

# Individual Report

## Basic Information

Project Title: Letter Detective

Github Repository: <https://github.com/navaneethnivol/cs-161-individual-letter-detective>

## Milestones with deadlines

**Week 1:** Setup repo and flask application, implement authentication

**Week 2:** Build the frontend application

**Week 3:** Build the backend apis and multiplayer logic

**Week 4:** Integrate backend with frontend

**Week 5:** Testing and UI enhancements

## Front-end and back-end technologies

Front-end: Next.js, Tailwind, Javascript, CSS, HTML

Back-end: Flask, Python, Docker

## The algorithms/AI schemes

Letter Detective is a multiplayer word-guessing game that uses websockets for real-time player interaction. Both players receive the same random word from a predefined dictionary, competing to guess it faster and earn points. Beware, though – the game only allows a limited number of incorrect guesses. Points are awarded based on the speed of correct guesses and revealed letters. The leaderboard updates in real-time, creating a competitive environment.

### Key Features:

Predefined dictionary for diverse words.

Real-time communication through websockets.

Dynamic scoring for speed and accuracy.

Live leaderboard for instant updates.

## Marketspace / Selling point

This game offers an educational component, making it a valuable tool for reinforcing vocabulary skills in an entertaining manner.