University of New Brunswick
Faculty of Computer Science
Course: CS2043 – Software Engineering I Deliverable #: _____5_____
Instructor: Natalie Webber Date: _____2017-03-14_____
Project group members:
Student #1: _____3413735_____ / ___Andrew Hampton_____
Student Number / Student Name
Student #2: _____3516474_____ / _____Shane Pelletier_____
Student Number / Student Name

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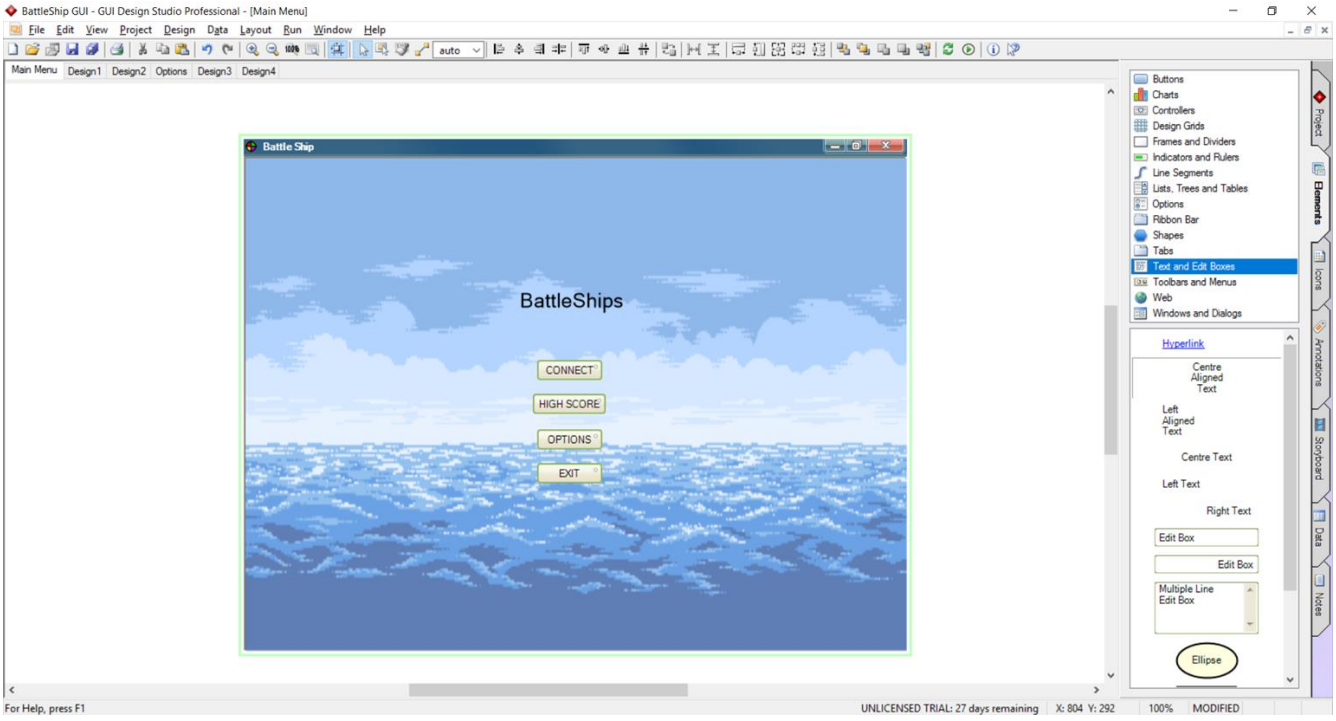
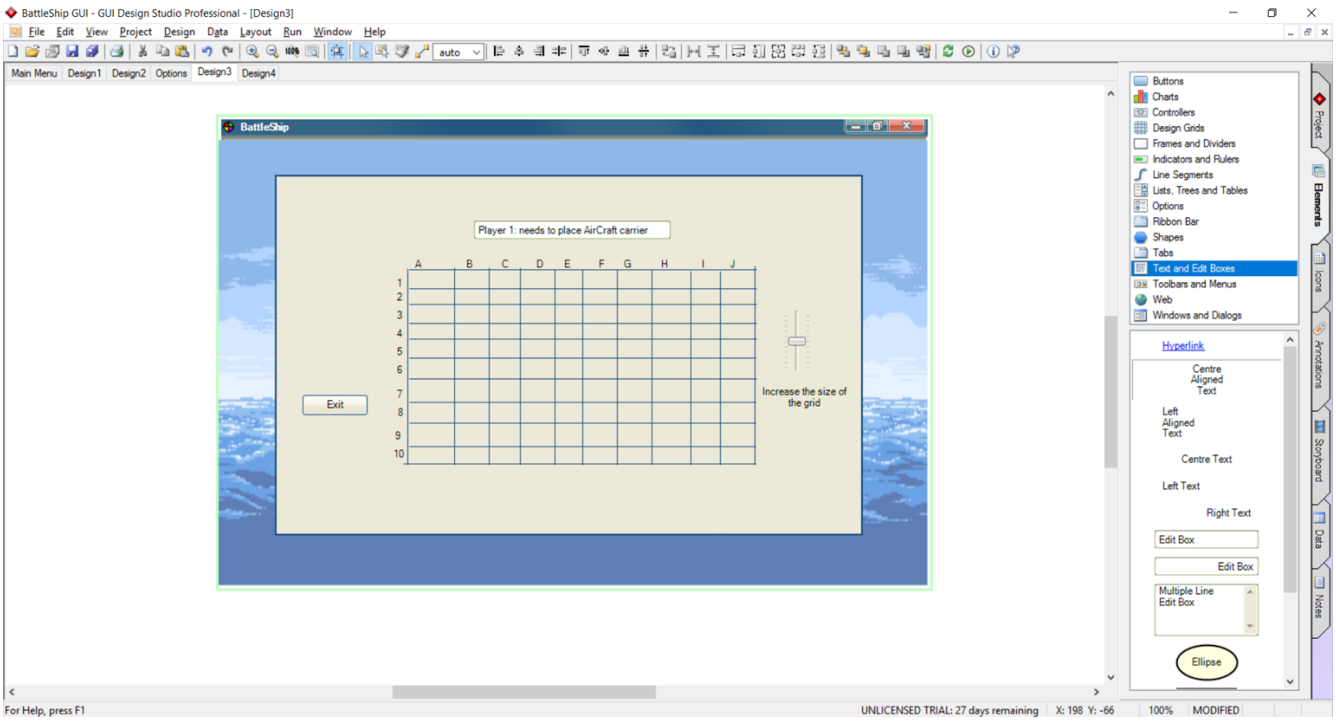
Design Document for the client



