

Part One: The Main Menu Screen

1. The Loading Screen



- As you enter the application, you will first be greeted with a loading screen. What is happening while this screen is showing is as follows:

1. Front-end of this app asks the back-end ,established on a separate app, for data used in the app. This is a collection of ships, pilots, upgrades, etc stored in a sqlite database.
2. If the request is successful, then the screen will go away as soon as the game data is loaded.
3. If the request is unsuccessful, then the loading screen will change its text to inform the user that there was an error in the process.

2. The Main Menu

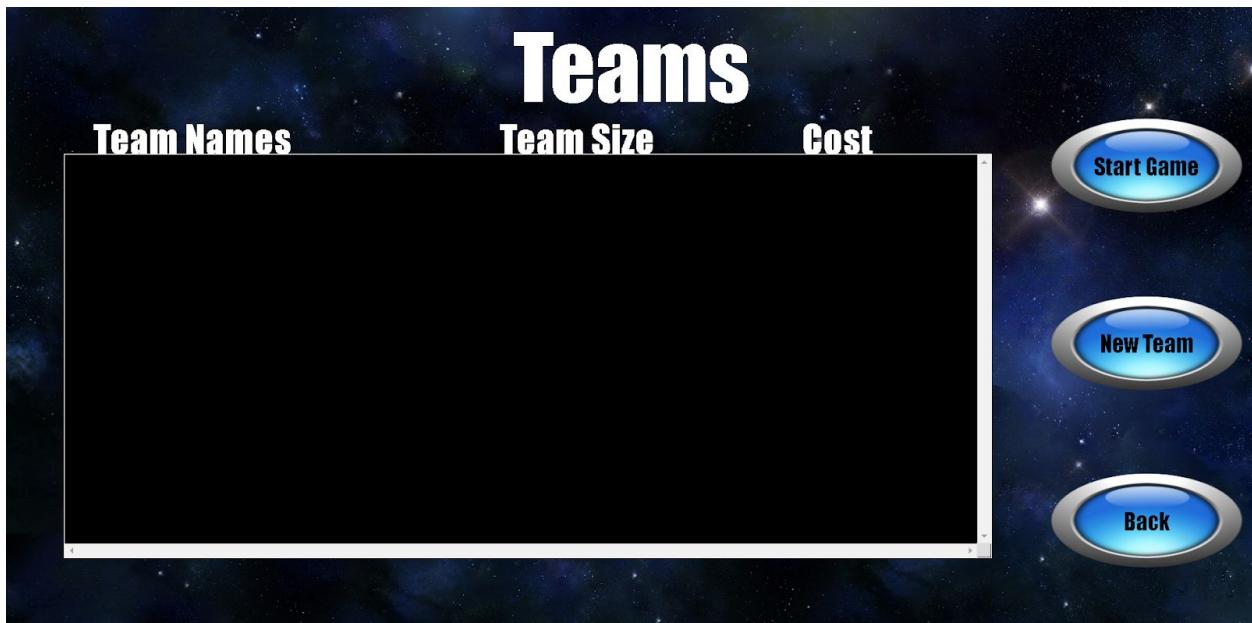
-This is what the screen will look like when the loading sequence is complete:



Please note that in this stage of development, the ability to load games from the database staged in the back end has not yet been implemented. There will be a warning that appears if you click the load game button.

Part Two: The Team Screen

1. Team Screen Box



This is the team screen, from here you will be able to get a very brief overview of each team as they appear in created order.

Going from left to right: The team name is displayed on the left. Clicking on the team name will have a pop-up with further team options.

The Team size shows up in the middle and relays how many ships are on a team..

The cost will show how many points the entire team takes up. Cost is determined by the value on the bottom right of the selected pilot plus any upgrades added to that ship, also located on the bottom right of their respective cards.

