Project 1: Battleship

Two players will take tern locate their battleship on the board. After both player finish locates their board, two player will take tern shooting doesn’t matter it is hit or miss. If any player doesn’t have any ship left, the other player win the game. It will allow people to play between two people, or play with simple AI, (or maybe more than 2 player).

The program will be based on C#. My experience with C# will only be in application design class, but I have been use C/C++ for several years. I will use my knowledge from C/C++ to improve or get the skill I will need in C#.

Functional Requirement:

* display the board for player to locate their ship and fire
* put the ship at any place with any direction
* confirm with player the location they choose to put the ship on the board
* shoot at any place, and give result (hit or miss)
* stop user shoot at the location already fire
* give the warning when any ship is sink
* when there is no ship on the board, give message which player win
* 2 people play, or play with AI

maybe

* load/Save the board
* allow more than 2 player
* design more ship (with different length or more than one ship for each type)
* different scaling of board
* every time fire several target on the same time
* allow user put the ship that is not straight

Nonfunctional Requirement:

* the system will be running on Windows 10
* player should be able to start over that game during game

Use-Case:

1 - Set ships

Actor: Any player

Description: The beginning of the game, player will set the ship in different position on the board. After setting the ships, trigger use-case 5.

2 - Shoot

Actor: Any player

Description: Player will choose a location to shoot and will trigger use-case 3 and use-case 4.

3 - Hit/Miss

Actor: None

Description: After the shoot, it will check is it hit or miss. Trigger use-case 5.

4 – Calculate Remain

Actor: None

Description: Decrease when the shoot hit a ship, when remain is 0 trigger use-case 6.

5 - Display board

Actor: None

Description: Show the board graphically

6 - Game Over

Actor: None

Description: When one of player don’t have any ship left, trigger use-case 7.

7 - Reset Game

Actor: None

Description: Start over the game, clean everything on the board.

Weekly Schedule:

Week 1 (10/4) Actual Game – game logic (set up game, windows outlook, controller)

Week 2 (10/11) Actual Game – game logic (start game, shoot, end game)

Week 3 (10/18) Actual Game – Display (graphic, start AI)

Week 4 (10/25) AI

Week 5 (11/1) Test, Debug

Project 2.1: <https://github.com/notepad-plus-plus/notepad-plus-plus/issues/4747>

It is a feature request on Notepad++. When we want to close Notepad++, it will check with user that do we want to save any file that is being edited. The person post this feature request want to have an extra button that only close the current working file.

Notepad++ is program in C++, therefore I will edit it in C++. I use C/C++ in most of the time in my education.

Functional Requirement:

* Allow user to not close any file, close all file, or close current file

Nonfunctional Requirement:

* This feature will be focus priority

Use-Case:

1 - Close Notepad

Actor: user

Description: if the file is saved, there will be three buttons for user to choose use-case 3, use-case 4, use-case 5

2 - Ask to save

Actor: user

Description: if file is not saved, ask user do they want to save. No matter user choose save or not, trigger use-case 3, use-case 4, use-case 5

3 - Not close any tab

Actor: user

Description: don’t do anything, leave the notepad++ open

4 - Close all tab

Actor: user

Description: close all the tab that user open

5 - Close current tab

Actor: user

Description: close the tab that user is currently working

Project 2.2: <https://github.com/notepad-plus-plus/notepad-plus-plus/issues/4505>

Notepad++ not allow to say an empty file. When the file is just create without any typing backstep, it is not able to save with Ctrl + S. In the menu it show that we are not able to click save and we can click save as. When we click the save as in the menu it work normally. In the file that has been type and backstep, we are able to use Ctrl + S and the save in the menu is clickable right now. It is not a big problem, but there is a reason to make it work in the same way.

Functional Requirement:

* Allow user to save an empty file without any edit

Use-Case:

1 - create empty document

Actor: user

Description: create a file that is not being edit

2 - shortcut

Actor: user

Description: user use shortcut to save file Ctrl + S, or Ctrl + Alt + S, trigger use-case 4

3 - menu

Actor: user

Description: user save the file from the drop-down list, both save file or save as, trigger use-case 4

4 - save file

Actor: user

Description: ask the location and file name

Project 2:

Week 5 (11/1) Understand Code

Week 6 (11/8) Actual Coding Project 2.1

Week 7 (11/15) Actual Coding Project 2.1

Week 8 (11/22) Actual Coding Project 2.2

Week 9 (11/29) Actual Coding Project 2.2

All the project will be send to Github, haven’t create a repository yet.