The gui for the BattleShip game would be consist of four main screens. The main menu, high score, set up phase and the battle phase. The main menu is where the player can connect, look at the high score, change settings of the game and exit the game. Since the target audience of the game are middle school students. There is a incentive to make the gui for game as simple as possible. For example, to connect

the server, the student would only need to click on the “connect button”, instead of typing the information by themselves. The main menu also allows the student to access the high score for the game, so they can see their standings. Finally, there is a option button, which allows the student to access the option menu. The option menu lets you change the volume of the music and sound, or simply mute both of them. This means that the student can change the game volume accordingly to the noise volume of the career event. Finally, the option menu allows the student to change the size of the text. So, if the student has any visual impairment they can change the game text accordingly. The high score menu will just display the top three students with the highest score. The score will be based on the win/lost ratio.

Set up phase

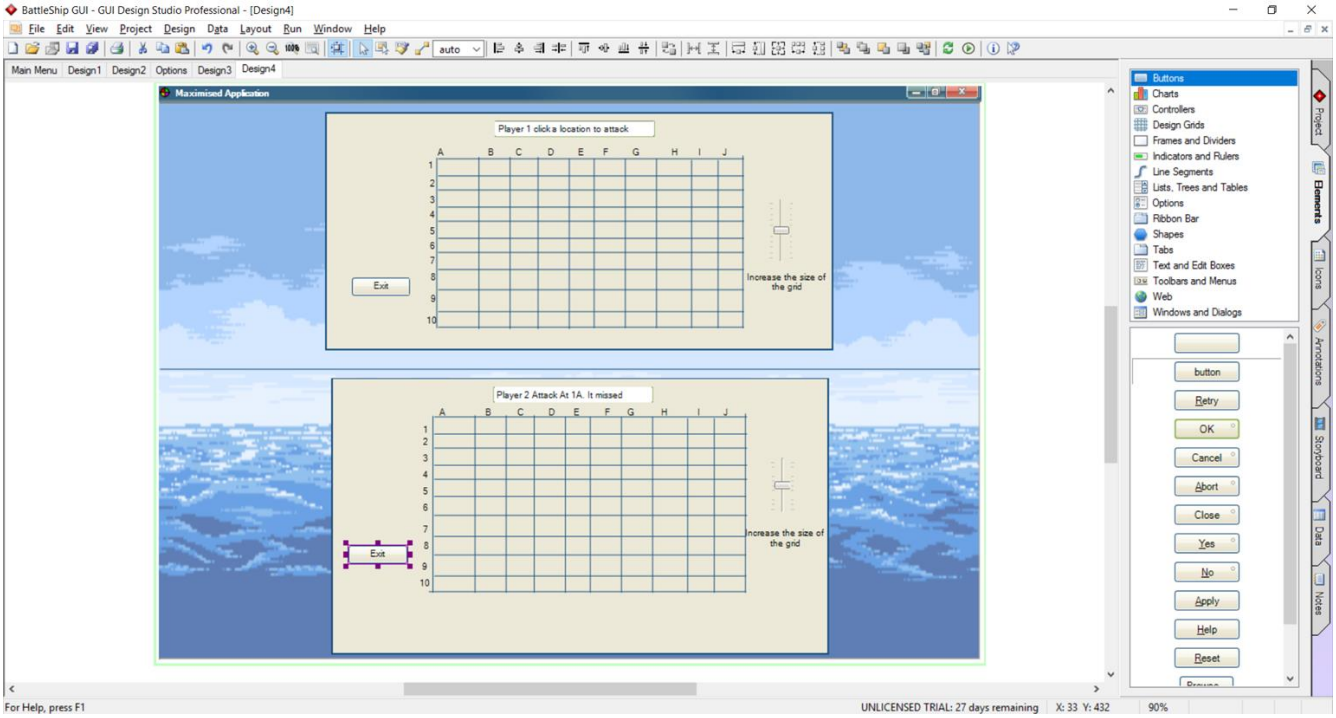


Once, the students connects to the server, they enter the set up phase. . Normally, there are two screens,

where one displays the student's ships, and the other screen is where the student picks a location to attack. However, during the set up phase there is only one screen, where the student can place their ships. This was decided on as way to keep the gui simple. The 10x10 grid is located in the middle of the screen. This is the place where the students will place their ships on. There is also a slider of the width and height of the boxes in the grid. So, that students with visual impairments can accurately can place their ships. There is a message box that display which ship needs to be place on the grid. Finally, the student click the “exit to main menu” to go back to the main menu. Once both players placed all of their ships on the gird then the game enters the next phase, the battle phase.