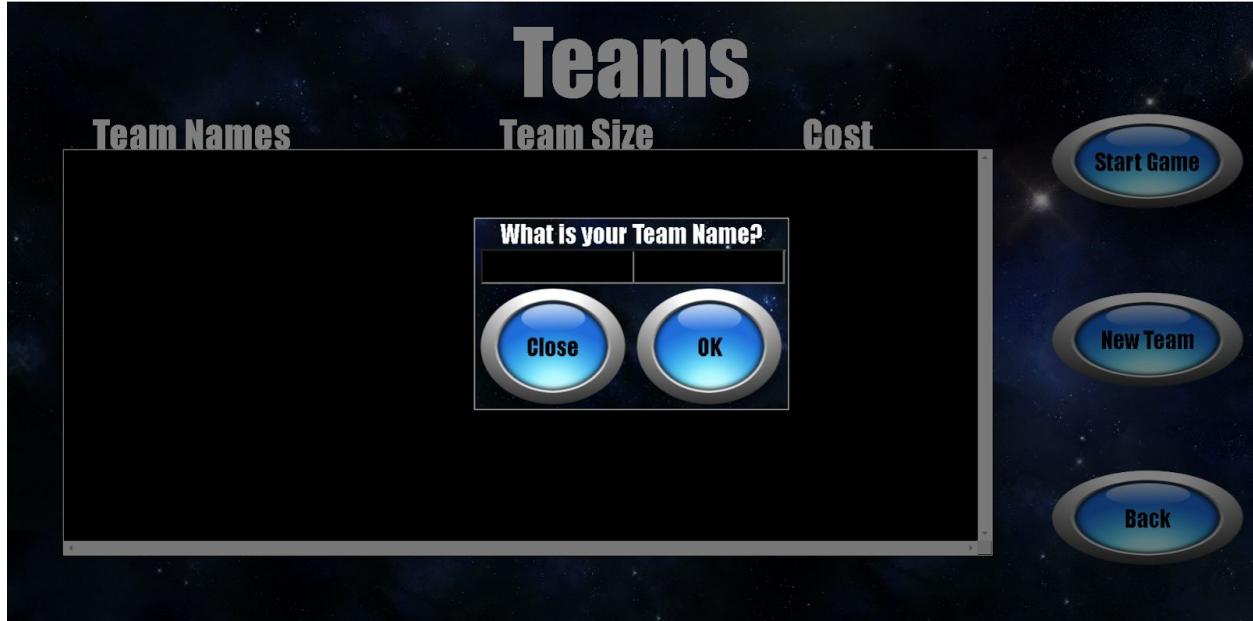
2.The Buttons

Each of these buttons performs a role in navigation.

The start game button is a feature that has not yet been implemented. If you click on the button, you will get a warning telling the user that the feature is not yet implemented.

The back button will take you back to the main menu. Note that when you go back to the main menu, you will not have to wait for another call to the back-end, as the game data taken from that end has been stored in session data.

The New Team button will take the user to the ship selection screen, but first a pop-up will appear for the user to name their team.



When inputting a team name, note that you will not be able to put in an empty name, a name that is just whitespace, or a name that is already taken.

3. One More Things for the Sake of Testing

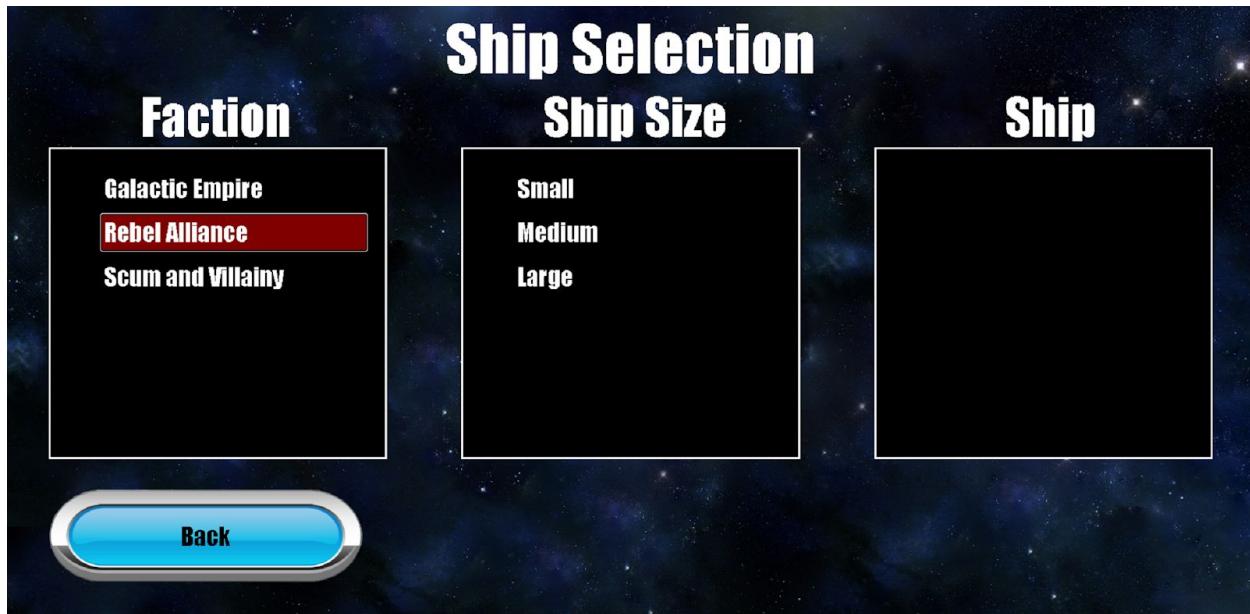
-IMPORTANT: For the sake of development and grading, if you click on the title on the top middle, the title that says "Teams", I have created a function that will randomly assemble a team of between 1 and 50 ships. Each time you click the title, another team will be added.

