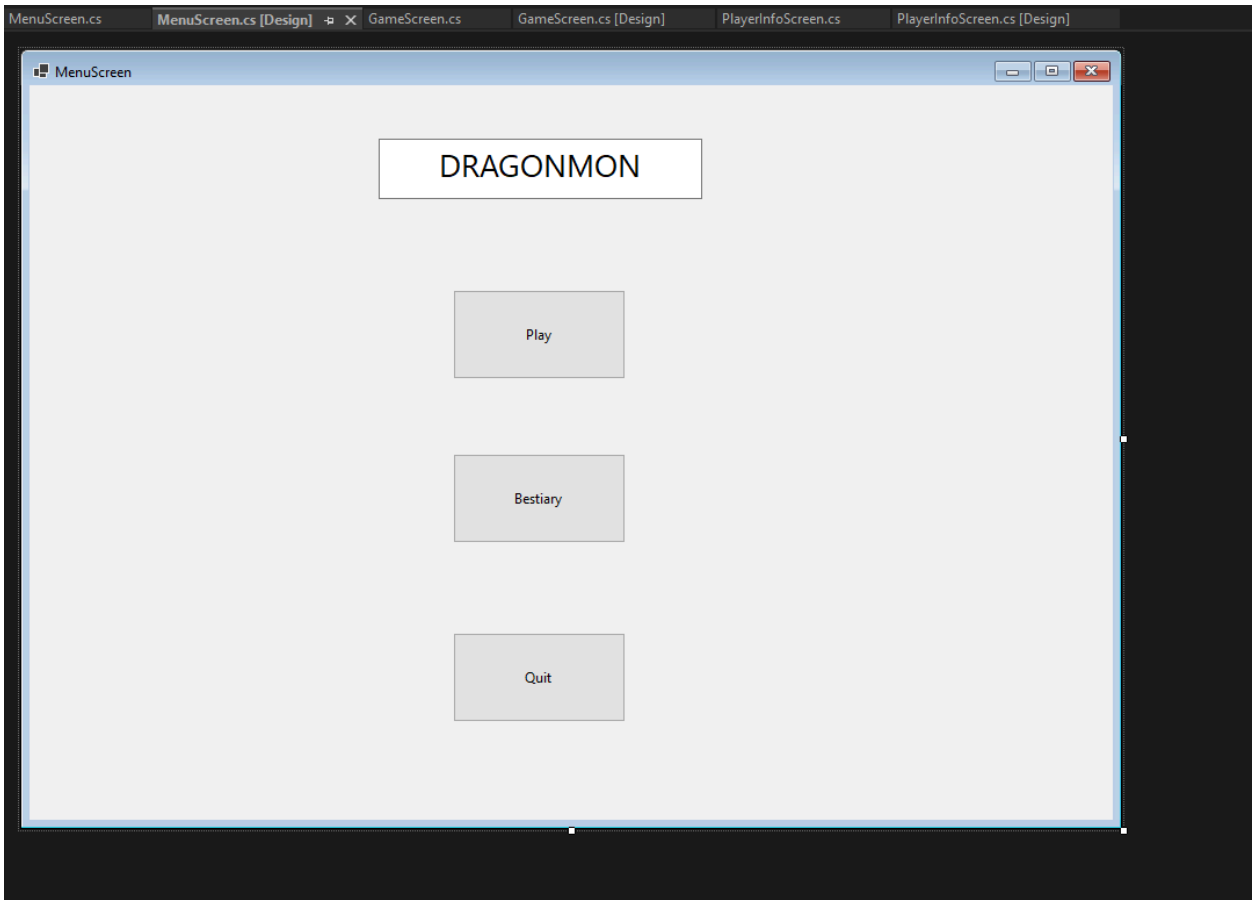
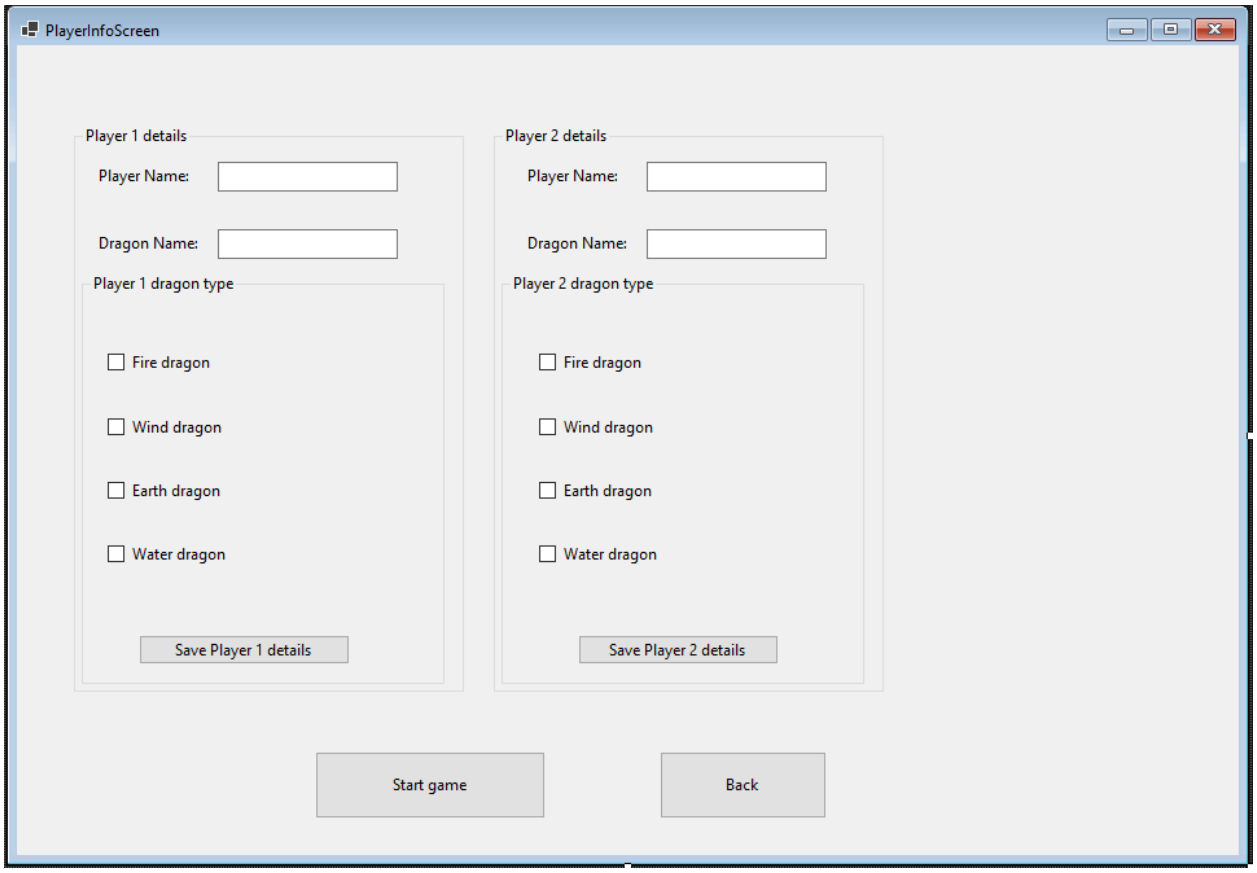
For the assignment given, we had to design a user interface for a dragon game where 2 players have to fight using dragons. The dragons each have their own types and with the respective types, come different abilities. The game had us use a fire dragon, an ice dragon, a wind dragon and an earth dragon. The game will follow a turn based formula where each player is given a turn to make their move against the other players dragon, and the player whose dragons health goes to zero or below will lose. Within the UI design of the assignment there are four forms present. There is a form to show the menu for the game where there are three buttons. The screenshot below shows how the design of the menu form looks.
The form that is attached below is used as the starting page after the game is opened. The player has three options when they land on this screen upon opening the game. When the player clicks the play button, they will be taken to the player details screen. If the player clicks on the Bestiary button, it will take them to a screen where they can see the details of the dragons that are playable in the game. If the player clicks on the quit button, the game will close and the player will have to re open the game if they want to play again.



