Team number: 1

Team name: Tower Defenders

Team members:

Joshua O'Leary
Alice Gurkova
Luke Soderquist
Adam Poppenhagen
Michael Jordan

Application Name: Space Defenders - TD

Application Description:
Our app is called Space Defender. Space Defender is a tower defense style game capturing all the excitement of futuristic warfare! The game will be hosted on its own website with many features. At the outset, new users will be prompted to create their own profile with a custom username and password. Upon registration, users will then be treated to the most cutting edge graphical interface possible! (within 16 weeks of amateur production by students) Gazing at the amazing functionality of our menu, users can start a new game, view most recent high scores, toggle option buttons and slide option sliders. It may even be possible to send messages to other players (time permitting). From here, users will not be able to contain their excitement and will rush to start a new game.

Once a new game is selected, the battlefield will appear and the calm before the storm will settle in. Users will then be prompted to place their first, ultra-futuristic space tower! The placement will be vital because not long afterwards a horde of freedom hating aliens will enter through a predetermined wormhole and follow a strict path right past the newly created tower. As droves of alien scum are obliterated by the mighty Defenders of Space™ , all the money in their space wallets drop, ready to be used by the Defenders of Space™ to buy new towers or upgrade their existing obelisks of alien destruction. There will be as many as 4 or 5 different alien enemies! Who knows? Maybe 6! Maybe 2! If the myriad of species of aliens makes it to the space station the Defenders of Space™ are defending, then damage will be done to the shields. Once the shields are gone, the station is lost and the game is over! Survive a predetermined amount of waves or time (whichever is easier) and you may just save space for all freedom living species!

Our users will be casual phone gamers and people who have fifteen minutes to kill. Maybe people waiting in line at the post office.

Vision Statement:

For the gamer who loves space. The Space Defenders TD game is an enjoyable representation of the great frontier that is space. Unlike many other games of its class, Space Defenders TD is not only free, but bound to entertain for hours on end.

Version Control:

Github Link: https://github.com/CSCI-3308-CU-Boulder/3308SP21_section014_1

Development Method:

We will be developing our project using the agile/scrum methodology. Using JIRA as our project management tool, we will complete multiple sprints during the course of our development process. Within each sprint we will have some number of user stories detailing what we plan to add to our project during each sprint. Although we will not be holding daily scrum meetings, we will meet twice a week to discuss progress and collaborate.

Our JIRA Board:
https://csci-3308-spring21-group1.atlassian.net/jira/software/projects/TD1/boards/1

Communication Plan:

The underlying form of communication used by the group will be text. A texting group chat will be used to communicate basic information such as availability and spontaneous desires to work on the project. After these meeting times have been established, the participating members will use a Discord server to communicate with each other through voice chat. Finally, all code will be seamlessly shared throughout the group through a Unity group project. This way, whenever someone codes or changes something on the Unity project, all others in the group will be able to access those changes immediately.

Meeting Plan:

We will meet on Thursdays from 4-5 pm and Fridays from 11:30-12:30 pm. Our meeting with our TA is on Wednesdays from 12:25-12:40. We communicate primarily through discord between us and zoom with the TA. Much of our architecture will be shared through Unity Hub. The zoom link is https://cuboulder.zoom.us/j/97993974858

Proposed Architecture Plan:

On the front end for our game, we will be using Unity. Our language for the backend will be python on aws. Unity Should be able to allow our front and back end to communicate. Honestly, none of us really understand what any of this is yet and our googling has yielded minimal results so we're actually hoping we go over some of this stuff in class or are given some resources to understand what these are.