Part Three: Ship Selection

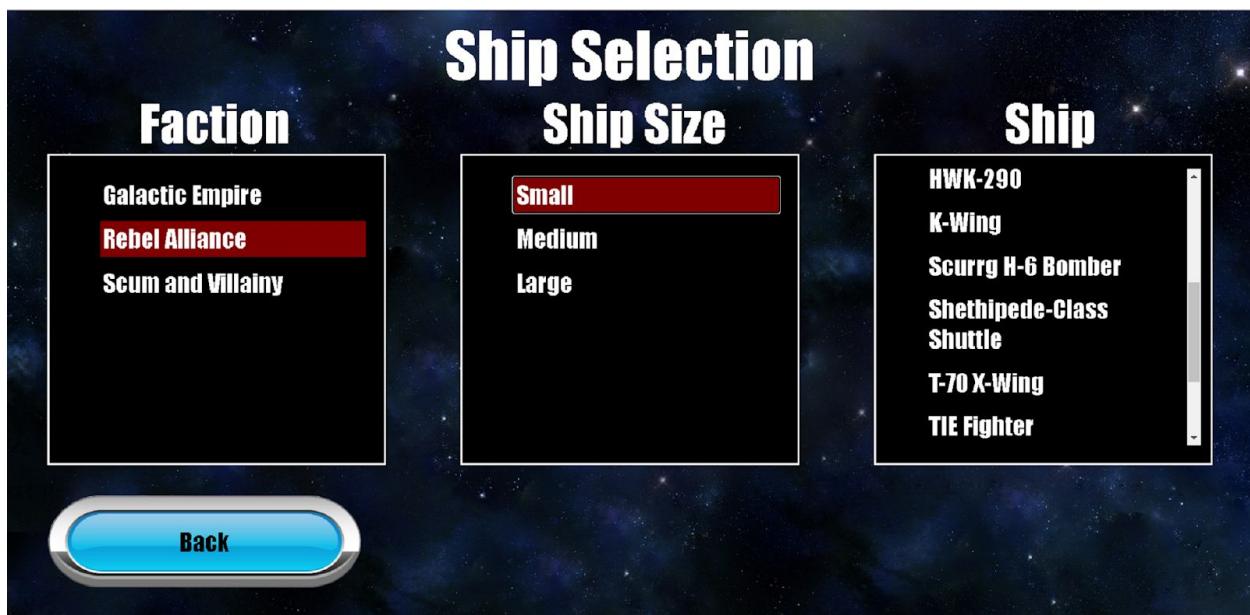
1. The Ship Selection Boxes



- As you go to the ship selection screen you will be met with three list boxes and a back button, which will take you back to the team screen. I will be going over these boxes individually in detail.
- The first box is the faction box. In the tabletop game "star wars x-wing" there are three main factions that all ships are sorted into: The galactic empire, the rebel alliance, and the scum and villainy faction. This app will allow for a team that is a mixture of the various factions, however choosing a faction will help narrow down what kind of ship the user is looking for.



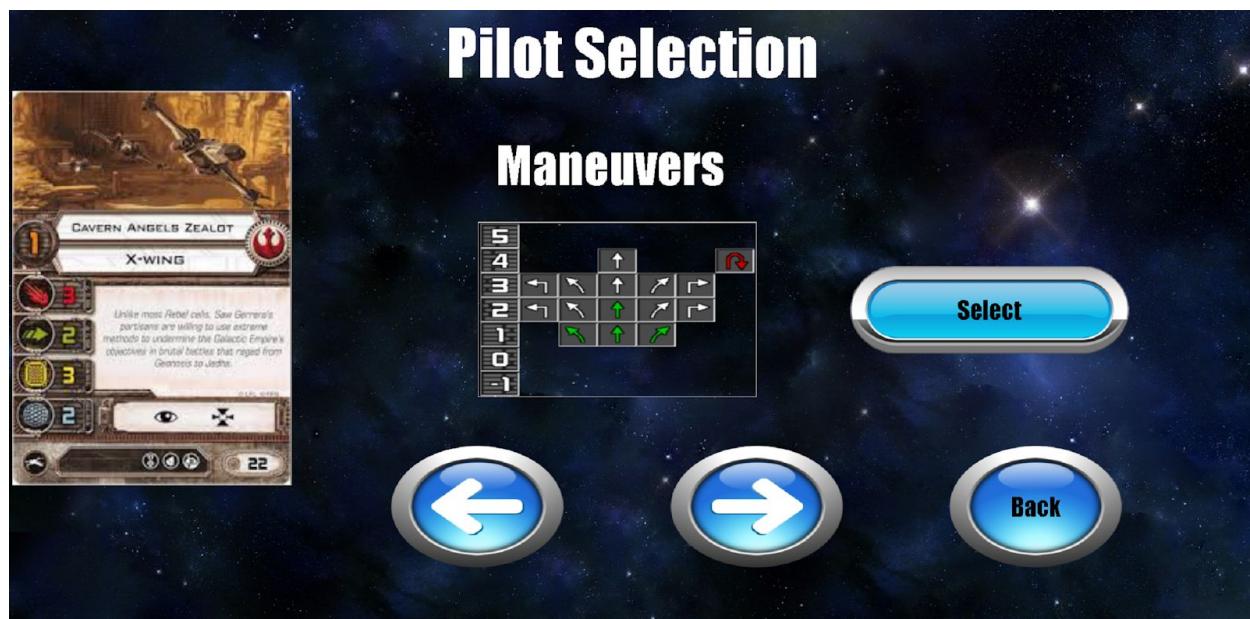
- By clicking on a faction, that faction will highlight in that faction's color (red for the rebels, gray for the empire, and brown for the scum and villainy faction). After clicking on a faction, you will see that the next box will be populated with some options regarding the size of your ship. In the game, there are a few varying sizes of ship. Selecting a size will help further narrow choices in what the user is looking for. When you click on a ship size, the selected choice will also highlight in the faction color you have chosen.



