

P-16:
Leaderboard Project Plan

March 5, 2025

Project Timeline

This timeline will cover the planning aspect of all tasks within LEADERBOARD branch. Each member is expected to contribute 3×45 minutes per week.

0.1 Planning and Design

- Create planning documents for LEADERBOARD branch.
 - Create a outline and rough dates for when tasks are estimated to be finished
 - **Deadline:** March 5, 2025
- Design use case diagrams
 - Create draft then create final of the use case diagrams.
 - **Deadline:** March 6, 2025
- Design class structure diagrams.
 - Create a general class structure diagram for classes in LEADERBOARD.
 - **Deadline:** March 6, 2025
- Create use case descriptions document
 - Identify and provide details to different use cases.
 - **Deadline:** March 6, 2025
- Review and submit documents for iteration 1:
 - Team review, spell checking, format checkin, proofread, then submit to D2L dropbox.
 - **Deadline:** March 6, 2025

Milestones:

- team 6 : : iteration 1: March 7, 2025

0.2 Development and Implementation

- **Objective:** Develop and implement a Leaderboard system to display the ranking of all players, with player profiles, and update rankings.
- **Duration:** March 8, 2025 - April 11, 2025 (Post-iteration 1 to iteration 3 deadline)
- **Key Features:**
 - Display players with rank, username, win/loss/points stats.
 - Update rankings
 - Allow to search players in Leaderboard.
 - Allow users to change the filter of the Leaderboard. (descending/ascending order)
 - Allow the users to change the ranking criteria.
 - Intergrate with GUI and other systems of the app.

The Development and Implementation will be divided into phase: Setup, Core Development, Integration, Testing, and Review. Tasks are assigned to balance workload among all team members.

Phase 1: Setup

- **Duration:** March 8, 2025 - March 12, 2025
- **Goal:** Establish rough skeleton code and finalize design for LEADERBOARD

Tasklist:

- Git Repository Setup
 - **Start Date:** March 8, 2025
 - **End Date:** March 8, 2025
 - **Estimated Time:** 1 hour
- Finalize class structure design: Adjust class diagram based on feedback
 - **Start Date:** March 9, 2025
 - **End Date:** March 10, 2025
 - **Estimated Time:** 3 hours
- Stub database interface: Simulate fetch rankings
 - **Start Date:** March 10, 2025
 - **End Date:** March 11, 2025
 - **Estimated Time:** 3 hours
- Plan GUI: Create a sketch for the LEADERBOARD GUI
 - `tasks.js`
 - **Start Date:** March 11, 2025
 - **End Date:** March 12, 2025
 - **Estimated Time:** 3 hours

Milestones:

- Setup complete: March 12, 2025

Phase 2: Core Development

- **Duration:** March 13, 2025 - March 25, 2025
- **Goal:** Implement core systems for LEADERBOARD

Tasklist:

- Implement a class to read and store player details
 - **Start Date:** March 13, 2025
 - **End Date:** March 16, 2025
 - **Estimated Time:** 5 hours
- Create a sorting class that sorts by wins or any other criteria
 - **Start Date:** March 14, 2025
 - **End Date:** March 18, 2025
 - **Estimated Time:** 8 hours
- Implement displaying Leaderboard

- **Start Date:** March 14, 2025
- **End Date:** March 18, 2025
- **Estimated Time:** 8 hours
- Simulate ranking updates either automatically or manually by pressing update button
 - **Start Date:** March 19, 2025
 - **End Date:** March 22, 2025
 - **Estimated Time:** 4 hours
- Basic GUI display
 - **Start Date:** March 20, 2025
 - **End Date:** March 25, 2025
 - **Estimated Time:** 5 hours

Milestones:

- Leaderboard prototype: March 25, 2025

Phase 3: Integration

- **Duration:** March 26, 2025 - April 1, 2025
- **Goal:** Connect leaderboard to other features and GUI

Tasklist:

- Integrate with other matchmaking: Add a method to receive game results from matchmaking stub, then update leaderboard
 - **Start Date:** March 26, 2025
 - **End Date:** March 29, 2025
 - **Estimated Time:** 6 hours
- Exchange GUI interaction: Maybe add clickable names to view profiles (i.e. Clash Royale)
 - **Start Date:** March 27, 2025
 - **End Date:** March 31, 2025
 - **Estimated Time:** 6 hours
- Link player stats to the viewed profile
 - **Start Date:** March 28, 2025
 - **End Date:** April 1, 2025
 - **Estimated Time:** 4 hours
- Test integration
 - **Start Date:** March 30, 2025
 - **End Date:** April 1, 2025
 - **Estimated Time:** 3 hours

Milestones:

- Integrated LEADERBOARD: April 1, 2025

Phase 4: Testing

- **Duration:** April 2, 2025 - April 8, 2025
- **Goal:** Ensure there are no bugs.

Tasklist:

- Create unit tests using JUnit to test ranking updates and also update player stats
 - **Start Date:** April 2, 2025
 - **End Date:** April 5, 2025
 - **Estimated Time:** 6 hours
- Test GUI functions
 - **Start Date:** April 3, 2025
 - **End Date:** April 6, 2025
 - **Estimated Time:** 4 hours
- Test ranking logic: Test the sorting methods and updates
 - **Start Date:** April 4, 2025
 - **End Date:** April 7, 2025
 - **Estimated Time:** 3 hours
- Full system test
 - **Start Date:** April 5, 2025
 - **End Date:** April 8, 2025
 - **Estimated Time:** 3 hours

Milestones:

- LEADERBOARRD tested: April 8, 2025

Phase 5: Review

- **Duration:**
- **Goal:**

Tasklist:

- Update documentation
 - **Start Date:** April 9, 2025
 - **End Date:** April 9, 2025
 - **Estimated Time:** 2 hours
- Full code review
 - **Start Date:** April 9, 2025
 - **End Date:** April 10, 2025
 - **Estimated Time:** 3 hours
- Record video demonstration
 - **Start Date:** April 9, 2025

- **End Date:** April 10, 2025
 - **Estimated Time:** 3 hours
- Submit documents
 - **Start Date:** April 10, 2025
 - **End Date:** April 11, 2025
 - **Estimated Time:** 1 hour

Milestones:

- Submission: April 11, 2025

Final Notes

Start coding on March 8, 2025, the earlier the better. Hold weekly meeting with other team leader working on other features. Hold scrum meetings with own team. Branch early and branch often, and commit frequently to GitLab.