Guardian of Earth

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Owner

Vision Statement

For Android smartphone users of all ages who want a fun, quick-performing, and re-playable game, Guardian of Earth is an Android application that takes the formula of a basic spaceship shooter and adds depth to the objective of the game. Unlike many other spaceship shooters, Guardian of Earth possesses a unique simplistic art style making it an application that is not only visually satisfying, but is quick to pick and play.

Requirements

Actors

Users – Motivated users of the app with sufficient enough knowledge to get the app open, and learn about the game through the tutorial to the main menu.

Actor-Goal List

Actor	Goal
User	Navigates easily through main menu
	Play the game
	Control spaceship rotation with buttons in lower portion of screen
	Control spaceship laser firing with button in lower portion of screen
	Pause the game
	Press the pause button in upper portion of screen
	Resume the game
	Press the resume button that appears after user has paused game
	Change layout and size of user controls
	Go into settings portion of app to modify settings to user's liking

Product Backlog

Story ID	Story	Story Points	Priority	Status
S1	Allow user to navigate easily through main menu	3	2	Not completed
S2	Allow user to visualize a loading screen that appears momentarily before the game is loaded	2	1	Not completed
S3	Allow user to pause the game while in the middle of playing it by selecting the pause button on the game HUD	2	8	Not completed
S4	Allow user to resume the game after they have paused by selecting the play button	2	9	Not completed
S5	Allow user to modify settings like user controls to their liking in a separate settings screen navigated to from the main menu	3	10	Not completed

S6	Allow user save high scores	4	11	Not completed
S7	Allow user to, while playing game, to interact with the spaceship's rotation by clicking buttons	7	3	Not completed
S8	Allow user to, while playing game, to shoot lasers out of the spaceship by clicking another button on the screen	8	5	Not completed
S9	Allow user to, while playing the game, visualize a HUD (head-up display) including, for example: scores, lives left, pause/play, etc.	5	6	Not completed
S10	Allow user to, while playing the game, have their lasers interact and collide with asteroids falling towards the earth to score them points	10	7	Not completed
S11	Allow user to, while playing the game, to also be able to visualize non-interactive game elements like the earth which lies at the bottom of the screen	6	4	Not completed

Sprint #1

Sprint Backlog

Story ID	Story / Task	Estimated Hours	Actual Hours
S2	Setup android studio project and startup activities	1	3
	Determine if game needs loading screen to show during the loading of game assets	1	1
S1	Design main menu ui	1	0.5
	Code main menu ui	2	2
	Test main menu ui and app startup	2	1
S7	Determine best algorithm for game loop	1	2
	Code game loop	2	3
	Test game loop with placeholder animations	2	5

Retrospective

I thought my first iteration under the agile methodology went pretty well. I planned to do several tasks for story 1 and story 2. What could have gone better though, was in the beginning of the iteration, I definitely underestimated the learning curve of developing an android app, and simply using Android Studio. So I plan to, in the future, take that into account when planning out my tasks for an upcoming sprint. I also experienced some difficulty in testing game loop, which resulted in an essential complexity rather than an accidental one. That is because, testing the game loop is inherent to the problem, because I don't have all the game elements in place to test the game loop. So I guess, what I didn't realize off the bat, is that I will need to test the game loop as I continue to add game elements to the scene to maintain a good performance for the game. So in the future, I will try to plan out and notice those essential complexities beforehand so I don't waste time on trying to solve something that can't be solved yet. Overall, I feel the sprint went pretty well.

Project Velocity

The project velocity after this sprint is 5 because I completed story 1 and story 2 completely.

Sprint #2

Sprint Backlog

Story ID	Story / Task	Estimated Hours	Actual Hours
S2	Put placeholder objects into game scene: spaceship, earth, buttons for rotating, button for firing	4	
	Add more definition to game object interface	2	
	Capture button touches for rotating spaceship	3	
	Rig up buttons to rotate the spaceship when they are tapped	4	