

Lab Exercise 02.04: Rule Execution Control with Agenda Groups

Objective:

This lab exercise aims to deepen students' understanding of Drools rule management by focusing on advanced session management and execution control. Students will modify the existing scenario (demo 6) from lesson 04 to utilize Agenda Groups instead of salience for execution control. Students will learn to use agenda-groups and manage a rule execution stack to ensure rules fire in the intended order.

Prerequisites:

- Completion of Lab Exercise 02.03 or a solid understanding of rule attributes and execution control using salience.
- Access to the provided Java classes and repository setup.

Instructions:

Part 1: Implement Agenda Groups in Rule Files

1. Modify Existing Rule Files:

- In the `demo 6` directory, open the following DRL files:
 - `ApplicationValidation.drl`
 - `ApplicationIDCrossValidation.drl`
 - `IssueNewPolicy.drl`
- Replace the salience attribute with agenda groups. For example, assign `agenda-group "application-validation"` for application validation rules and `agenda-group "issue-policy"` for issuing policy rules. (**Optional:** combine salience with agenda-groups to reduce groups needed)

2. Create Execution Control in Rule Files:

Part 3: Adjust FactInsertionAndExecutionOrder Class

1. Modify the FactInsertionAndExecutionOrder.java:

- In `FactInsertionAndExecutionOrder.java` (found under `Lesson04` directory, create a stack corresponding to `demo 6` that used the agenda groups you defined for your rules. Remember 'first-in, last-out' logic.

Part 4: Test and Validate

1. Run the Modified Session:

- Execute the `FactInsertionAndExecutionOrder.java` class, ensuring to trigger demo 6.
- Confirm that the application validations are processed first, followed by ID cross-validation, and finally, the issuance of new policies only to approved applications. The order of rule execution should reflect the agenda group stack.
- Ensure no policies are issued for applications that fail validation, showcasing the effective use of agenda groups for execution control.

Evaluation Criteria:

- Accurate implementation of Agenda Groups to replace salience for execution control.
- Successful modification and execution of the `FactInsertionAndExecutionOrder.java` class to reflect the new control flow.
- Verification that rules fire in the correct order, ensuring valid applications receive policies.