There is a play button, a bestiary button and a quit button. The play button is labeled BTNPlay in the code, the Bestiary button is labeled BTNBestiary in the code and the Quit button is labeled BTNQuit in the code. The BTN is added in front of the word describing the button as to not confuse which element it is in the form and when working with the code for the form. In a later version of the game, there will be a background screen for this form so that the game looks a lot nicer.

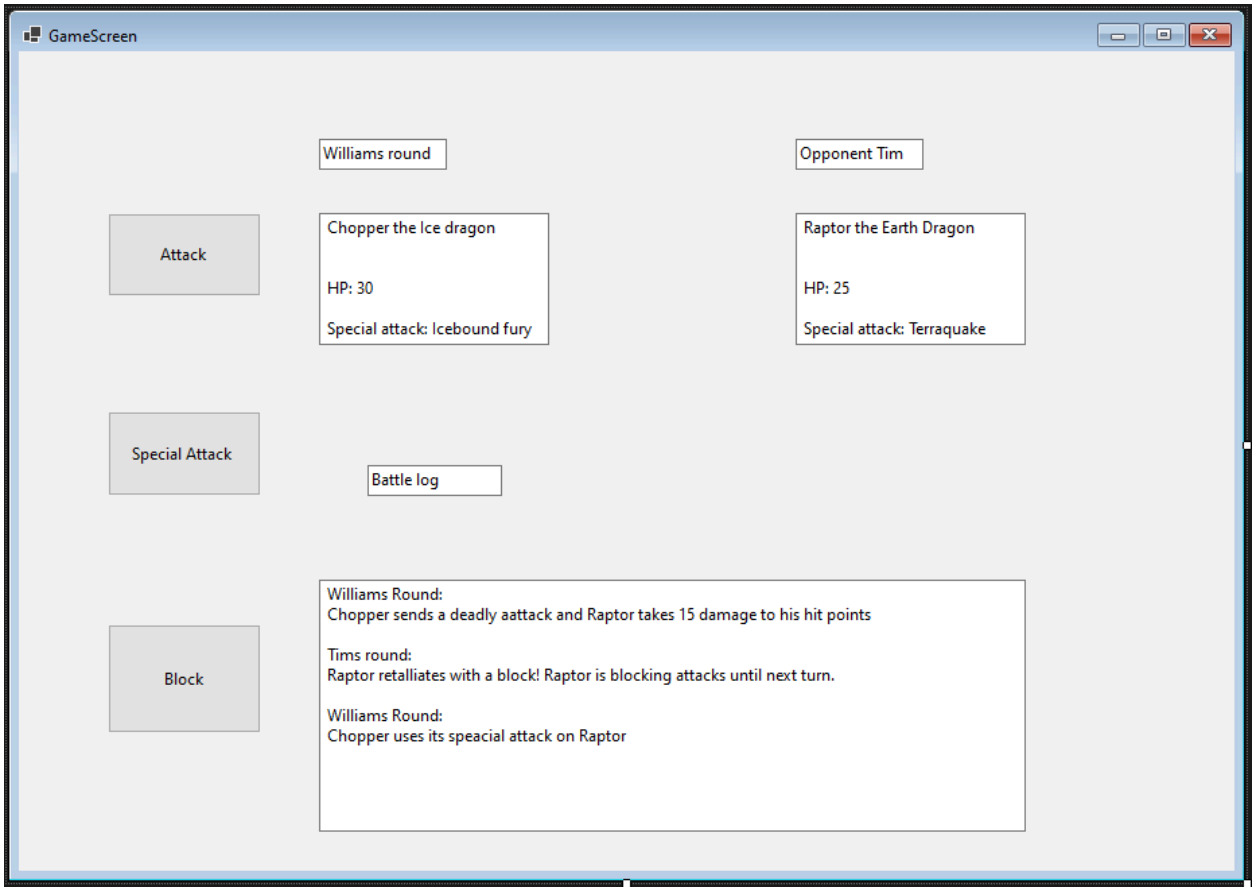
When the player clicks on the play button they will be taken to the player details screen. This screen is put in place so that the player can input their details such as their name, their dragon name and their dragon type. Attached below is the screen and the layout of that the player will see.