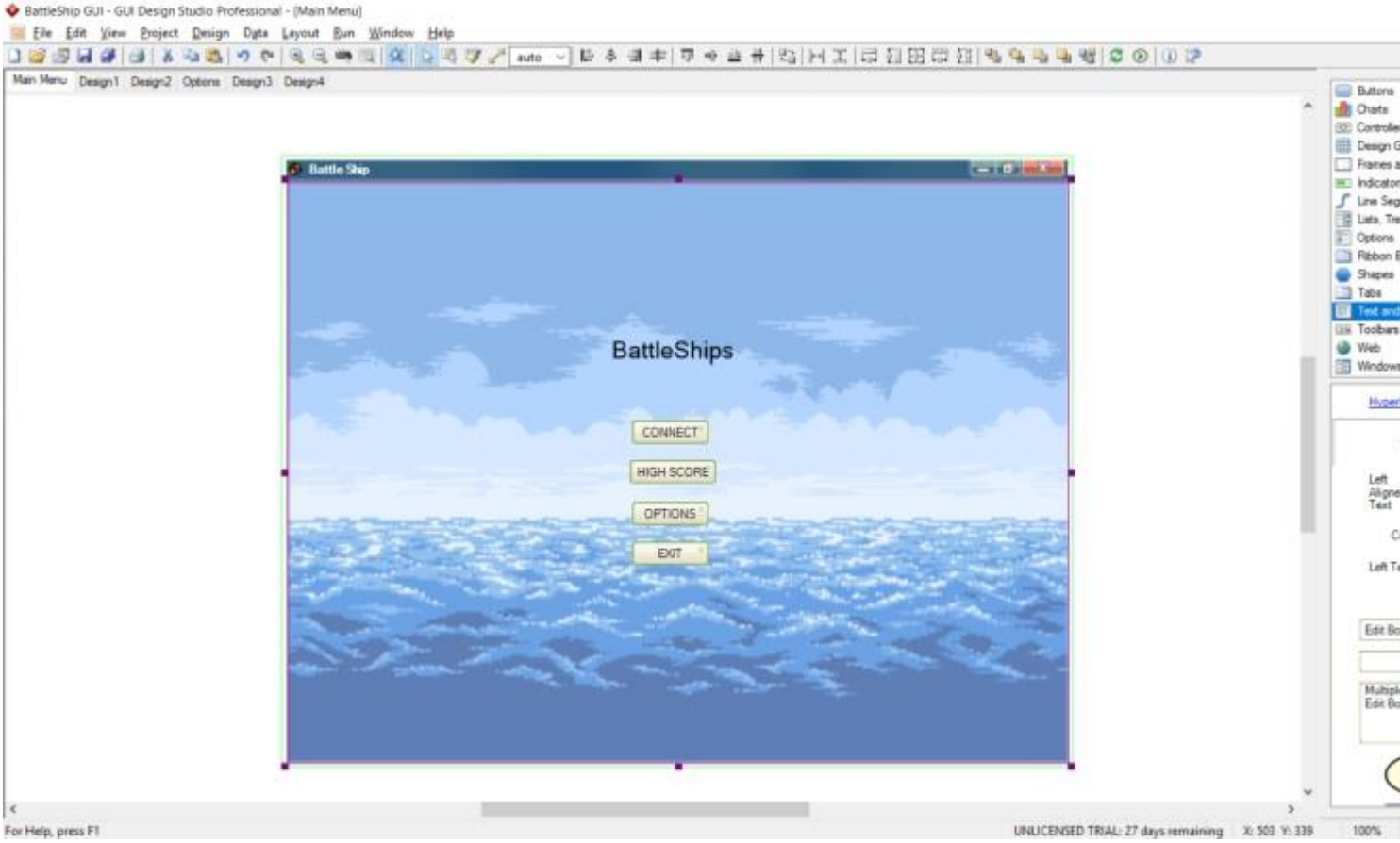
Note: The background was retrieved from http://opengameart.org/content/ocean-background

