

# SENG 300 P - [REDACTED] Planning Document

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# Game Logic Team

## Project Iteration 1

### Tasks:

- Class Structure Diagrams
  - Create list of classes and methods first
    - Split up workload accordingly
    - More detailed planning document available under docs/gamelogic
  - Status: **Completed**
- Use Case Diagrams
  - Coordinated alongside descriptions (i.e: whatever description each member worked on, they worked on the associated diagram part)
  - Status: **Completed**
- Use Case Descriptions
  - Coordinated alongside use case diagrams
  - Status: **Completed**

### Timeline:

Feb 24th - Feb 28th:

- Rough drafts (tables: class, object, and method structures for class diagram)
- Actual game logic planning
- Class structure diagrams
- Deadlines: **Met**

Mar 1st - Mar 7th:

- Meetings with other teams for requirements from both sides
- Use case descriptions and diagrams
- Deadlines: **Met**

## Project Iteration 2

### Tasks:

- Work with other teams on Accountability Contract
- Begin working on code
  - At the very least the Abstract Classes to start
  - Directory and Class structure
  - Status: **Backlog**
- Meetings with other teams
  - Decide work split for division of labour
    - Original Team to be potentially divided for iteration 2 deliverables
  - Coordinator priority regarding work based on what other teams need from one another

- Status: Backlog

*For 1 member of GUI and 1 member of Game Logic ONLY:*

- Website v1
  - If time permits:
    - Store for lookboxes
    - Store for ranks
  - Status: Backlog

#### **Timeline:**

Mar 8th - Mar 14th:

- Abstract Object Classes, at least SOME work done on them
- Inter-team requirement meeting
- Division of team
- Website v1
- Deadlines: Pending

Mar 15th - Mar 21st:

- Completion of abstract classes, at least a few of the inherited objects
- Finalize website
- Deadlines: Pending

### **Project Iteration 3**

#### **Tasks:**

- All Abstract Classes (game, board, piece, and so on)
- GUI Integration
  - Meetings with GUI team as well to ensure smooth incorporation of code
  - Status: Backlog
- Game Logic Integration
  - Status: Backlog

#### **Timeline:**

Mar 22nd - Mar 28th:

- All Abstract Classes completed
- At least some of the remaining classes and files to be relatively close to done
- Deadlines: Pending

Mar 29th - Apr 11th:

- All game logic related code completed
- Integration of GUI
- Deadlines: Pending

# GUI Team

## NOTES:

- GUI HEAVILY DEPENDS ON THE TIMELY DELIVERY OF COMPONENTS FROM OTHER TEAMS SO THAT WE HAVE ENOUGH TIME TO COMPLETE OUR PORTIONS
- GUI TEAM MAY REQUIRE ADDITIONAL MEMBERS FROM OTHER TEAMS IN ITERATION 3 IF TIME IS TIGHT

## Group objectives:

Create the Graphical User Interface (GUI) for all screens and displayed components of the games and their associated menus and pages.

## Design ideas:

- Retro game?
- GUI needs to be consistent

## Project Iteration 1

### Tasks:

- v1 graphics for pages need to be completed
  - Status: Complete
- If needed, v2 graphics can be created based on the work of other groups and their created diagrams
  - Status: Complete
- Meet with other teams to discuss their needs from GUI and what GUI needs from them
  - Status: Complete
- Finalize designs
  - theme/colors/fonts
  - Status: Complete

### Timeline:

Feb 24th - Feb 28th:

- Rough drafts (lo-fi) of designs
- First med-fi designs
- Deadlines: Met

Mar 1st - Mar 7th:

- Meetings with other teams for requirements from both sides
- Finalize all designs
- Finalize theme color scheme and fonts to be used
- Deadlines: Met

## Project Iteration 2

### Tasks:

- Begin working on code
  - Game screens (priority 1)
    - **Pieces and each box needs to be clickable**
  - Sign in and login screens (priority 2)
  - Menus (priority 3)
  - Status: Backlog
- Final meetings with other teams to decide priorities and what we all need
  - Status: Backlog
- Original team to be divided into other teams to complete Iteration 2 deliverables
  - Status: Backlog

*For 1 member of GUI and 1 member of Game Logic ONLY:*

- Website v1 needs to be completed
  - If time permits:
    - Store for lookboxes
    - Store for ranks
  - Status: Backlog

### Timeline:

Mar 8th - Mar 14th:

- Game screens
- Sign in OR login page
- Final inter-team requirement meetings
- Division of team
- Website v1
- Deadlines: Pending

Mar 15th - Mar 21st:

- Completion of menus and screens for this iteration
- Finalize website
- Deadlines: Pending

