WARGAME PROGRESS REPORT

Report 4: October 4th - October 31st

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 492
Client: Reid Coates
Advisor: Ahmed Shakil

WEEKLY PROGRESSION

	Members	Week 8 (Oct. 14th - Oct. 18th)	Week 9 (Oct. 21st - Oct. 25th)	Week 10 (Oct. 28th - Nov. 1st)	Week 11 (Nov. 4th - Nov. 8th)	Week 12 (Nov. 11th - Nov. 15th)	Week 13 (Nov. 18th - Nov. 22nd)	Week 14 BREAK	Week 15 (Dec. 2nd - Dec. 6th)	Week 16 (Dec. 9th - Dec. 13th)
Game Framework			Work Night Pt 1		Work Night Pt 2					
Tile types	Jack/Reid									
map size increase?	Alex									
Aircraft equipment manager (in progress)	Luke									
Cell battle logic	Reid									
Combat Resolution Notification	Alex/Reid									
Return to base	Reid									
Base building	Jack/Reid									
Land/return to new base	Jack/Reid									
Missile kill scalability/bug fix	Reid									
Out of fuel	Reid									
Refueler group	Luke/Reid									
Win conditions (Check if blue has control of all key tiles Otherwise, has a team lost all of their assets)	Reid									
ARG asset update (converts to marine unit)	Luke/Reid							STRETCH GOALS		
Game Assets										
Blue team assets completion	Luke									
Art resources	Luke									
UI/UX improvements	Alex/Jack									
Web-Application Deployment										
Backend Hosting on VM	Reid									
Frontend Hosting Through GameMaker	Jack/Reid									
Play Testing										
User Interface Assessment	All									
Performance Assessment (Bug Finds)	All									
Game Rule Clarity Assessment	All									
User Privileges										
Game Asset Modifications	Jack/Reid									

Jack Kelley
- Added a "Move All" option for asset relocation
- Added key tile types to the frontend
- Added distinct MOBs and FOBs
- Started implementing base creation on the frontend

Reid Coates
- Built test suite for correct behavior and few edge cases
- Added tile types as a default value and a storable value
- Added missile takedown math
- Added armament unequip logic

- Added asset destruction logic
- Added game log additions and storage
- Updated asset data structure
- Updated game data structure
- Added new log structure with string to json conversion for MariaDB storage

Luke Muilenburg
- Worked on blue team assets
- Helped with development of the aircraft equipment manager system
- Started development on system to apply assets to their correct list items on the frontend

Alexander Hassan
- Resized the current map to increase the number of pixels on the board.
- Created a scrollable Game log on the front end to receive Combat resolution notifications from the backend.
- Worked with Luke to re-create the Equipment Manager System with improved UI, and officially implemented the Equipping system and its constraints on the front end.
- Updated Submit Move functionality with the necessary changes from above.

PENDING ISSUES

Turn Interfacing
- We need to add interfaces for guiding the user through playing a turn and the possible options they have on any given turn. More generally, we want to start with notifying the user if their opponent has submitted a move and is waiting on them to make a move, as well as display what turn it is. We also want to include more information about game assets and clean up the code for displaying where an asset can be moved to (its range).

Should we implement sending HTTPS requests as opposed to HTTP requests?
- In the final product delivery, it may become necessary to encrypt all network communications with HTTPS requests. However, this may require significant rework and may not entirely be possible with Game Maker.
- Note: This change should not affect how the game communicates with the backend and will be a consideration that we will discuss and decide on finalization of the backend logic and frontend graphics.

Remaining Task Breakdowns

Jack	Reid	Luke	Alex
Base building	Refueler groups	UI improvements	Equipment manager
UI improvements	Base building	PDF instructions	UI improvements
GameMaker deployment	Return to base	Main menu improvements	Theme music
	Cell battle logic		
	Enequip assets bug fix		
	Kill nearby assets in combat		
	Potential base tile		
	Permanent VM deployment		

INDIVIDUAL CONTRIBUTIONS

Team Member	Contribution	Weekly Hours	Total Hours
Alexander Hassan	- Resized the current map to increase the number of pixels on the board. - Scrollable Game log to receive Combat resolution notifications from the backend. - Equipment Manager System with improved UI, and implemented the Equipping system and its constraints.	25	100
Jack Kelley	- Added a "Move All" option for asset relocation - Added key tile types to the frontend - Added distinct MOBs and FOBs - Started implementing base creation on the frontend	24	103
Reid Coates	- Initial missile kill iteration - Asset removal - Unequip functionality - Data structure reworks	27	133

	- Test suite build - Game log with storage and generation		
Luke Muilenburg	Updating sprites to new style and formatting lists. Development of the screen for aircraft equipment. Beginning of the system to apply sprites to squadrons.	16	85

NEXT WEEK

Task	Members	Completion Date
Add base building logic	Reid	11/11
Design refueling logic and flags	Reid	11/11
Add cell battle logic	Reid	11/11
Add potential base tile	Reid	11/11
Finish implementing UI for Equipment Manager.	Alex	11/11
Add copyright-free theme music and improve UI/UX.	Alex	11/11
PDF instructions build	Luke	11/11
Finish implementing base building on frontend	Jack	11/11
Update UI in the game menus	Jack	11/11