Battle phase



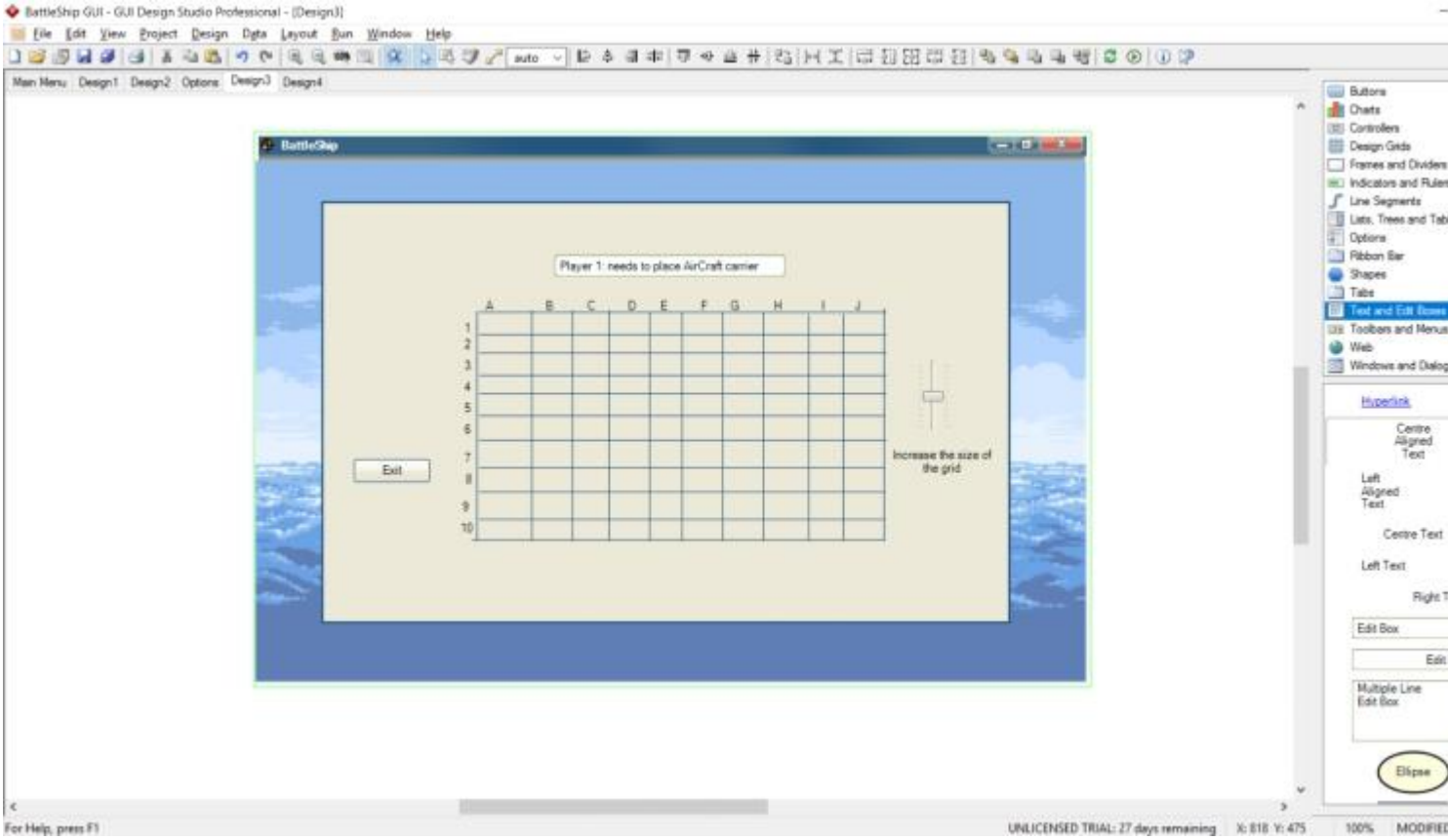
Once the set up phase ends, the student enters the battle phase. This phase has two screen. The bottom screen is where the student's ships will located, and shows the area where the other student attacked. The top screen is where the student decides what area to attack. The reason for this set up is to make the game to be more line with the traditional BattleShip game. Furthermore, this arrangement also creates a clean divide between student's information and the opponent's information. Above the bottom screen, there is a message box that display the appropriate text. For example, it display text that informs the student whether it is their turn. It also displays text to inform the student whether their attack hitted or missed. There is also sound effects that give feedback to the student, a different sound effect will play depending if the student hit or missed. The message box was added to convey information to student when the sound effects failed, e.g the student is deaf/hard of hearing, the game volume was too low or it was muted, or they could have missed it. There is a also slider that allow the students to adjust the height and width of the box on grids of both screens. So, the student can adjust to what they comfortable with. When the student attacked a area, that area will be mark either with white. if it missed. Or with red if hit. The reason for the colour scheme is to keep it align with the traditional BattleShip. So, if the student has played the traditional version when they know what it represents.

