CS 30700

Sprint 1 Planning Document

Admiral Radar

Utkarsh Agarwal
Ramsey Ali
Sam Buck
Panagiotis Kostouros
Delun Shi

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1 Sprint Overview

In this sprint we intend to build the very basic functionality of the game. On the server side, this will include the relational database structure and the interface software inside the Java server to connect to it. On the client side, we will implement the graphical user interface in a basic fashion, without many of the advanced graphics and user experience additions that will be present in the final version. The backend side of the interface will allow control of the GUI in a way that allows us to test functionality, but does not necessarily allow full playability of the game. Finally, the backend of the client will be able to connect to the basic server and interface with the login features.

SCRUM Master: Sam Buck

SCRUM Meetings Monday and Thursday, 8pm

There are several risks or challenges which we foresee in this sprint. The most obvious are technical: ensuring the git works with all users' development environments, that the server implementation properly interacts with the database software, and that we're able to properly use all APIs which the project requires. Coordinating the user interface and the backend could also be challenging, as the MVC paradigm we've designed the client under expects the controller classes to interact properly with several different aspects of the code, each written by different members. The final significant task is interpersonal: while our team has come together as a working unit, we have not yet worked on writing software together, and may face issues when attempting to work together when writing integrated software.

2 Sprint Detail

1. As a user, I would like to be able to login using an id and password

First Name	Last Name	Rank	Pips	Title
Jean Luc	Picard	Captain	4	Commanding Officer
William	Riker	Commander	3	Executive Officer
Data	Soong	Lieutenant Commander	2.5	Operations Officer
Worf	Son of Mogh	Lieutenant	2	Tactical Officer
Geordi	LaForge	Lieutenant	2	Chief Engineer
Beverly	Crusher	Commander	3	Chief Medical Officer

Table 1: User Story 1

Acceptance Criteria:

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3. As a user, I would like to be able to start, join, and end a game when I like

First Name	Last Name	Rank	Pips	Title
Jean Luc	Picard	Captain	4	Commanding Officer
William	Riker	Commander	3	Executive Officer
Data	Soong	Lieutenant Commander	2.5	Operations Officer
Worf	Son of Mogh	Lieutenant	2	Tactical Officer
Geordi	LaForge	Lieutenant	2	Chief Engineer
Beverly	Crusher	Commander	3	Chief Medical Officer

Table 2: User Story 3

Acceptance Criteria:

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6. As a user, I would like to be able to play on a turn based mode

First Name	Last Name	Rank	Pips	Title
Jean Luc	Picard	Captain	4	Commanding Officer
William	Riker	Commander	3	Executive Officer
Data	Soong	Lieutenant Commander	2.5	Operations Officer
Worf	Son of Mogh	Lieutenant	2	Tactical Officer
Geordi	LaForge	Lieutenant	2	Chief Engineer
Beverly	Crusher	Commander	3	Chief Medical Officer

Table 3: User Story 6

Acceptance Criteria:

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33. As a developer, I would like to be able to make a separate server

First Name	Last Name	Rank	Pips	Title
Jean Luc	Picard	Captain	4	Commanding Officer
William	Riker	Commander	3	Executive Officer
Data	Soong	Lieutenant Commander	2.5	Operations Officer
Worf	Son of Mogh	Lieutenant	2	Tactical Officer
Geordi	LaForge	Lieutenant	2	Chief Engineer
Beverly	Crusher	Commander	3	Chief Medical Officer

Table 4: User Story 33

Acceptance Criteria:

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34. As a developer, I would like to be able to store game information in server

First Name	Last Name	Rank	Pips	Title
Jean Luc	Picard	Captain	4	Commanding Officer
William	Riker	Commander	3	Executive Officer
Data	Soong	Lieutenant Commander	2.5	Operations Officer
Worf	Son of Mogh	Lieutenant	2	Tactical Officer
Geordi	LaForge	Lieutenant	2	Chief Engineer
Beverly	Crusher	Commander	3	Chief Medical Officer

Table 5: User Story 34

Acceptance Criteria:

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35. As a developer, I would like to be able to communicate between server and client

Task	Description	Time (hr)	Owner (Team Member)
1	Have multiple clients interact with the server at a time	5	Utkarsh
2	Utilize Java Socket Programming	4	Utkarsh

Table 6: User Story 35

Acceptance Criteria:

- A server should be capable to run multiple clients and be able to accept and properly interpret client commands.
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36. As a developer, I would like to be able to have a database for user profile

Task	Description	Time (hr)	Owner (Team M
1	Implement a database structure that reflects the data being stored	3	Ramsey
2	Implement a database that stores images for user avatars	6	Ramsey

Table 7: User Story 36

Acceptance Criteria:

- Given the database exists, the database should be able to store all information provided by users or games into tables.
- Given that an image is stored in the database, the database can retrieve said image and provide it to requested client.
- Given that a player has an avatar, when the player logs in, the avatar image is properly displayed on the client.

41. As a Developer, I would like the server to receive all inputs from each of 4 clients before executing the team?s move.

