

# WARGAME PROGRESS REPORT

Week 1: January 23rd - February 6th

*Reid Coates* | Client Coordination and Backend Development Lead

*Jack Kelley* | Organization Lead and Frontend Development

*Alexander Hassan* | Testing Lead and Frontend Development

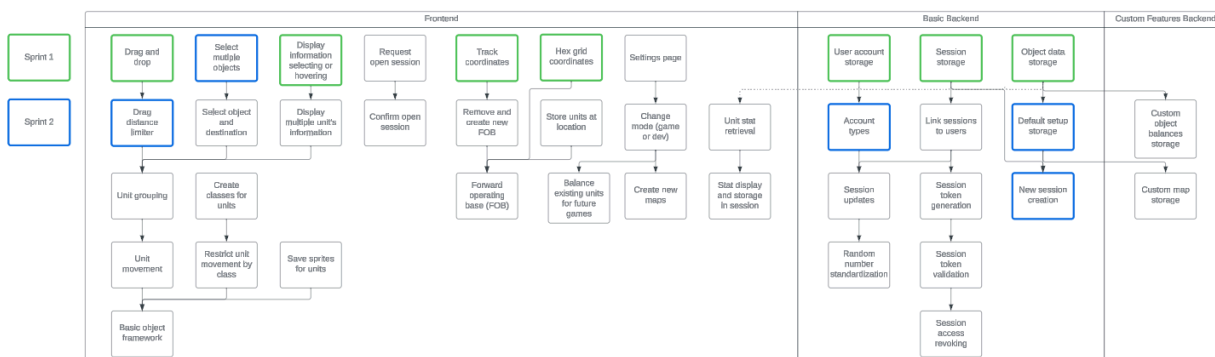
*Luke Muilenburg* | Frontend Development Lead

Group 23 | sddec24-23 | EE/CPRE/SE 491

Client: Reid Coates (AFROTC and Major Stephanie Jones)

Advisor: Ahmed Shakil

# WEEKLY PROGRESSION



## Agile Combat Employment (ACE) Research - **Reid**

- Compiled core components of the ACE operational scheme of maneuver
- Developed concepts for demonstrating core components through the Wargaming Simulator
- Compiled list of rules for existing ACE-demonstrating board game
- Compiled list of assets for existing ACE-demonstrating board game to be used on the frontend and backend

## Agile Combat Employment Briefing - **Jack / Luke / Alexander**

- Participated in a briefing from Reid over the ACE operational scheme
- Familiarized selves with core components and further developed concepts for demonstrating said components in the simulator
- Familiarized selves with rules of the existing board game and how assets are intended to interact with one another

## Development Flowchart - **Reid**

- Compiled a list of individual, technical tasks that need to be accomplished over the course of the project

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- Created a flow indicating which tasks are prerequisites or corequisites of each other
  - Split tasks into groups based on functionality: Frontend, Basic Backend, and Custom Features Backend (can be found below)

#### SCRUM Sprint Planning - **Jack / Luke / Alexander**

- Created a key for dictating which tasks is associated with which Sprint
- Assigned a tentative list of tasks to be completed in Sprint 1 (colored green)
- Assigned a tentative list of tasks to be completed in Sprint 2 (colored blue)

#### GameMaker Studio Experimentation - **Jack / Luke / Alexander**

- Installed and experimented with GameMaker Studio, which we will be using for the frontend
- Began learning how to create a visual pop-up card, to be used for displaying resources and information associated with grid tiles on the game board - **Luke**

#### SpringBoot Backend Proofs of Concept - **Reid**

- Used SpringBoot to create a conversion between GameMaker and Java to send JSON between both using HTTP (HTTPS is not an option with GameMaker).

# PENDING ISSUES

Still need a clearer picture of how we intend to translate the board game functionality into a video game

- What liberties will be necessary to make use of the new platform?
- What kind of user interaction do we want? Drag-and-drop, button selections, asset selection, etc.

Not sure how we want to manage user map-creation

- Should there be a dynamic scaling option, multiple pre-defined scaling options, or a single set scale for map sizes?
- Scaling is important for properly representing movement speed of aircraft and personnel and this is critical because the AFROTC training objective 10.2 requires being able to draw conclusions from basic asset knowledge which requires them to be accurate.
- This is a decision that we may be able to put off while we focus on getting basic components set up like the grid and the information card that will pop up.

# INDIVIDUAL CONTRIBUTIONS

Team Member	Contribution	Weekly Hours	Total Hours
Alexander Hassan	Researched Game Maker Engine (desk research) and the educational Airforce Wargame Rules.	3	3
Jack Kelley	Researched GameMaker Studio, reviewed rules for existing board game, developed concepts for implementing a hex grid board, recorded meeting minutes for team meeting and advisor meeting	4	4
Reid Coates	Created flowchart and briefed team on Air Force objectives, the game rulebook, and generated basic asset ideas. Communicated progress to Major Jones on a daily basis in obtaining all necessary documents.	6	6
Luke Muilenburg	Researched ACE principles outside of meetings in order to gain a better understanding of our customer's goal for the application. Researched how to implement pop-up dialogue boxes in the Game Maker engine.	4	4

# NEXT WEEK

- Lock in tasks to be completed for Sprint 1 and Sprint 2 - **Jack**
  - Also develop a specific timeline for Sprint 1 and Sprint 2 to take place
- Request a virtual machine for hosting our backend - **Alexander**
- Install and begin development with Game Maker Studio - **Luke**
- Begin grid development for frontend - **Jack**
- Begin pop-up information card development for frontend - **Luke**
- Begin developing an abstracted plug-in style storage system for backend - **Reid**
- Create initial commits for GitLab - **Reid / Luke**
  - For both the frontend and the backend