-Finally, we have the ship selection box. When you click on a ship size, notice that it too will have the highlighted color of the faction you have chosen. At any time, if you click on a different faction, the options for ship will go away and the ship size will be unhighlighted to you to pick

again. To proceed to the pilot selection screen, you need only click on which ship you intended on choosing.

Part Four: The Pilot Selection Screen



When selecting a pilot, the information given to you will be a potential pilot for you to select, the maneuvers that pilot can perform (maneuvers of each ship are generally the same). By clicking on the forward and backward arrow, you can select which pilot you want to use on your team.

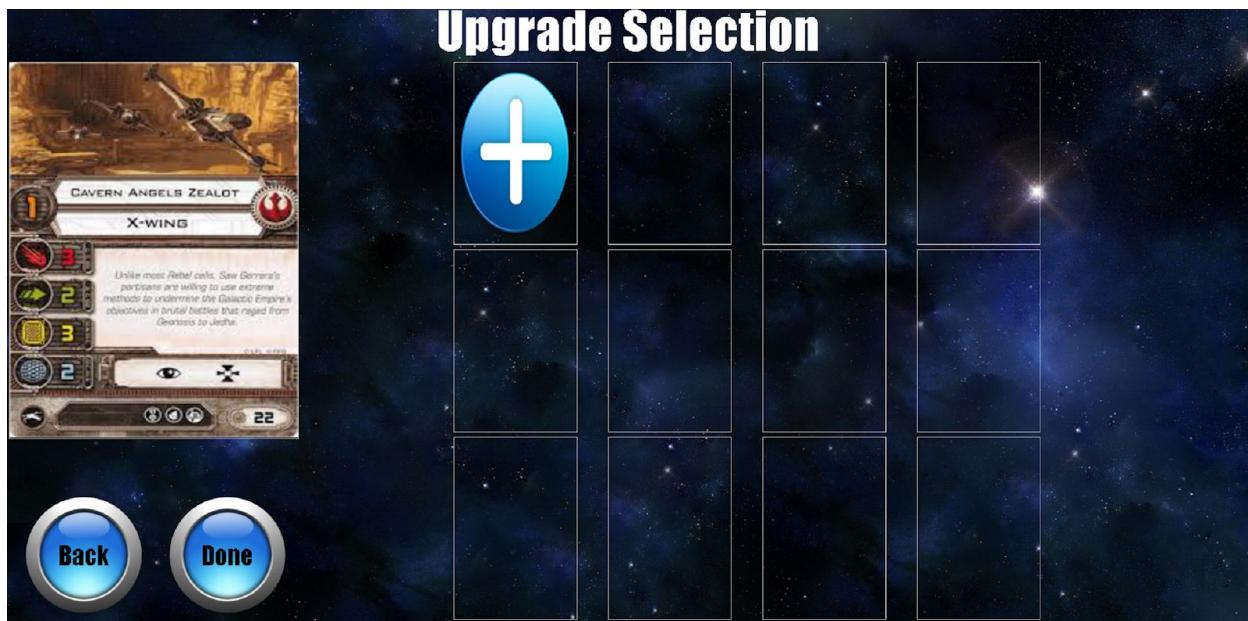
- If you wish to go back to ship selection, click on the back button.

- Once you find a pilot you like, press the select button.

-Reminder: When it comes to the cost of your team, the cost is determined by the cost of the pilot (seen on the bottom right, in this case, 22 points) plus the cost of any upgrade for that ship, which will also be on the bottom right of that card.

