

Secure Test Environment Enforcement

Project Overview

for your information

Overall Objective

Ensure candidates complete the assessment in a **locked-down, time-bound, and auditable environment** by enforcing browser restrictions, limiting distractions, preventing content misuse, and capturing a complete event trail for employer review.

This feature is intended for **high-stakes / employer-vetted assessments**.

Note: You are encouraged to generate and integrate code using commonly available AI tools in order to speed up the process. Please note that code should not infringe on any copyrights, stealing etc. You should also be able to defend the use and provide explanation as well.

Your Task :

Assume that you are taking a test. Use <https://example.com/> in a Chrome browser for testing the functionality that you will be developing.

You need to achieve the following when the URL is accessed.

1. Browser Enforcement (Chrome Only)

Tasks

- Detect browser name and version at load
- Block assessment if browser ≠ Google Chrome
- Show blocking screen with:
 - Reason for restriction
 - Instructions to reopen in Chrome

Events to Log

- Browser detected (name + version)
- Access blocked due to unsupported browser

2. Unified Event Logging

Objective of Logging

Provide employers with a **complete, timestamped audit trail** of candidate behavior during the assessment.

Tasks

- Define a unified event schema:
 - Event type
 - Timestamp
 - Attempt ID
 - Question ID (if applicable)
 - Metadata (browser, focus state, etc.)
- Capture **all** events from:
 - Browser enforcement
 - Fullscreen
 - Tab/focus changes
 - Copy/paste attempts
 - Timer activity
- Batch and send logs to backend efficiently
- Persist logs locally during offline or refresh scenarios
- Ensure logs are immutable post-submission