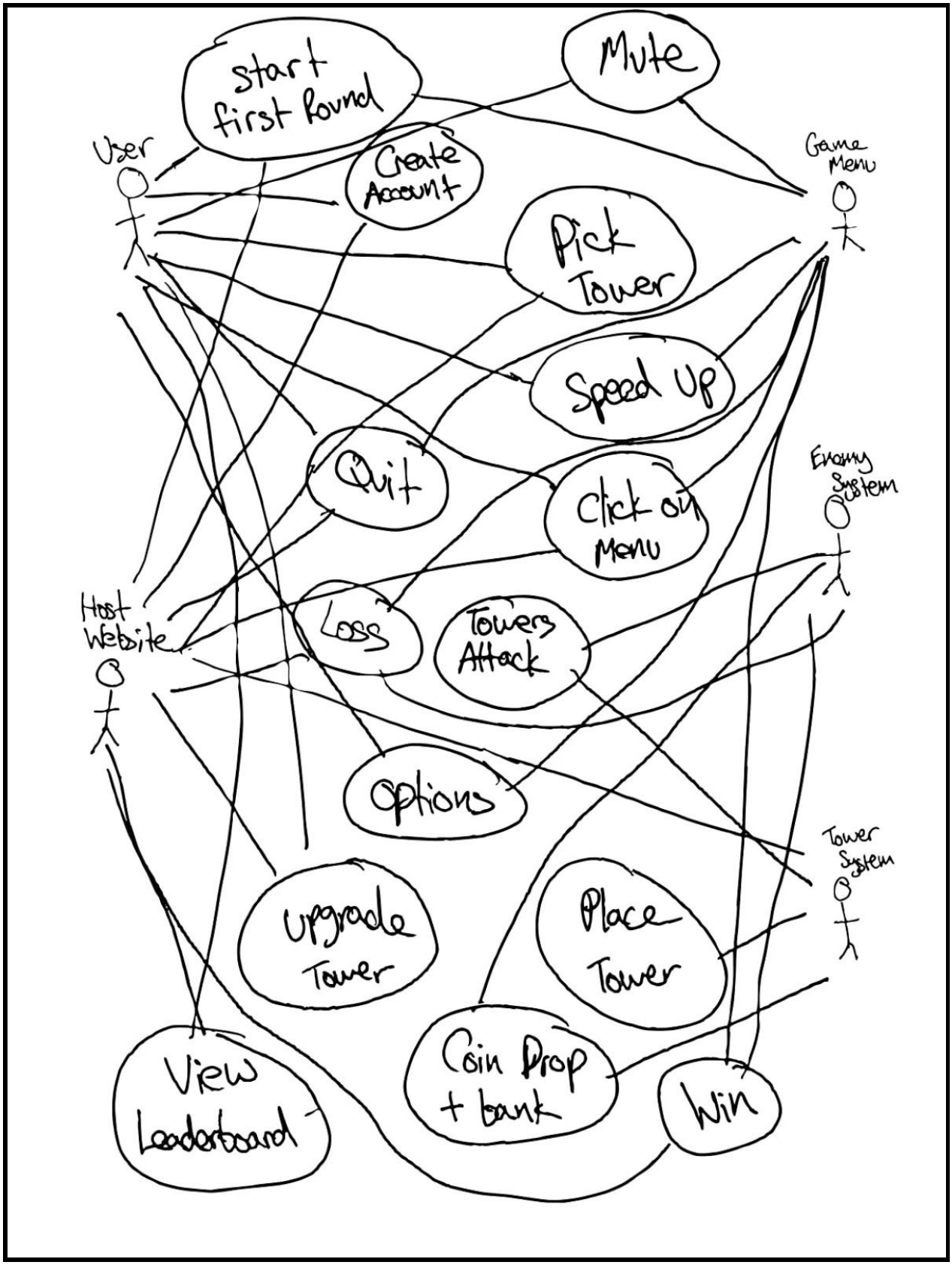
Use Case Diagram:

Actors:

- User/Gamer
- Enemy system
- Tower system
- Game menu
- Host website

Use cases:

- Start first round
- Pick tower from tower menu options
- Place tower
- Upgrade tower
- Speed up round
- Click on menu
- Mute sound
- Viewing leaderboard
- Creating an account
- Towers attack enemies
- Quitting Game
- Enemy dies coin drop added to bank
- Accessing options
- Round ends in win
- Round ends in defeat


start first Round
Mute
User
Create Account
Game Menu
Pick Tower
Speed Up
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Click on Menu
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Host Website
Loss
Towers Attack
Options
Tower System
Upgrade Tower
Place Tower
View Leaderboard
Coin Drop + bank
Win