3/30/23, 5:57 PM OneNote

## U, L & D steps

Thursday, March 30, 2023 2:59 PM

**UI** Design Welcome message

Ask user 1 for their name Ask user 1 for their 5 ship placements Ask for placement Determine if it is a valid spot Store

Clear

Ask user 2 for their name Ask user 2 for their 5 ship placements Ask for placement Determine if it is a valid spot Clear

Display grid of where user 1 has fired Ask user 1: Where would you like to fire on? Verify a valid spot Check results Store shot Clear Display the score (user 1: 2 ships left, user 2: 4 ships left) Repeat with user 2 Loop until someone wins Print out Winner's name and number of shots taken Wait for user to say they are done Exit

UI Design cont.

A1 A2 A3 0 A5 B1 B2 B3 0 B5 C1 C2 C3 X C5 D1 D2 D30 D5 E1 E2 E3 O ES

Logic Design

Clear display enum Method: Asking for name Method: Get ship placement Method: Determine if valid spot for ship Storing ship information: List per user?

Storing shot information: List per user? Method: create the grid for each user Method: print out grid

Method: fire on opponent

Method: determine if a shot can be taken & outcome

Method: display score

Method: print winner and shots taken

## Data Design

Playerinfo User's Name -string Dseis 5 ship location User's shot grid - Lis

 ${\sf GridSpot}$ SpotLetter- string SpotNumber - int Status-string (possib