

Q1,

The screenshot shows an IDE with the following components:

- EXPLORER:** A project named 'UWINGELIROMEO' with a source directory 'src/id28418' containing a package 'q1'. The package contains several Java files, with 'StockReport.java' selected.
- Editor:** Displays the code for 'StockReport.java'. The class extends 'Inventory' and has a constructor that takes 'id', 'c', and 'u'. It also has a 'generateReport()' method that prints stock details.
- PROBLEMS:** Shows two errors related to the 'generateReport()' method.
- OUTPUT:** Displays the command prompt output for running the program. It shows the execution of 'javac' and 'java' commands, followed by the program's output: 'Enter total items: 100', 'Enter stock value: 10', and a formatted stock report for '28418'.

Q2,

The screenshot shows an IDE with the following components:

- EXPLORER:** A project named 'UWINGELIROMEO' with a source directory 'src/id28418' containing a package 'q2'. The package contains several Java files, with 'Ticket.java' selected.
- Editor:** Displays the code for 'Ticket.java'. The class extends 'Payment' and has a constructor that takes various parameters including flight details, passenger information, and payment details. It also has a 'calculateFare()' method.
- PROBLEMS:** Shows two errors related to the 'calculateFare()' method.
- OUTPUT:** Displays the command prompt output for running the program. It shows the execution of 'javac' and 'java' commands, followed by the program's output: '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: Momo', 'Amount paid (>0): 100000', 'Calculated Fare: 3.3 28418', 'Ticket Number: TKT-0001 28418', 'Issue Date: 2025-11-19 28418', and 'Payment recorded: 100000.0 28293'.

Q3,

```

src > id28418 > q3 > J TaxRecord.java > Language Support for Java(TM) by Red Hat > TaxRecord > computeTax()
3 public final class TaxRecord extends Payment {
29 public double computeTax() {
36 double assessed = super.getAssessedTax();
37 double computed;
38 if (assessed > 0) {
39     computed = assessed;
40 } else {
41     computed = salary * 0.10; // default 10% placeholder
42 }
43
44 // Show result formatted with student ID appended
45 System.out.println("Tax Record Receipt: " + receiptNo + " 28418");
46 System.out.println("Computed Tax: " + computed + " 28418");
47 return computed;
}

doe@afnog:~/Uwngeliromeo$ javac -d bin src/id28418/q3/*.java
doe@afnog:~/Uwngeliromeo$ java -cp bin id28418.q3.Main
=== Tax Administration System (Q3) === 28293
Tax authority name: Uwngeli
Region: Kigali
Authority email: uwngeliromeo@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@afnog:~/Uwngeliromeo$

```

Q4,

```

src > id28418 > q4 > J FinalRecord.java > Language Support for Java(TM) by Red Hat > FinalRecord > computeFine()
3 public final class FinalRecord extends Fine {
7 public FinalRecord(int id, String createdAt, String updatedAt,
23 this.recordCode = recordCode;
24 this.daysLate = daysLate;
25 }
26
27 /** computeFine() = daysLate * ratePerDay */
28 public double computeFine() {
29 double fine = daysLate * getRatePerDay();
30 System.out.println("Computed Fine: " + fine + " 28418");
31 return fine;
32 }
33 }

doe@afnog:~/Uwngeliromeo$ 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: Suuil
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@afnog:~/Uwngeliromeo$

```

Q5,

```
src > id28418 > q5 > J Main.java > Language Support for Java(TM) by Red Hat > Main > main(String[])

5 public class Main {
6     Run main | Debug main | Run | Debug
7     public static void main(String[] args) {
8         Scanner sc = new Scanner(System.in);
9
10        try {
11            System.out.println(x: "-----School Management System -----28418");
12
13            System.out.print(s: "School name: ");
14            String school = sc.nextLine();
15
16            System.out.print(s: "Location: ");
17            String loc = sc.nextLine();
18
19            System.out.print(s: "Email: ");
20            String email = sc.nextLine();
21
22            System.out.print(s: "Department name: ");
23            String dept = sc.nextLine();
24
25            System.out.print(s: "Teacher name: ");
26            String teacher = sc.nextLine();
27
28            System.out.print(s: "Student name: ");
29            String student = sc.nextLine();
30
31            System.out.print(s: "Qualification: ");
32            String qual = sc.nextLine();
33
34            System.out.print(s: "RegNo (8 chars): ");
35            String regNo = sc.nextLine();
36
37            System.out.print(s: "Phone (10 digits): ");
38            String phone = sc.nextLine();
39
40            System.out.print(s: "Course name: ");
41            String course = sc.nextLine();
42
43            System.out.print(s: "Course code (>= 6 chars): ");
44            String courseCode = sc.nextLine();
45
46            System.out.print(s: "Assessment name: ");
47            String assessment = sc.nextLine();
48
49            System.out.print(s: "Score (0-100): ");
50            String score = sc.nextLine();
51
52            System.out.print(s: "Term name: ");
53            String term = sc.nextLine();
54
55            System.out.print(s: "Credit (>0): ");
56            String credit = sc.nextLine();
57
58            System.out.print(s: "Computed Grade: ");
59            String grade = sc.nextLine();
60
61            System.out.println("School name: " + school);
62            System.out.println("Location: " + loc);
63            System.out.println("Email: " + email);
64            System.out.println("Department name: " + dept);
65            System.out.println("Teacher name: " + teacher);
66            System.out.println("Student name: " + student);
67            System.out.println("Qualification: " + qual);
68            System.out.println("RegNo (8 chars): " + regNo);
69            System.out.println("Phone (10 digits): " + phone);
70            System.out.println("Course name: " + course);
71            System.out.println("Course code (>= 6 chars): " + courseCode);
72            System.out.println("Assessment name: " + assessment);
73            System.out.println("Score (0-100): " + score);
74            System.out.println("Term name: " + term);
75            System.out.println("Credit (>0): " + credit);
76            System.out.println("Computed Grade: " + grade);
77        } catch (Exception e) {
78            e.printStackTrace();
79        }
80    }
81}
```

doe@afnog:~/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: QOP
Course code (>= 6 chars): 123456
Assessment name: TOP
Score (0-100): 90
Term name: 1
Credit (>0): 4
Computed Grade: A 28418

Q6.

```
src > id28418 > q6 > J Payslip.java > Language Support for Java(TM) by Red Hat > Payslip > generatePayslip()

3 public final class Payslip extends Payroll {
4     public Payslip(int id, String createdDate, String updatedDate,
5         super(id, createdDate, updatedDate, orgName, orgCode, rssbNumber, contactEmail, deptName,
6         employeeID, fullName, position, baseSalary, rssbRegistered, month, year, startDate,
7         basicPay, transportAllowance, housingAllowance, rssbContribution, payeTax, loanDeduction,
8         overtimeHours, overtimeRate, bonus);
9
10        if (payslipNumber == null || payslipNumber.isEmpty()) throw new RSSBDataException(msg: "payslipNumber is null");
11        if (issueDate == null || issueDate.isEmpty()) throw new RSSBDataException(msg: "issueDate is null");
12    }
13}
```

doe@afnog:~/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
=== PAYS LIP === 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