Here are **5 industry-based Java assignments** using the following topics: for loop, while loop, for-each loop, and switch case. Each assignment is tied to real-world-like scenarios to make them practical and relatable.

Assignment 6: Order Delivery Tracker

Topics: for-each loop, switch, string array logic
Scenario: An e-commerce system tracks delivery statuses of 10 orders.

Task:

- Store 10 delivery status codes in an array: {"P", "D", "C", "F", ...}
    - P = Pending
    - D = Delivered
    - C = Cancelled
    - F = Failed
- Use a for-each loop and switch to print:

Order 1: Pending

Order 2: Delivered

...

- Count how many orders fall under each status type and display summary.

✅ **Assignment 7: User Access Level Management**

Topics: while loop, switch case, role validation logic
Scenario: A SaaS product allows users to perform actions based on their role.

Task:

- Present the following roles and allow users to choose:

1. Admin

2. Manager

3. Viewer

4. Exit

- Use a while loop + switch:
    - Admin → "Can manage users and settings"
    - Manager → "Can generate reports and approve requests"
    - Viewer → "Read-only access"

- Loop until the user selects "Exit".

✅ Assignment 8: Toll Booth Billing System

Topics: for loop, switch, arrays, conditionals
Scenario: A toll booth records vehicle entries and calculates charges based on type.

Task:

- Input 5 vehicle types: ["Car", "Truck", "Bike", "Car", "Bus"]
- Use a for loop + switch to assign toll:
    - Car = ₹100, Truck = ₹250, Bike = ₹50, Bus = ₹200
- Print total toll collection.
- Track and print number of each vehicle type.

✅ Assignment 9: Employee Attendance Summary

Topics: for-each loop, logic processing, array handling
Scenario: HR system logs attendance ('P', 'A', 'L') for each employee over a week.

Task:

- For 3 employees, use a 2D array (rows = employees, columns = 7 days):

```
char[][] attendance = {
 {'P','P','A','P','L','P','P'},
 {'P','A','A','P','P','P','L'},
 {'P','P','P','P','P','P','P'}
};
```

- For each employee:
    - Count Present (P), Absent (A), and Leave (L)
    - Display attendance summary

Expected Output:

Employee 1 → P: 5, A: 1, L: 1

Employee 2 → P: 4, A: 2, L: 1

...

✅ Assignment 10: Dynamic Tax Bracket Calculator

Topics: for loop, switch, array logic
Scenario: A finance app calculates tax based on user income range.

Task:

- Store 5 income values in an array.
- Use for loop + switch (or if ladder) to apply tax brackets:
    - Income ≤ 2.5L → 0%
    - 2.5L – 5L → 5%
    - 5L – 10L → 20%
    - 10L → 30%
- Display income, tax %, and tax amount for each user.