## Project Iteration 3

### Tasks:

- Finish working on all GUI components that remain
  - User profiles
  - Leaderboard
  - Win/loss/draw screens
  - Help popup

- Game select
- Any other remaining screens
- Status: Backlog
- Work on supplementary ideas if time permits
  - Add alternative skins
    - User profile picture upload
    - User profile skins
    - User game skins
    - High priority
  - Store to buy lootboxes
    - Drops skins
    - Some kind of currency dropped during games
    - Drops game skins
    - Could tie into the website
    - Medium priority
  - Add purchasable skins (and lootboxes for skins) which change the design of pieces with selectable colors
    - Medium priority
  - Tetris cat animations?
    - Might be done as a priority
    - Medium priority
  - Player profiles
    - Player match history (includes player names and statistics)
    - High priority - Ties into Leaderboard
  - SFX/ music
    - Low priority
  - Status: Backlog
- Website updates as required
  - Status: Backlog

### Timeline:

Mar 22nd - Mar 28th:

- Remaining GUI components
- Depending on time, begin working on high priority supplementary features
- Website updates as needed
- Deadlines: Pending

Mar 29th - Apr 11th:

- Finalization of GUI
- Work on med and low priority supplementary features
- Website updates as needed
- Deadlines: Pending

# Authentication/Profile Team

## Project Iteration 1

### Objectives:

- Account creation
- Editing account info
- MFA
- System admin

**Deadline:** March 7, 2025

### Tasks:

- Create planning docs:
  - ETA: March 1, 2025
  - Status: **Complete**
- Use cases, class structure diagram for admin
  - ETA: March 3, 2025
  - Status: **Complete**
- Authentication system diagrams (use case diagram, class and sequence if necessary):
  - ETA: March 4, 2025
  - Status: **Complete**
- Use cases, sequences of creating an account:
  - ETA: March 2, 2025
  - Status: **Complete**
- Use cases, sequences of editing account:
  - ETA: March 4, 2025
  - Status: **Complete**
- Use cases, class structure diagram for guest user
  - ETA: March 3, 2025
  - Status: **Complete**

### Extras:

- Add security measures for the player authentication process (encrypted database, etc.)
  - ETA: None
  - Status: **Complete**

### Meetings:

- **Feb 25**
- **March 6**

## Project Iteration 2

### Tasks:

- Examine other teams project
  - ETA: March 10th, 2025
  - Priority: High
  - Status: Backlog
- Brainstorm features they could/should implement
  - ETA: March 11th, 2025
  - Priority: High
  - Status: Backlog
- Create draft of future proposal document
  - ETA: March 12th, 2025
  - Priority: High
  - Status: Backlog
- Feature Proposal Document:
  - Descriptions of two requested feature changes that need to include a high-level description of the features, expected impacts on the systems and suggestions for implementation or design.
  - ETA: March 21st, 2025
  - Priority: High
  - Status: Backlog
- Make final design decisions
  - ETA: March 21st, 2025
  - Priority: High
  - Status: Backlog
- Begin working on high priority code
  - ETA: March 21st, 2025
  - Priority: Medium
  - Status: Backlog

**Deadline:** March 21, 2025

### Timeline:

Mar 8th - Mar 14th:

- Members should be focused on completing iteration 2 deliverables,
  - Feature proposal
  - Helping other teams with iteration 2 tasks

Mar 15th - Mar 21st:

- Begin code on high priority items
  - Account creation
  - User login
  - Guest user



**Meetings: TBD**

## **Project Iteration 3**

### **Tasks:**

- Finish code
- Finish documentation
- Finish project

**Deadline:** April 9th, 2025

### **Tasks:**

- Code for account creation:
  - ETA: March 28th, 2025
  - Priority: High
  - Status: **Backlog**
- Code for user login:
  - ETA: March , 2025
  - Priority: High
  - Status: **Backlog**
- Code for account editing:
  - ETA: March , 2025
  - Priority: Medium
  - Status: **Backlog**
- Stubs for database:
  - ETA: March , 2025
  - Priority: Medium
  - Status: **Backlog**
- Code for database/network encryption:
  - ETA: April 4th, 2025
  - Priority: Low
  - Status: **Backlog**
- Individual deliverables:
  - ETA: April 11th , 2025
  - Priority: High
  - Status: **Backlog**

### **Extras (time permitting, no priority status)**

1. Player ranks (like leagues)
2. Implement 2FA, etc.
3. Implement Database
4. Password recovery (security questions or email to reset?)
5. Spectating features
6. Username & chat profanity filter
7. Blocking players

8. Banning players?
9. Administrator interface
10. Chatting inside/outside of game
11. Chatbot for help with accounts, etc.

