

# MINI QUIZ GAME

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Mini Quiz Game is an interactive console-based application that tests users' knowledge on various topics through multiple-choice questions, tracks scores in real-time, and generates performance reports, modeled after structured simulators like the Smart Home Energy Scheduler.

## Project Description

This simulator engages users by presenting randomized questions from predefined categories, validating answers instantly, and calculating final scores with feedback. It simplifies learning through gamified quizzes, making it ideal for educational tools, student projects, or portfolio demonstrations in programming courses.

## Purpose

The tool helps users assess knowledge retention, practice under time constraints, and review weak areas via detailed reports. Useful for classrooms, self-study, competitive exam prep, or coding interviews, it converts question data into actionable insights like accuracy rates and topic-wise performance.

## How It Works

Users select quiz categories, difficulty levels, or question counts from a menu-driven interface. The system draws from a question bank, processes inputs using scoring logic, and outputs results including total score, time taken, and retry options.

## Key Features

- Menu-driven interface for easy navigation without technical expertise.
- Customizable quizzes with topics like programming, math, or general knowledge.
- Real-time scoring, timers, and high-score persistence via files.
- Instant feedback and categorized reports for improvement tracking.

## Core Components

**Data Input Layer:** Loads questions from text/JSON files with options and answers. **User Interaction Module:** Handles category selection, answer submission. **Scoring Engine:** Calculates percentages and ranks performance.