Part Five: The Main Upgrade Screen

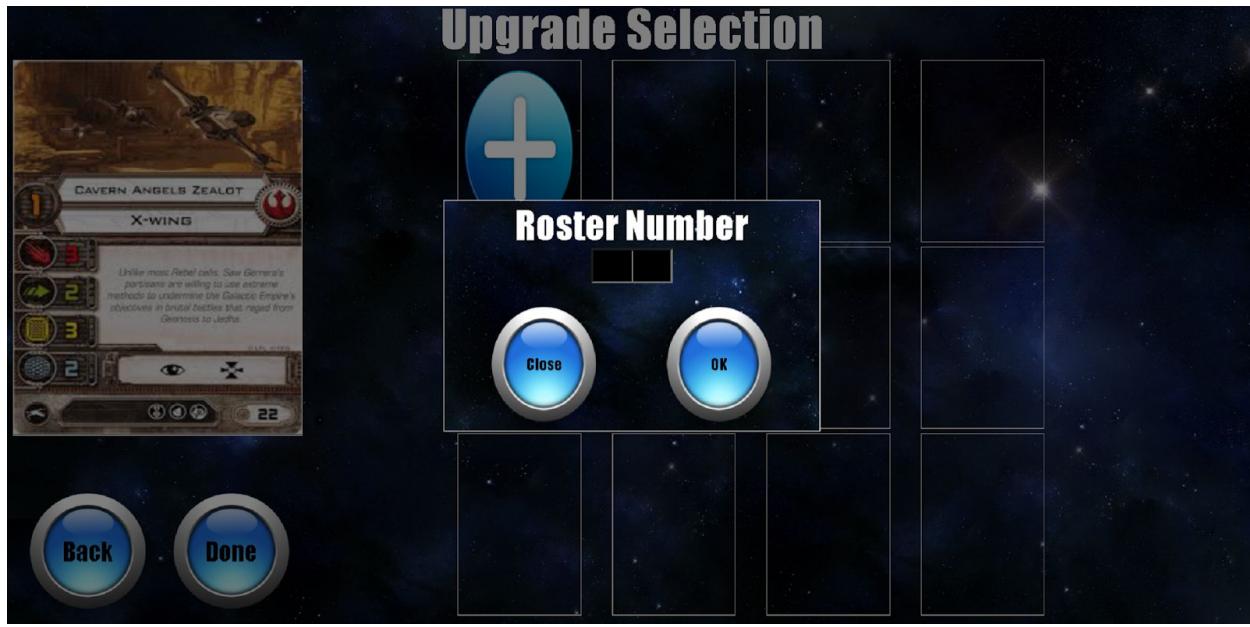
1. Screen Interaction With No Upgrades



The first time you go to the upgrade screen, you will see borders with nothing in them aside from one with a plus button on it, this is the button you must push to add upgrades.

The back button will take you back to the pilot selection screen.

If you do not wish to add any upgrades to this ship, then you can press the done button. If you do that a pop-up will appear that will ask you to give your ship a roster number. This is done because in many cases you may recruit the same pilot if they are generic (examples include: rookie pilot, cavern angels zealot, various squad pilots) vs pilots that are unique (Luke Skywalker, Han Solo, Darth Vader, etc). A roster number is the only way to tell duplicates of the same pilot apart.



To the contrary, if you do want to add upgrades to your ship, press the plus button and then you will get to go to the upgrade type selection screen.

IMPORTANT: It is important to note that on the bottom of your pilot card there are little circle symbols, those are the upgrade types that your ship can have. I did loosen restrictions on this, so in a more custom game, a player may choose whatever upgrades they want for whichever ship they want.

2. Screen Interactions With Upgrades

If you already have upgrades, there is an extra interaction you can do for your upgrades. If you wish to remove an upgrade for your ship, simply click on the upgrade you wish to remove, a confirmation will show up in which you can remove that upgrade.

Upgrade Selection

Remove This Upgrade?



No

Yes

Back

Done

Part Six: Upgrade Type Selection Screen



This screen allows the user to choose what kind up upgrade they wish to select. If you are ever confused on which upgrade types are allowed for a specific ship, look at the bottom of the pilot card, there you will see corresponding symbols to those on this screen. Be aware that not all ships have upgrade slots. To access the list of upgrades for a type, click on the symbol you wish to see the upgrades for.

Part Seven: Upgrade Selection



- In this screen you will see a selection of all of the upgrades of the selected category. Here you may:

1. Click on an upgrade to add it to your ship, after clicking you will be sent back to the main upgrade screen, with the upgrade you just selected filling up the first available slot, each ship can hold up to twelve upgrades.
2. Click the back button to go back to the upgrade type selection screen.

IMPORTANT: Any red bordered card that you may see is dual sided, you may notice that each red bordered upgrade comes in pairs. These kinds of upgrades denote a change in what the upgrade does based on its text. If you select a red-bordered upgrade, the border will carry over into the main upgrade screen.

Part Eight: Team Options



Clicking on an existing team in the team names list box will bring this pop-up of all options to alter an already existing team. The following options are:

1. Add a New Ship: This process will add a new ship to an already existing team. The process is identical to creating a ship for a new team, with the exception of the new team name pop-up appearing.
2. Remocing a Ship: This process allows the user to remove a ship from their team. This will be covered in more detail in part eleven.
3. View Team: This allows the user to view their entire team, including:
 - i. Each ship's pilot card.
 - ii. Each ship's maneuvers
 - iii. Each ship's upgrades
 - iv. Each ship's roster number.

Here a user may also add/remove upgrades from a particular ship.

4. Statistics: The user can see some charts that do a breakdown of their team and a cost comparison to other teams.

5. Remove Entire Team: This will remove the entire selected team. Use with caution. There is a confirmation you must pass in order to remove the entire team.
6. Close: Closes the pop-up.

