  7       if (assessed > 0) {
  8         computed = assessed;
  9       } else {
 10         computed = salary * 0.10; // default 10% placeholder
 11       }
 12       // Show result formatted with student ID appended
 13       System.out.println("Tax Record Receipt: " + receiptNo + " 28418");
 14       System.out.println("Computed Tax: " + computed + " 28418");
 15       return computed;
 16     }
 17   }
 18 }
```

PROBLEMS (138) OUTPUT DEBUG CONSOLE TERMINAL PORTS

```

doe@afrog:~/Uwingeliromeo$ javac -d bin src/id28418/q3/*.java
doe@afrog:~/Uwingeliromeo$ java -cp bin id28418.q3.Main
-- Tax Administration System (Q3) === 28293
Tax authority name: Uwingeli
Region: Kigali
Authority email: uwingeliromeo@gmail.com
Tax category name: VAT
Tax rate (e.g., 0.18): 0.18
Category code (>=3 chars): RCG
Taxpayer TIN (9 digits): 123456789
Taxpayer name: Romeo
Employer name: Romeo
Employer TIN (9 digits): 123456789
Employee name: Romeo
Employee salary (>0): 20
Tax Record Receipt: RCPT-001 28418
Computed Tax: 3.5999999999999996 28418
doe@afrog:~/Uwingeliromeo$
```

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Q4,

File Edit Selection View Go Run ... ← → Q_Uwingeliromeo

EXPLORER UWINGELIROMEO

```

src > id28418 > q4 > J FinalRecord.java > Language Support for Java(TM) by Red Hat > FinalRecord > computeFine()
  3   public final class FinalRecord extends Fine {
  4     public FinalRecord(int id, String createdDate, String updatedDate,
  5       String recordCode, String daysLate) {
  6       this.id = id;
  7       this.createdDate = createdDate;
  8       this.updatedDate = updatedDate;
  9       this.recordCode = recordCode;
 10       this.daysLate = daysLate;
 11     }
 12     /**
 13      * computeFine() = daysLate * ratePerDay *
 14     */
 15     public double computeFine() {
 16       double fine = daysLate * getRatePerDay();
 17       System.out.println("Computed Fine: " + fine + " 28418");
 18       return fine;
 19     }
 20   }
 21 }
```

PROBLEMS (151) OUTPUT DEBUG CONSOLE TERMINAL PORTS

```

doe@afrog:~/Uwingeliromeo$ java -cp bin id28418.q4.Main
Library name: Kigali library
Location: Kacyiru
Library email: kacyiru@gmail.com
Author name: romeo
Author nationality: Rwandan
Book title: Suuui
ISBN (13 chars): TTTTTTTTTTTT
Publication year: 2012
Patron name: Ahmed
Card number (8 chars): 12345678
Phone (10 digits): 0787082826
Loan date: 28/10/2019
Due date: 30/10/2029
Return date: 1/11/2019
Days late: 4
Rate per day: 500
Computed Fine: 2000.0 28418
doe@afrog:~/Uwingeliromeo$
```

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Q5,

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

        try {
            System.out.println("-----School Management System -----28418");
            System.out.print("School name: ");
            String school = sc.nextLine();

            System.out.print("Location: ");
            String loc = sc.nextLine();

            System.out.print("Email: ");
        }
    }
}
```

PROBLEMS (172) OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
doe@afrog:~/Uwingeliromeo$ java -cp bin id28418.q5.Main
School name: AUCA
Location: Gishushu
Email: info@auca.com
Department name: Software engineering
Teacher name: Ivan
Qualification: Masters
Student name: Romeo
RegNo (8 chars): 12345678
Phone (10 digits): 1234567890
Course name: OOP
Course code (>= 6 chars): 123456
Assessment name: TOP
Score (0-100): 90
Term name: 1
Credit (>0): 4
Computed Grade: A 28418
doe@afrog:~/Uwingeliromeo$
```

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Q6,

```
public final class Payslip extends Payroll {
    public Payslip(int id, String createdDate, String updatedDate,
                   String employeeID, String fullName, String position,
                   double basicPay, double transportAllowance, double housingAllowance,
                   double rssbContribution, double payeTax, double loanDeduction,
                   double overtimeHours, double overtimeRate, double bonus) {
        super(id, createdDate, updatedDate, orgName, orgCode, rssbNumber, contactEmail, deptName,
              employeeID, fullName, position, baseSalary, rssbRegistered, month, year, startDate,
              overtimeHours, overtimeRate, bonus);
        if (payslipNumber == null || payslipNumber.isEmpty()) throw new RSSBDataException(msg: "Payslip number is required");
        if (issueDate == null || issueDate.isFmtnv()) throw new RSSBDataException(msn: "Issue date is required");
    }
}
```

PROBLEMS (203) OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
doe@afrog:~/Uwingeliromeo$ java -cp bin id28418.q6.Main
Position: IT
Base salary (>0): 40
RSSB registered (true/false): true
Month (1-12): 12
Year (>=2000): 2023
Start date: 23/10/2023
End date: 24/10/2024
Basic pay (>=0): 40
Transport allowance (>=0): 2
Housing allowance (>=0): 4
RSSB contribution (>=0): 4
PAYE tax (>=0): 4
Loan deduction (>=0): 4
Overtime hours (>=0): 4
Overtime rate (>=0): 4
Bonus (>=0): 4
Payslip number: 456
Issue date: 23/1/2024
==== PAYSLIP === 28418
Payslip No: 456 28418
Issue Date: 23/1/2024 28418
Gross Salary: 66.0 28418
Total Deductions: 12.0 28418
Net Salary: 54.0 28418
doe@afrog:~/Uwingeliromeo$
```

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