Design Document for the programmer



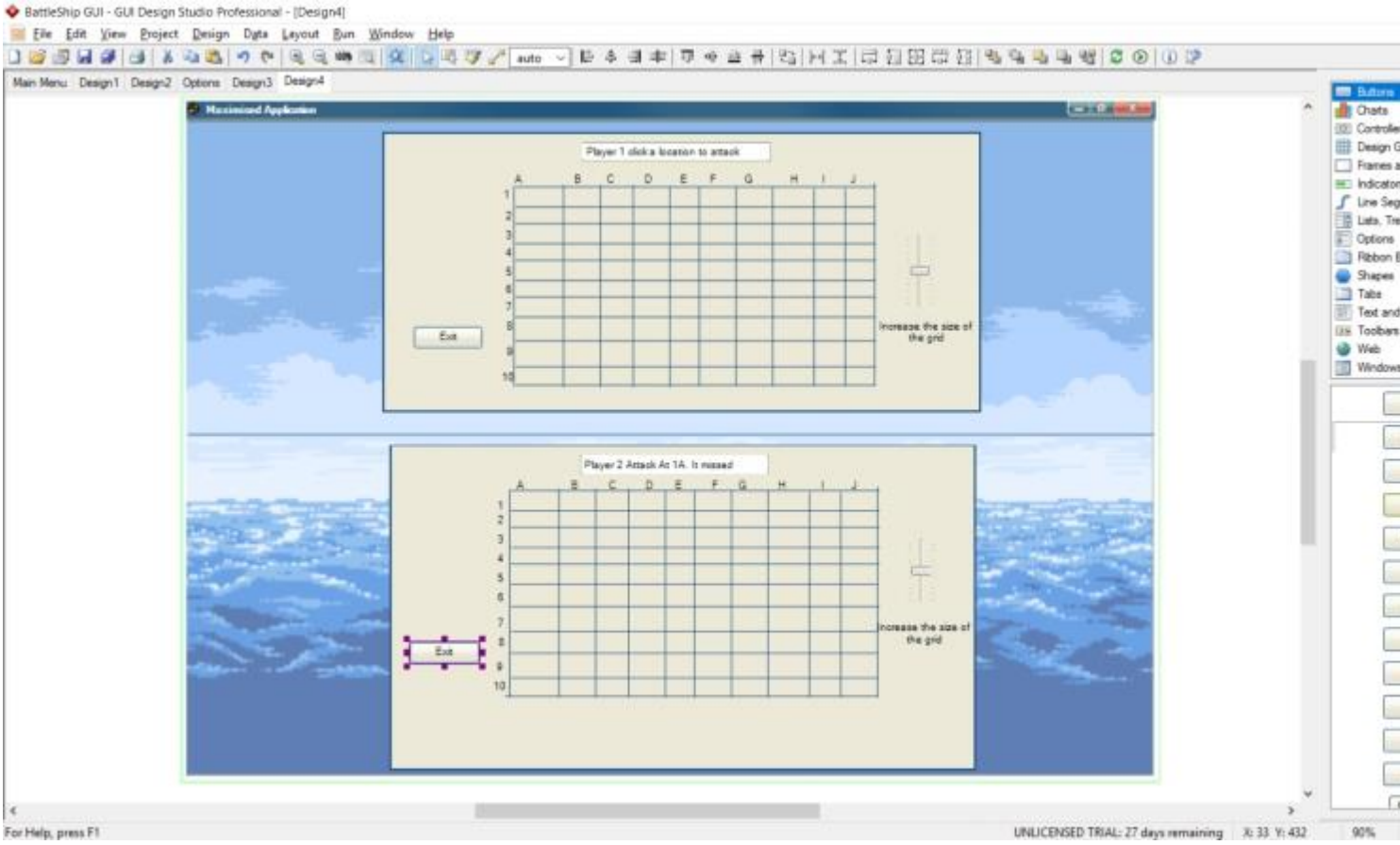
The gui for the BattleShip game would be consist of four main screens. The main menu, high score, set up phase and the battle phase. The main menu is where the player can connect, look at the high score, change settings of the game and exit the game. It consists of four buttons laid out in a BoxLayout. Since the target audience of the game are middle school students. There is a incentive to make the gui for game as simple as possible. For example, to connect the server, the student would only need to click on the “connect button”, instead of typing the information by themselves. The main menu also allows the student to access the high score for the game, so they can see their standings. Finally, there is a option button, which allows the student to access the option menu. The option menu lets you change the volume of the music and sound, or simply mute both of them. This means that the student can change the game volume accordingly to the noise volume of the career event. Finally, the option menu allows the student to change the size of the text. So, if the student has any visual impairment they can change the game text accordingly. The high score menu will just display the top three students with the highest score. The score will be based on the win/lost ratio.

