Republic of the Philippines
Laguna State Polytechnic University
Province of Laguna

Machine Problem No. 1			
Topic:	**Propositional Logic**	**Week No.**	2-3
Course Code:	**CSST101**	**Term:**	1st Semester
Course Title:	**Advance Knowledge Representation and Reasoning**	**Academic Year:**	2025-2026
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Section	**BSCS 3A**		

Introduction

The **Mini Expert System** is a rule-based program made using Python. It evaluates students based on their academic performance and classroom behavior. The system uses a set of logical rules to decide results such as exam eligibility, grades, login access, and bonus points. It also records all the results in a CSV file named **logic_results.csv** for documentation and review.

This project shows how an expert system can help make decisions automatically by following defined rules, instead of depending only on human judgment.

Rules Tested

1. Attendance Rule

This rule evaluates whether a student is eligible to take examinations based on attendance percentage.

- If the attendance is **75% or higher**, the student is marked as **"Eligible to take exams."**
- Otherwise, the result is **"Not eligible to take exams."**

2. Grading Rule

This rule assesses a student's academic performance.

- **90 and above:** *Excellent*
- **75–89:** *Passed*
- **Below 75:** *Failed*

3. **Login System Rule**

This rule simulates a school login verification process.

- If the student has an account and enters the correct password → **Login successful**
- If the password is wrong → **Incorrect password**
- If the student has no account → **No account found**

4. **Bonus Point Rule**

This rule checks whether a student qualifies for extra points.

- If the student participated in class and submitted **2 or more projects**, they receive **Bonus points awarded**
- If they participated but submitted fewer projects → **Partial bonus**
- If not active → **No bonus points**