Automated Assessment using GradeMate Tool

Internal Assessment Summary – CIE 2 and CIE 3

Overview

This report presents the summary of descriptive answer evaluations conducted using the GradeMate system for the CIE 2 and CIE 3 internal assessments, held on separate dates for M.Tech second-semester students. Each test focused on assessing the students' understanding of core software testing and automation concepts, particularly emphasizing analytical reasoning and the ability to structure test documentation effectively.

Parameter	Details
Total Students Evaluated	18
Total Questions	5
Marks per Question	10
Total Marks	50
Test Mode	Offline (Executable Interface)
Subject	Software Testing and Automation
Semester	M.Tech 2nd Semester
Evaluation Method	Rubric-based Automated Assessment using LLM
Guided By	Prof. Rashmi R, RV College of Engineering
Test Conducted By	Shrinidhi Hegde, M.Tech 4th Semester, Software Engineering, R V College of Engineering

Rubric Design and Evaluation Criteria

A structured rubric was defined by the test conductor prior to test creation, outlining performance expectations for each question. The rubric included the following criteria:

- Relevance: Appropriateness and accuracy of the answer to the question asked
- Clarity: Logical structure, grammar, and readability of the response
- Completeness: Coverage of all key points or steps expected in a full answer

These rubrics were embedded into the prompt that was sent to the LLM (Mistral 7B), ensuring consistent and objective evaluation across all students.

System Configuration

- Evaluation Engine: GradeMate (Powered by Mistral 7B via Ollama)
- Execution Mode: Fully offline, Windows executable
- Hardware Used: Intel i5, 8GB RAM (per student machine)
- Evaluation Time: Real-time (average <3 seconds per answer)
- Internet Requirement: None (completely local processing)

Outcomes

- The system successfully evaluated all 18 student submissions in real time.
- Each response received both a numerical score and qualitative feedback aligned with the rubric.
- Students reported the evaluation as fair, informative, and closely aligned with their expectations.
- No re-evaluation requests were raised.

Remarks

The successful deployment of GradeMate, with custom rubrics authored by the evaluator, demonstrates the practicality of AI-assisted grading in postgraduate education. The use of offline LLMs ensures both data privacy and accessibility, while the rubric-driven evaluation framework upholds academic integrity and consistency.