Task	Description	Time (hr)	Owner (Te
1	Implement proper listening constraints for the server	3	Utkarsh
2	Implement client sided listeners to await further instructions from server	4	Utkarsh
3	Implement proper messaging for each client from the server	2	Utkarsh

Table 8: User Story 41

Acceptance Criteria:

- The server should wait for response from Captain, Engineer and First Officer before updating the Ship object.
- Given that the server has received all inputs from the clients and the server hasn?t given the go ahead to the clients for further inputs yet, the clients should not be able to change game state.
- Given that a team is performing an action, when the server receives all necessary inputs from clients and then executes it, it should send updates to all teams about a move made, also, it should notify the executing team that their action is complete.

43. As a Developer, I would like each player?s client to be distinct and separate. No player role should be able to perform actions of other team members for them.

Task	Description	Time (hr)	Owner (Team Member)
1	Implement client/user roles	3	Delun
2	Implement distinct client/user communication	2	Delun
3	Implement player turns for each action	3	Delun

Table 9: User Story 43

Acceptance Criteria:

- Given that the player has a certain role (e.g. Captain), when he/she interacts with the GUI, they should only be presented with the actions related to his/her specific role.
- Clients should not be able to send nor receive peer-to-peer communication.
- If an action is currently being performed by another player, the other players must wait until the end of turn before performing another action.

45. As a Player or Developer, I would like communications with the login server to be encrypted and secure. Each player should only be able to access their own account.

Task	Description	Time (hr)	Owner (Team Member)
1	Implement a Hash Function	1	Ramsey
2	Implement Database User Privileges	2	Ramsey

Table 10: User Story 45

Acceptance Criteria:

- Given packet is intercepted, no private user information should be able to seen by other users
- A user can?t modify the database for aspects outside of his or her role
- Given that a user has already created an account with their email, they cannot create another account with that same email, since each user should only create one account per email address.

3 Sprint Backlog

Functional Requirements

User Stories to be implemented in this sprint are shown in *italitcs*.

General

1. As a user, I would like to be able to login using an id and password
2. As a user, I would like to be able to have an avatar and customize my profile
3. As a user, I would like to be able to start, join, and end a game when I like
4. As a user, I would like to be able to select a team and position on my team
5. As a user, I would like to be able to select a map from variety of maps
6. As a user, I would like to be able to play on a turn based mode
7. As a user, I would like to be able to have a second mode of playing: real-time
8. As a user, I would like to be able to text chat with my teammates in-game
9. As a user, I would like to be able to perform the actions required for a spacewalk

10. As a user, I would like to be able to play the game entirely online, without a desktop client

11. As a user, I would like to be able to play with less than four players by having the computer take over a role

Captain

12. As a user, I would like to be able to send directions to navigate the spaceship

13. As a user, I would like to be able to know when a special ship system is ready

14. As a user, I would like to be able to fire a rocket, drone, the radar, or mines.

15. As a user, I would like to be able to deploy the ship?s boosters.

16. As a user, I would like to be able to fire a remotely-detonated mine.

17. As a user, I would like to be able to know when a system is disabled

18. As a user, I would like to be able to get information about the enemy spaceships supposed position from the radio operator

19. As a user, I would like to be able to begin a spacewalk.

20. As a user, I would like to be able to see where my team has laid mines

First Mate

21. As a user, I would like to be able to charge a system on every move

22. As a user, I would like to be able to deploy the Sonar or a Drone.

23. As a user, I would like to be able to monitor the total health of the ship

Engineer

24. As a user, I would like to be able to keep track of which systems are disabled and which get repaired

25. As a user, I would like to ask the captain to follow a certain course to repair a system

26. As a user, I would like to select a component to be disabled after a movement.

Radio Operator

27. As a user, I would like to be able to get the courses of enemy spaceships
28. As a user, I would like to be able to click on different areas and plot supposed paths
29. As a user, I would like to be able to keep tracks of mines ? both ours and enemies
30. As a user, I would like to be able to advise captain on when to deploy mine
31. As a user, I would like to be able to keep track of disclosed locations of enemy
32. As a user, I would like to be able to adjust predicted enemy courses based on information received

Developer

33. As a developer, I would like to be able to make a separate server
34. As a developer, I would like to be able to store game information in server
35. As a developer, I would like to be able to communicate between server and client
36. As a developer, I would like to be able to have a database for user profile
37. As a developer, I would like to be able to have accommodation for real-time play

Non-Functional Requirements

38. As a Player, I would like to keep GUI input delays low.
39. As a Player, I would like all communications (text chat, notifications, etc.) between clients and the server to have low latency, especially in real-time mode, for enjoyable gameplay.
40. As a Player I would like the audio feedback to be synced with the visuals.
41. As a Developer, I would like the server to receive all inputs from each of 4 clients before executing the team?s move.
42. As a Developer, I would like each team?s clients to only receive information that they are entitled to know. (e.g. they should not receive the other team?s location)
43. As a Developer, I would like each player?s client to be distinct and separate. No player role should be able to perform actions of other team members for them.
44. As a Player or Developer, I would like the game to be capable of handling more than 2 teams (8 players) (if time allows).
45. As a Player or Developer, I would like communications with the login server to be encrypted and secure. Each player should only be able to access their own account.