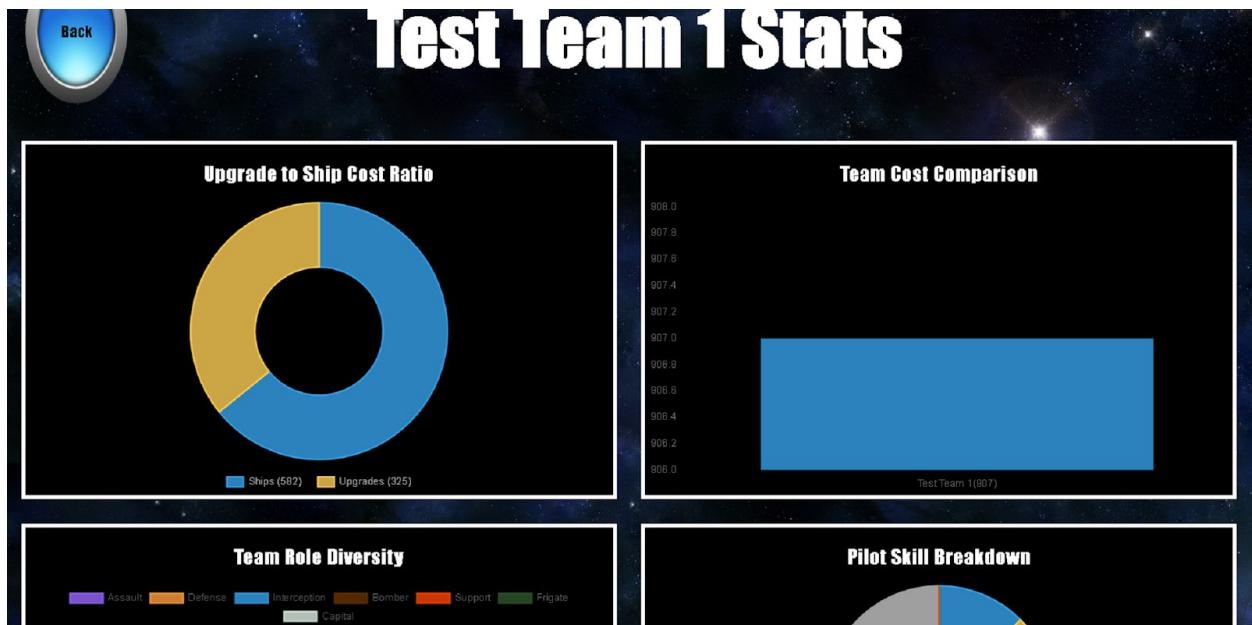
Part Nine: Team View Screen



This screen allows you to see the specifics of each ship that is on a team.

- The arrow buttons allow you to change which team member you are looking at.
- The change button will allow the player to add/remove upgrades.
- the back button will allow you to go back to the teams screen.

Part Ten: Statistics Screen



This screen allows you to see a few charts that break down the team dynamic of the team clicked on. There are currently four charts:

- Upgrade to ship cost ratio: Shows the user how many points are spent on ships vs how many points are spent on upgrades for those ships.
 - Team Cost Comparison: Shows the cost of each team in comparison. Since there is only one team on this demo, there is only one entry on the chart. This chart will show comparisons up to eleven teams.
 - Team Role Diversity: This will show what each team is more oriented towards based on the ships they have.
 - Pilot skill breakdown: This breaks down the diversity of pilot skills a team has.
- The Back button will take you back to the team screen.

Part Eleven: Removing Ships



This screen is identical to the team view screen with one key difference, instead of the change button, you have the remove button, which will remove the selected ship from the game after passing a confirmation.

Part Twelve: Starting A Game

Once you have at least one team on the team screen, you can start a new game. When you are ready, press the "start game button". When you press the button, one of two things will happen, either you will be informed on which team gets first initiative (chosen at random), or you will be taken to the pilot sorting screen if your team has more than one pilot at the same pilot skill.



Pilot Sorting Screen: The pilot sorting screen is meant for the user to sort which pilots of the same pilot skill will perform in the user specified order. In this case we have two ships that will be sorted into order. The user need only click on each ship in the unsorted ship category in the order they want each ship to perform. That ship will then appear in the sorted ship screen. Once all of the ships are in the sorted ship list, the user clicks on the "done" button to go either to the next potential conflict or to the main game playing screen.

If the user wishes to see the stats of each ship that is to be sorted, they may click on the "view stats" button to get a traditional team view screen, however all of the ships that will be displayed are the ships that need to be immediately sorted. If you are on the first line-up of ships that need to be sorted and then press the

back button, you will be taken back to the team screen, otherwise you will be taken to the most previous group of ships to be sorted.



Once sorting is complete, you will be met with a confirmation that you wish to start a game. Press "ok" and you will be informed to which team is given first initiative (chosen at random) and then the game will begin.



Back

Done

View Stats



Part Thirteen: Playing the Game

- Maneuver Selection

When the game begins, you will be met with the following screen:



This document will go over the various things you can do on this screen:

1. Choosing a maneuver:

The maneuver in this screen is denoted with the number and arrow toward the top middle of the screen. The user may cycle through the maneuvers available to a specific ship by pressing the the left and right arrow buttons. Note: There are two maneuvers available to every ship, one is denoted with a circle and cross, the other with three arrows pointed to the right, these are the deploy and not deployed maneuvers not found in the traditional game. For larger games, should a player not deploy all of their forces but wish to keep them in the game for later, they may use these actions.



Deploy maneuver



Not Deployed maneuver

Note: If you are working with a large ship, the maneuvers will show the amount of energy gained from each maneuver(energy is a stat unique to large ships) denoted by small purple dots.

2. Changing the pilot's stats:

By clicking on any of the skills located directly to the right of the pilot card, a user can change the stats of the ship (with the exception of roster number; once the game has started, roster number cannot be altered). The user can change these stats at will and then press "ok" when finished. Note: If you are dealing with a large ship, there will also be a stat for energy.



3. Changing the pilot's tokens:

Much like changing pilot stats, a user can assign and take away various tokens found in the game. This is operated the same way as altering a pilot's status. Click on the token you want to change, and then adjust accordingly. If you have none of a token, the opacity of that token will change vs if you have at least one of that token.



4.Adding a target lock:

If you decide to click the button "add" under the target lock section, you will be presented with a screen for adding target locks. The two pieces of data you need here are the team of the ship you are targeting as well as the roster number of the ship you wish to target. when you press "ok" a blue lock will be assigned to the ship that implemented the lock and a red lock will be assigned to the ship that has been targeted.