#### **Timeline:**

Mar 21th - Mar 28th:

- Complete high priority code
- Begin work on medium priority features

Mar 28th - April 4th:

- Complete work on medium priority features
- Implement any possible low priority items

April 4th - April 11th:

- Ensure code meshes appropriately with other teams
- Pass off code for integration
- Complete individual deliverables

## **Leaderboard/Matchmaking Team**

### **Project Iteration 1**

#### **Objectives:**

- Matchmaking logic
- Leaderboard creation logic
- Integration with game logic, authentication & profile, networking teams

**Deadline:** March 7, 2025

#### **Tasks:**

- Matchmaking and player ranking logic
  - ETA: 02-28
  - Status: **Complete**
- Leaderboard creation diagrams
  - ETA: 03-04
  - Status: **Complete**
- Matchmaking diagrams (ranked, vs. friends, etc.)
  - ETA: 03-04
  - Status: **Complete**
- Matchmaking use cases
  - ETA: 03-04
  - Status: **Complete**
- Player statistics handling
  - ETA: 03-04
  - Status: **Complete, but will likely be revised at a later date**

- README for documentation and diagrams
  - ETA: 03-06
  - Status: **Complete**
- Coordinate with game logic, auth/profile, networking teams to draw overview diagram
  - ETA: 03-06
  - Status: **Complete**
- Create team planning document
  - ETA: 03-07
  - Status: **Complete, but will likely be revised at a later date**

#### Timeline:

##### **February 24 - March 2: Deadlines Met**

- Establish team roles
- Discuss interdependencies with other teams
- Complete diagrams for basic functionality of matchmaking
- Complete diagrams for player statistic storage
- Complete diagrams related to leaderboard generation
- Complete relevant use-cases

##### **March 3 - March 7: Deadlines Met**

- Organize file structure and create README
- Draw diagrams for lower-priority additions
- Review each other's diagrams from previous week and update
- Complete project plan for Iteration 2 and Iteration 3

## Project Iteration 2

#### Objectives:

- Focus on **planning analysis** of the team deliverables
- Identify timelines, task dependencies, and risks for both teams (henceforth called "A" and "B")
- Organize and compare these risks, offer suggestions for improvement
- Coordinate with editorial and documentation team to integrate this work with the design review and feature proposal subteams into a well-formatted document

**Deadline:** March 21, 2025

#### Tasks:

- [both teams] Identify timing issues and unrealistic deadlines
  - ETA: 03-12
  - Status: **Not Started**
- [both teams] List risks that could impact completion, sorted by delay\*probability
  - ETA: 03-15
  - Status: **Not Started**
- [both teams] List suggestions for mitigating risks and improving timeline

- ETA: 03-18
  - Status: Not Started
- Contribute to grade letter proposal & grade adjustment table documents
  - ETA: 03-20
  - Status: Not Started
- Add the results of the previous tasks to the submission documents
  - ETA: 03-20
  - Status: Not Started

#### Timeline:

##### **March 10 - March 12:**

- Identify timing issues & unrealistic deadlines for both teams

##### **March 13 - March 15:**

- Identify, list, and describe risks for both teams

##### **March 16 - March 18:**

- List suggestions for both teams

##### **March 19 - 21:**

- Review previous work
- Combine planning analysis data into main feedback document
- Contribute to and complete the grade-related documents

## Project Iteration 3

#### Objectives:

- Complete “changes made” document based on Iteration 2 reviews
- Complete leaderboard and matchmaking code
- Ensure compatibility with other teams’ code
- Write unit tests
- Complete video submission

#### Tasks:

- Code for integration with GUI team
  - ETA: 03-24
  - Status: Not Started
- Code for integration with game logic team
  - ETA: 03-24
  - Status: Not Started
- Contribute to player code together with authentication and profile team
  - ETA: 03-25
  - Status: Not Started
- Code for matchmaking
  - ETA: 03-26
  - Status: Not Started

- Code for leaderboard
  - ETA: 03-26
  - Status: Not Started
- Complete changes made document
  - ETA: 03-27
  - Status: Not Started
- [optional, high priority, interdependent]: Code for displaying player rank on profile
  - ETA: 03-30
  - Status: Not Started
- [optional, high priority]: Code for guest accounts
  - ETA: 04-04
  - Status: Not Started
- [optional, medium priority, interdependent]: Code for creating chat instance between players when a match begins
  - ETA: Undecided
  - Status: Not Started
- [optional, medium priority]: Code for blocking accounts (e.g. if player 1 blocks player 2, they will not match with each other in the future and they cannot message each other)
  - ETA: Undecided
  - Status: Not Started
- [optional, low priority, interdependent]: Code for integration with account database (instead of using stubs)
  - ETA: Undecided
  - Status: Not Started

