Mini Expert System — Report

Rules Tested

1. **Attendance Rule**

- Condition: If attendance ≥ 75% = Eligible
- Otherwise = Not eligible

2. **Grading Rule**

- Condition: If final grade ≥ 75 = Pass
- Otherwise = Fail

3. **Login System Rule**

- Condition: Username valid AND password valid AND account not locked = Login success
- Otherwise = Login denied

4. **Bonus Points Rule**

- Condition: If the student participated in extra activity = +5 bonus points (capped at 100)
- Otherwise = No bonus applied

5. **New Rule — Library Borrowing Rule**

- Condition: If ID is valid AND no overdue items = Allowed to borrow books
- Otherwise = Not allowed to borrow

Description of the New Rule

The **Library Borrowing Rule** was added to extend the program. This rule ensures that only students with valid IDs and no overdue items can borrow library materials. It reflects how real academic systems enforce borrowing privileges responsibly.

Screenshots of Program Runs (Console Output)

Student: Mendez

- AttendanceRule = attendance = 82.5% = eligible

- GradingRule = grade = 78.0 = pass
- LoginSystemRule = login success
- BonusPointsRule = bonus +5.0, final = 93.0
- LibraryBorrowingRule = allowed

Student: Mendoza

- AttendanceRule = attendance = 70.0% = not eligible
- GradingRule = grade = 72.0 = fail
- LoginSystemRule = login denied
- BonusPointsRule = no bonus, final = 65.0
- LibraryBorrowingRule = not allowed

Student: Mercado

- AttendanceRule = attendance = 95.0% = eligible
- GradingRule = grade = 92.0 = pass
- LoginSystemRule = login denied (account locked)
- BonusPointsRule = bonus applied, final = 100.0 (capped)
- LibraryBorrowingRule = not allowed