5.Viewing a target lock:

If you click on any target locks that have been generated in the target lock area, you will be met with a pop-up, showing the ship that assigned the lock as well as the ship the lock has been assigned to. Here you have the option to remove the lock if you so choose.



6. Assigning/Removing an upgrade:

In the token box on the bottom left of the screen, the top right token is a little circle with a small yellow "U". If you press that button you will be able to assign or remove a new upgrade to your ship (see parts 5-7 on upgrades for further explanation).

There are two ways to remove an upgrade from a ship, you may remove an upgrade from the upgrade screen by pressing the previously described token, or you may click on the upgrade itself in the upgrades section (card picture on the center-right).

7. Assigning/Removing a critical hit card:

To assign a critical hit card, simply click on the middle token all the way on the right of the token box (small hexagonal token with small red explosion). You will be met with a pop-up confirming that you want to assign a critical hit card. If you accept, your ship will be assigned a critical hit card. These are assigned at random, to comply with game rules. Note: If you are dealing with a large ship, the assignment of a critical hit card will prompt a question as to whether the card should be issued to the aft or fore. This is because each of the large ships come with their own unique critical hit cards and are assigned based on whether damage to that ship was in the front or back of that ship.

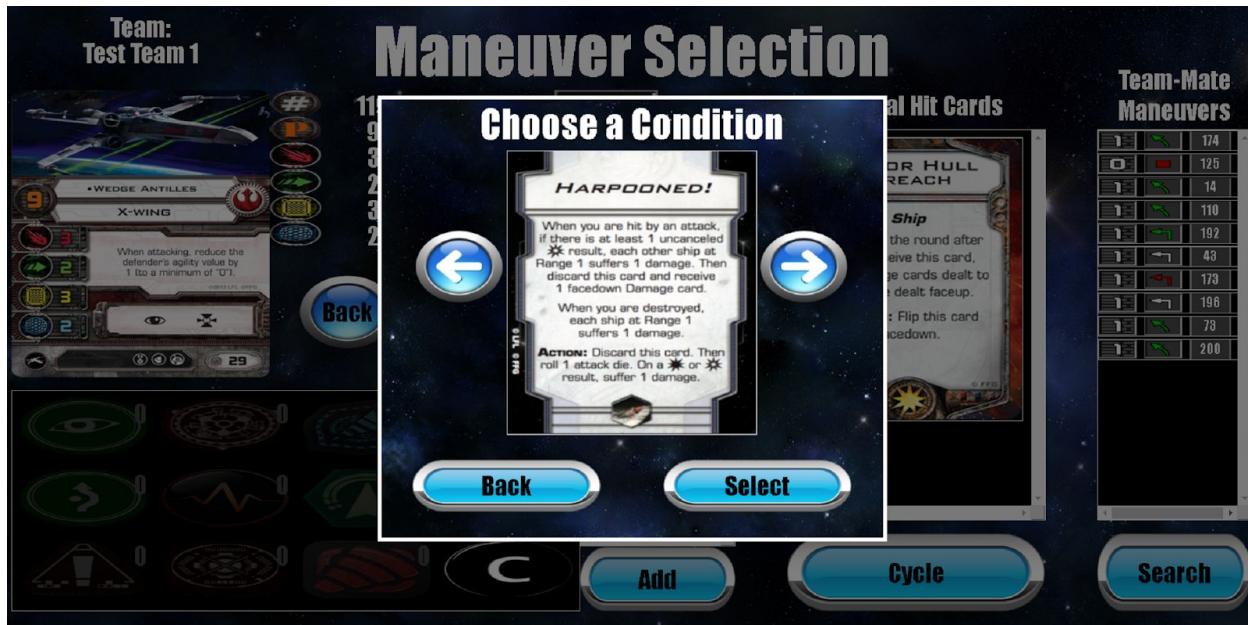


To remove a critical hit card from a ship, you may press the "cycle" button until critical hit cards appear. Click on the card you wish to remove. You will be met with a confirmation to make sure you are deleting the correct card.



8. Assigning/Removing a condition:

To assign a condition, you click on the token in the token box. This one is all the way on the bottom right of the token box. From there, you will be met with a pop-up that will allow you to cycle through each condition and choose which one you want to assign to your ship.



To remove conditions, go through the same process as removing critical hit cards. Click the "cycle" button until you hit conditions, click on a condition you wish to remove, then confirm that it is the correct condition you wish to remove.

9. Cycling through card types:

There is a button called "cycle" that will go through different types of cards your ship could acquire during the game. The three types of cards the app cycles through are:

1. Upgrades
2. Critical Hit Cards.
3. Conditions

This allows access to all cards on a single screen. Note: By default, as you go from ship to ship, upgrades will appear first. If a ship is assigned a critical hit card or condition, it will appear before upgrades do.

10. Team-mate maneuvers:

All the ways on the right of the screen is a list of maneuvers your team-mates have already chosen, this will help the user know what maneuvers team-mates are going to perform to avoid ship collisions. Note: If you select a maneuver for a large ship, the screen will also show how much energy is gained.

From left to right: maneuver range, maneuver type, roster number of the ship that executed that maneuver.