Set up phase



Once, the students connects to the server, they enter the set up phase. . Normally, there are two screens, where one displays the student's ships, and the other screen is where the student picks a location to attack. However, during the set up phase there is only one screen, where the student can place their ships. This was decided on as way to keep the gui simple. The main game screen will be drawn using an external library for the game graphics, surrounded by JFrame components laid out using a BorderLayout. The 10x10 grid is located in the middle of the screen. This is the place where the students will place their ships on. There is also a slider of the width and height of the boxes in the grid. So, that students with visual impairments can accurately can place their ships. There is a message box that display which ship needs to be place on the grid. Finally, the student click the “exit to main menu” to go back to the main menu. Once both players placed all of their ships on the gird then the game enters the next phase, the battle phase.

Battle phase



Once the set up phase ends, the student enters the battle phase. This phase has two screen. The bottom screen is where the student's ships will located, and shows the area where the other student attacked. The top screen is where the student decides what area to attack. The reason for this set up is to make the game to be more line with the traditional BattleShip game. Furthermore, this arrangement also creates a clean divide between student's information and the opponent's information. Above the bottom screen, there is a message box that display the appropriate text. For example, it display text that informs the student whether it is their turn. It also displays text to inform the student whether their attack hitted or missed. There is also sound effects that give feedback to the student, a different sound effect will play depending if the student hit or missed. The message box was added to convey information to student when the sound effects failed, e.g the student is deaf/hard of hearing, the game volume was too low or it was muted, or they could have missed it. There is a also slider that allow the students to adjust the height and width of the box on grids of both screens. So, the student can adjust to what they comfortable with. When the student attacked a area, that area will be mark either with white. if it missed. Or with red if hit. The reason for the colour scheme is to keep it align with the traditional BattleShip. So, if the student has played the traditional version when they know what it represents.

Note: The background was retrieved from http://opengameart.org/content/ocean-background

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Time Sheet

Activity	Start	Completion	Number Hours Shane Pelletier	Number Hours Andrew Hampton
Prepare Project plan	2017-01-13	2017-01-24	1.5	1.5
Prepare UML Diagram and documentation	2017-01-24	2017-02-02	1.5	1.5
Prepare Test plan	2017-02-02	2017-02-09	1.5	1.3
BattleShip server Impementation and unit testing	2017-02-14	2017-02-28	2	2
GUI design documentation for Customer and Programmer	2017-03-09	2017-03-14	1	3