

SPL1 Project Proposal Form, 2025
Institute of Information Technology (IIT)
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Title: CodeJudge A C-Based Automated Code Testing and Evaluation System

Project Description:

CodeJudge is a C-based automated code testing system designed to evaluate C programs against user-provided test cases. The system allows a user to input paths of a C source file, corresponding input files, and expected output files. It then compiles the code, executes it with each input, and compares the actual output with the expected result. Based on this comparison, it displays whether each test case has passed or failed. The program also identifies compilation errors or runtime errors and reports them clearly to the user. This project aims to replicate the basic mechanism of online judges but implemented entirely using **raw C code** without external libraries. It focuses on automation, file handling, process management, and result validation in a simple command-line environment.

Features:

- Allows users to provide their own test cases with input and expected output files.
- Automatically compiles the user's C program using GCC.
- Executes the compiled code for each test input.
- Compares the actual output with the expected results.
- Detects and reports compilation or runtime errors clearly.
- Displays a summary showing passed and failed test cases with detailed results.

Languages or Tools to be used:

Language : C/C++ language (Standard Libraries only)

Compiler : GCC compiler

IDE:Visual Studio Code

Supervisor's Name: Assistant Prof. Md. Saeed Siddik

Signature of the supervisor: _____

Date: _____

Before the Midterm Presentation:

I confirm that the progress is satisfactory and I am forwarding it for midterm presentation.

Signature of the supervisor: _____

Date: _____

Midterm Presentation Feedback: