Table 1: Revision History

Date	Developer(s)	Change
2022/02/01	Noel Zacharia	Initial draft, Sections 1,7,8
2022/02/03	Richard Fan	Team Meeting Plan, Team Communication Plan, Team Roles
2022/02/03	Biranugan Pirabaharan	Sections 5 and 6
2022/02/04	Richard Fan	Corrected grammar and word choice
2022/04/04	Richard Fan	Updated for Rev1

SE 3XA3: Development Plan
Wordle 2.0

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1 Introduction

This document is the Development Plan for the project Wordle 2.0.

2 Team Meeting Plan

Below is the team meeting schedule.

Where	When	Length
MS Teams L01	Every Tuesday and Thursday @ 9:30 AM	2 Hours Each Session
Facebook Messenger	Every Saturday at 9:00 PM	2 Hours

Table 2: Team Meeting Plan

The team has decided to meet during the two weekly lab sessions and Saturday. Additional sessions may be added if deemed necessary by the team.

2.1 Agenda Rules

1. A meeting agenda will be completed before every meeting containing the following information:

    (a) Outline of the meeting
    (b) Meeting topics/issues
    (c) Who is to lead each topic
    (d) Approximate timeline for each topic

2. All team members will contribute to the agenda in between meetings.

3. The agenda is to be uploaded to the repository 10 minutes before the start of the meeting.

4. The chair will be responsible for the smooth flow of the meeting.

5. A member will be assigned to record the minutes of the meeting.

6. All members of the team shall be present unless otherwise communicated.

7. If a member is unable to attend a meeting, they must let another member know so the meeting can be rescheduled accordingly.

2.2 Meeting Roles

The following meeting roles have been defined:

Chair The role of the chair is to ensure that the meeting progresses smoothly. They lead the meeting according to the set agenda. They let members know when it is their turn to speak and when their turn ends. They may also be responsible for facilitating conflict resolution.

Recorder The role of the recorder is to keep a record of the meetings. This may include key decisions, problems, and solutions discussed. The recorder is responsible for compiling this record into a standard document.

Participant The role of the participant is to actively attend and contribute to the meeting. They should participate in any discussion and be prepared to offer their thoughts on topics presented.

3 Team Communication Plan

Meetings are to be conducted over voice calls through Microsoft Teams or Facebook Messenger. Team members should be present at the scheduled start time. A Facebook group chat has also been created for team members. This group chat will be used for any urgent communication outside of scheduled meetings. Any issues with the code shall be flagged and communicated using Git issues.

4 Team Member Roles

It is decided that the roles will rotate each meeting. Each member of the team will take turns becoming the Chair, Recorder, and Participant. The roles will rotate based on each member's last name to ensure that members do not repeat roles in the next meeting. Since team members have similar experiences in the technology used, all team members have agreed to work on all aspects of the project. The assignment of work will be decided and agreed upon by all team members. This assignment will be documented using a Gantt chart.

5 Git Workflow Plan

As Dr.Bokhari suggested in lecture we will be using a feature-branch workflow model. With this model, we will develop all the project's features in separate branches. This way developers can update and peer review the features without concern of other work being affected. Eventually, these branches are to be merged to the main branch after the features have been tested and the developers are fully confident in its functionality. Thus, throughout the term and the lifetime of the project, the main branch will remain fully functional. All commits must include clear, descriptive messages. This helps with any issue tracking and allows for easy resets or reverts to previous stable versions if they are needed. We will use milestones that align with and follow the deliverables as they are listed in the outline. This is to help stay on track and meet deadlines.

6 Proof of Concept Demonstration Plan

We have limited experience when it comes to testing JavaScript. We will need to explore our options for testing to ensure we can develop the best tests we can. Currently, we are learning more about frameworks such as JEST and Cypress. We hope to have a better understanding before developing the test plan. This will help us understand the scope of the tests we can develop. We are not very familiar with React and TypeScript. We will have a bit of a learning curve to grasp the basics, so we can better understand the source code. This will require us to spend some time before development to practice and explore the nuances of the languages used in the original code. Through the plethora of online resources, we should be able to learn everything we need. To help get through these hurdles, we will attempt to create a minimalistic high-fidelity prototype of the game to ensure we can learn the basics for when we start the full development

process. This version will not be flawless but simply a first attempt at converting the source code into our implementation. This simply serves to confirm we have the knowledge to do so and gives us good practice.

7 Technology

7.1 Programming Language

The code will be written using the latest version of JavaScript. JavaScript was chosen because it is a common programming language used in front-end development. Team members have familiarity with JavaScript.

7.2 IDE

The IDE that will be used is Visual Studio Code. This is a relatively common IDE with great support for extensions.

7.3 Testing

~~DOM Testing will be done to ensure the components are rendered correctly. We will use a common testing framework such as JEST or Cypress to ensure unit testing is done.~~ We will use Selenium, an automated testing framework to test different interactive components of the game. Unit test cases will be selected from a wide range of input cases, including edge cases to ensure complete coverage of the input domain.

7.4 Documentation

This project will be documented using LaTeX and Doxygen and will be made available in the project repository on GitLab.

8 Coding Style

The goal is to maintain readability. To ensure this we will be attempting to consistently use PascalCase in our codebase.

9 Project Schedule

Our Gantt chart will be updated as the project progresses.

10 Project Review

Group 8 has re-implemented and improved upon the popular word game Wordle for their 3XA3 project. The team used HTML, Javascript, and CSS in their implementation. After completing the project, the team has concluded that the project was a success. The original game lacked replay value, had only a single word length available, and did not come with any type of testing. Our group's implementation solved these issues by implementing different word lengths, allowing for multiple plays a day, and comprehensive test coverage through test cases based on the requirements specified within the Software Requirements Specification. Also, the development process was well documented and the source code was designed in a modular fashion. In terms of the final product shown during the final demonstration, the team was able to fulfill all of the requirements that were specified within the Software Requirements Specification. However, given the time constraint, the team was not able to implement some features that they wished to do so such as animations within the interface. The team also removed several non-functional requirements listed in the SRS since there was limited time and they were not essential to overall goal of the project.

In terms of the team functionality, the team was able to function well and communicate effectively. The team was able to distribute work and update each other on the status of their work. All team members were able to meet the deadlines that were agreed upon.

In conclusion, the team has considered Wordle 2.0 a success. Should the project be attempted again, the team wishes to implement the features that they wished to but could not due to time constraints. The team has learned a lot about the software development process, and will apply these concepts in their future projects and careers.