#### **Timeline:**

##### **March 10 - March 28:**

- Complete “changes made” document based on Iteration 2 reviews
- Complete any leaderboard and matchmaking tasks that other teams (particularly GUI and game logic) depend on

##### **March 29 - April 4:**

- Complete any important functionality that was not done in the previous week
- Clean up existing code
- Add unit tests for existing code
- If we are meeting our goals comfortably, implement any of the optional tasks

##### **April 5 - April 11:**

- Clean up existing code
- Add unit tests for existing code
- Generate unit tests coverage report
- Complete video submission

# Networking Team

## Project Iteration 1

### Tasks:

- Plan networking objectives/organization
- Create initial documentation for networking implementations
- Create structure/class diagrams
- Identify use cases, documenting and diagraming them
- Research the plausibility of functional networking

### Timeline:

#### Feb 24th - Feb 28th:

- Establishing team
- Deciding on Networking Team Lead
- Deadlines: **Met**

#### Mar 1st - Mar 7th: Planning team roles and tasks, while creating an overview planning document

- Create drafts of networking documentation
- Create simplified class diagrams using the prototype functional net code as reference
- Create a list of use cases and a diagram
- Create a functional prototype of
- Merge to main, review, and submit
- Deadlines: **Met**

## Project Iteration 2

### Tasks:

- Discuss implementation with other team leads and adapt to best suit their implementation
- Revise and extend documentation for other teams to reference
- Revise and complete class structure diagrams before creating code
- Begin implementing stub functions, with the hopes of implementing functional networking

### Timeline:

#### Mar 8th - Mar 14th:

- Divide team up for other components
- Meet with other teams and coordinate what's needed in regards to networking
- Revise all documentation and diagrams
- Deadlines: **Pending**

#### Mar 15th - Mar 21st:

- Implementation, at the very least stubs.
  - If there is time, actual functioning networking as well
- Deadlines: Pending

## Project Iteration 3

### Tasks:

- Continue remaining tasks from project iteration 2
- Implement stretch goals such as functional networking/database
- If implementation is complete of networks, members may be required to move to another team, such as GUI to help with backlogged tasks and supplementary features

### Timeline:

Mar 22nd - Mar 28th:

- Continue remaining features
- If time permits, actual network functionality
- Deadlines: Pending

Mar 29th - Apr 11th:

- Move over to other teams to help cover gaps or bridge the gaps for integration
- Deadlines: Pending

# Integration Team

**\*\*The leads of all teams will complete integration and therefore there won't be as much work when it comes to iteration 1\*\***

## Group objectives:

Work on integrating the separate systems into one fully functioning system

## Project Iteration 1

### Tasks:

- Make sure all components are pushed to main from their respective branches
  - Status: Complete
- Review items to submit
  - Status: Complete
- Create, combine and complete planning documents
  - Status: Complete
- Final submission for iteration 1
  - Status: Complete

### Timeline:

Feb 24th - Feb 28th:

- No work
- Deadlines: N/A

Mar 1st - Mar 7th:

- Merge branches (7th)
- Review (7th)
- Submission (7th)
- Planning doc (6th - 7th)
- Deadlines: Met

## Project Iteration 2

### Tasks:

- Divide teams up for iteration 2 deliverables
  - Status: Complete
- Make sure all teams are on track for iteration 2 deliverables
  - Status: Backlog
- If code is being worked on, make sure that there are adequate ways for teams to add on
  - Status: Backlog



- Review items to submit
  - Status: Backlog
- Final submission for iteration 2
  - Status: Backlog

#### Timeline:

Mar 8th - Mar 14th:

- Divide team up (7th - 8th)
- Deadlines: Met

Mar 15th - Mar 21st:

- Keep everyone on track to meet deadlines
- Keep codebase consistent
- Review (21st)
- Submission (21st)
- Deadlines: Pending

## Project Iteration 3

#### Tasks:

- Complete integration
  - Status: Backlog
- Make sure all code is submitted to the integration team by the latest on April 6th
  - Work may continue at this time, but the deadline is to provide adequate time to begin working on integration
  - Status: Backlog
- README
  - Status: Backlog
- Review items to submit
  - Status: Backlog
- Final submission for iteration 3
  - Status: Backlog

#### Timeline:

Mar 22nd - Mar 28th:

- Begin integration if there is an adequate amount of code
- Keep merges up to date and timely
- Deadlines: Pending

Mar 29th - Apr 11th:

- Complete integration
- Review (10th -11th)

- Submission (11th)
- Deadlines: Pending