Team-Mate Maneuvers

1	↗	174
0	➡	125
1	↗	14
1	↗	110
1	↙	192
1	⬅	43
1	⬅	173
1	⬅	196
1	↗	73
1	↗	200

11. Searching for another ship:

If you click the search button on the bottom right corner of the screen, you will be met with the following pop-up. You may search for another team by inputting that ship's team and roster number.

Once you click the ok button you will be met with the following screen:



Note: You are still able to manipulate the tokens, cards, target locks, and stats of a ship you search for, but you will not see their team-mate maneuvers or their chosen maneuver. Press the return button to go back to the ship you were on previously.

12. Going to the next ship:

When you find a maneuver you would like to confirm for your ship, click on the "select" button. This will take you to the next ship to select a maneuver for. When all of the ships have a chosen maneuver, you will be moved to the movement phase, which will have its own page.

13. Going back to the previous ship:

The back button appears when you go past the first ship. It allows the user to go back one ship all the way to the beginning. If you press back, each selected

maneuver will be remembered so that you can skip through ships if you have to go back several ships.

Part Fourteen: Playing the Game - Movement Phase

The movement phase begins after all ships have selected a maneuver. The game itself goes as follows for each round:

1. Maneuver selection
2. Movement phase
3. Attack phase

Each time a new phase has been entered, the main title will change to indicate which phase the game is in for that round.

Order to ships as they execute maneuver will go from lowest pilot skill going first to highest pilot skill going last between all teams. If there is more than one ship on a team with the same pilot skill, the order will be executed in the order placed in part 12 of the documentation. If there are ships on different teams with the same pilot skill, the ships who's team has the initiative token will go first(denoted by orange diamond above the upgrade display) followed by the order in which the teams were created.

As the game enters the movement phase, the screen will be seen as such:



It is to be noted that the movement phase screen is identical to maneuver selection except there are some differences such as:

1. The team-mate maneuver box is gone.
2. The ability to select maneuvers is gone, instead that ship's chosen maneuver from part 13 will appear to indicate that this is the maneuver the ship will execute.
3. The back button is visible for the first ship, pushing this button will move the game back to maneuver selection, to the last ship to choose a maneuver.

Once a ship has executed its maneuver, press the next button to go to the next ship. Once all of the ships have finished, the game will move on to the attack phase.

Part Fifteen: Playing the Game-Attack Phase



Once all ships have executed their maneuver, then the attack phase can begin. The order of ship for the attack phase will be from highest to lowest pilot skill, or in other words, the reverse order of ships seen during the movement phase.

This phase features a dice rolling feature that allows the user to roll attack and defense dice during this phase. To use this simply add the number of attacker and defender dice needed and then click the roll button, the result will be a pop-up with the results; for example if you wished to perform a roll with three defense dice and three offense dice, the result would look something like this:



Once all of the attacker have been cycled through, you will get a few alerts to inform you of any of the following:

1. If someone has an upgrade that would affect the normal end-of-the-round procedure.
2. The round is now over.
3. Which team will get the initiative token for the next round (done in the order in which the teams are created, passing the token to the next team after the current initiative token holder).

A new round will begin after these pop-ups have finished, beginning again at the maneuver selection phase.

Part Sixteen: Playing the Game

- When A Ship Dies

If at any point, a player clicks on their ship's hull stat (indicated by a yellow square next to the pilot card) and augments the quantity to zero the following pop-up will appear:



Answering yes will permanently remove the ship from the game as it will have been destroyed by an opponent.

Answering no will set that ship's hull to one and then exit the pop-up.

Note: The button you see that says "kaboom" will play a small clip of the Soviet Union National Anthem. This is an inside joke between my wife and I. When she and I would play this game and one of the ships would die, she would hum that same tune, and was asked to implement the same feature when a ship dies to honor that joke.

Note: Once a ship has been destroyed there is no way to put it back onto the roster.

Note: If you destroy a ship while it is the subject of a ship search, the idea is to take the user back to the ship that called that search, however there is a bug that sometimes tends to bring the user back one ship to far forward to backward, this is a bug we were not able to fix before the code freeze for this project.

Part Seventeen: Playing the Game - To Victory!

When only one team remains, you will be meted with the following message:



This is the dignify that the game is over. The user will be taken back to the main team screen, with the remainder of the winning team still in the team roster.

Note: If the player is playing with many teams, this same message will appear, however it will be informing the user that a team has been eliminated rather than the game being over.

Part Eighteen: Loading and Saving Games

A new feature of this app is the ability to load and save games. To save a game, simply press the `` key on any of the following screens:

1. Team Screen
2. Maneuver Selection Screen
3. Movement Phase Screen
4. Attack Phase Screen

A pop up will appear. This is to input to save your game under any name you choose. The game will then check to see if that name is already taken; if it is, it will ask if you wish to overwrite it, you may choose to. You will then be informed of when your game is saved.

To load a game, you need to be on the main menu screen, press the "load game" button and enter the name of the game you saved under. The game will then load the phase of the game you are in whether that be squad building, maneuver selection, movement, or attack phase. It will load on whoever's turn it is.

Note: If you attempt to save while performing a search, you will be instructed to go out of the search in order to save, simply press the return button to go out of a search and then save the game there.