CSE3310-002/003/004 Semester Group Project

Rev A 2/14/2024

Project Description

The project will use a plan driven approach with four deliverables, Requirements, Design, Implementation, and Test. The contents of each deliverable are listed later in this document.

Working as a team is essential for this project and an important learning objective in CSE3310. Each student will be graded on individual work and the team's resulting composite work. Students that do not contribute significantly to a deliverable will receive a 0 grade for it.

Product Description

The software product to be created during this project is a real time, multi user, internet enabled word search game; known as TheWordSearchGame (TWSG).

<u>User Story</u>

User1 enters the site from a web browser. The user enters its 'nick' or 'handle'. A few minutes later, User2 joins the site and enters its 'nick'. Both User1 and User2 see the list of waiting players. Both select the "play with 2 players" button.

At the same time both users are presented with a grid of letters. There are words embedded in the grid, along with random letters. The density of valid words is an important feature of the game; higher density is preferred. Words can be reversed, horizontal, vertical, or diagonal.

Each user identifies the start and end of a word with the mouse. When they select the first letter, it changes color. When the last letter is selected, all letters change color to highlight the word on the screen.   The color is specific to the user.

Both users see the other user highlighting and selecting words.

The first user to select the end letter of the word 'wins' the word.

If neither player has selected a start letter after 30 seconds, the system will prompt all players of the start letter of one of the remaining words.

A score will be kept for each player.

<u>Unknowns</u>

Specific items of gameplay may be revised as more is known about the problem domain. The team must be cognizant of and prepared to deal with requirements changes.

User Requirements

- UREQ001 – The word grid will be rectangular in TWSG. (50 letters by 50 letters would be a reasonable size).
- UREQ002 – TWSG shall start a game when at least two and up to four players are ready.
- UREQ003 - While waiting for a game to start, there will be a 'lobby' where waiting players gather and can see each other's names.
- UREQ004 – Each player in TWSG will be identified by a 'Nick' or a 'Handle'. The Nic will be unique.
- UREQ005 – Only words from the provided word list will be used. Words will be > 3 characters long.
- UREQ006 – The server will support 5 concurrent games.
- UREQ007 – A 'Player Leaderboard' will be provided. It will be for all players hosted on one server.
- UREQ008 – Messaging between all players will be provided

Requirements Specification

During this phase, the requirements specification is completed. The specification contains the following:

- Introduction
- Context Diagram
- User Interface
    - Mock Ups of User Interface
    - Each Input and Output must have an identifier and result in a systems requirement
- Use Cases (Stick Figure and Tabular)
    - Game with 2 players
- System Requirements
    - Maintain as a spreadsheet
    - Required Columns
        - F/NF
        - Unique ID
        - From
        - Requirement Text
        - Requirements Source
- Unknown / TBD List
    - This contains ambiguous or not understood issues that must be resolved later.