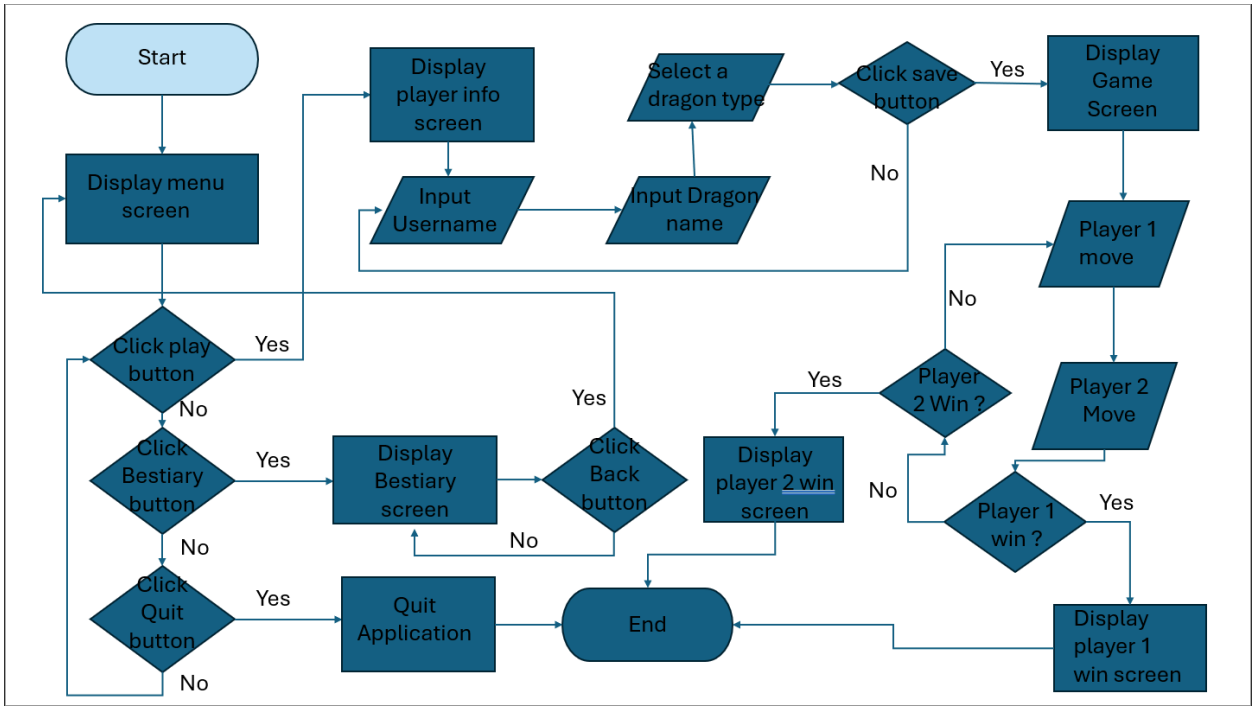
The form has four group boxes, two of which are nested inside the other group boxes. The first player boxes that the player should interact with are the player one or two details boxes. The player one details group box is named GBP1details in the code where GBP is short for groupbox player one. This is done so that it is easier to identify in the code. The same is done for the player two group box as it is named GBP2details in the code so that it is easier to identify in the code. In these respective groupboxes are a player name and a dragon name textbox where the player can input their name and the dragon name as string variables before they can save the data and move onto the next group boxes. The text boxes in the player 1 group box are named, TXTPlayer1Name and TXTPlayer1DragonName the TXT in the front of the variable name is short for text and this is done so that the it can be easily identified in the code. The dragon type group boxes are made up of four check boxes for each player that is selecting a dragon. The check boxes for the types of dragons will return a Boolean true or false variable in the code to determine the dragon that the player has chosen before the game starts. There are 4 buttons that are also present on the form a save player ones details, save player twos details, start game button and a back button. Within the code, the buttons are labeled with the BTN before the the word of the code as the buttons are named in the code BTNSaveP1, BTNSaveP2, BTNStartgame and BTNBack so that they are all easy to identify within the code when working with them. Once the each respective players clicks their save details button, the

players name, the player's dragon name and the dragon type that they chose will be saved into constant variables that will be used in the actual game and during play. The check box variables for what type of dragon will load the constant data type that matches the elemental type of dragon that the player selects, for example if the payer selects the Wind dragon, it will set the constant values of the players dragon to to that of the winds dragons attack, health, block damage and special attack damage.

After completing the player details screen, the player will be taken to the game screen. The game screen where the players will be fighting their dragons against each other where they each can make a turn against the opposing player. The UI elements that are present on the screen are Attack button, special attack button, block button and text boxes for the player name, dragon details and the battle log. The attack button is labeled in the code BTNAttack as to be able to identify the button in the code. Same goes for the Special attack, which is also labeled in the code BTNSAttack and for the block button being BTNBlock. The battle log works by showing both players what is actively going on as the game goes on. The battle log will show what moves the player dragons make against each other, the block damage that each dragon does against each other as well as the the special attacks that are done



Attached below is a flow chart that shows the processes a player has to go through upon opening the game.



The step by step of the flowchart goes as follows: the program starts when it is clicked. Upon the opening of the application the players will land on the first process of the flow chart, which is displaying the menu screen. From the menu screen, the players have 3 decisions that they can make: will they click the play button, yes or no, will they click the bestiary button, yes or no, will they click the quit button, yes or no. If they choose no for all three of the decisions, then they will loop infinitely in between the three decisions until they decide to click yes on one of the buttons which will return a yes, leading them to the next point in the flowchart. If they click yes on the quit button, the next process that follows will be the application quitting and closing, as well as the end of the flowchart. If the player clicks the bestiary button, they will be brought to the next process in the flowchart which is opening the bestiary screen. Here they can see the different dragons and their stats. Here the players are presented with another decision which is: click the back button, yes or no. If the player decides to not click the back button, they will stay on the bestiary screen until they decide to click the back button. If the back button is clicked, then the player will be brought back to the first process of the flowchart which is displaying the main menu screen. From there the players have the three first decisions that were given in the beginning. (Click play button, Click bestiary button, Click quit button). The player can then make the previous decisions as before, or they could click yes on the play button. If the players click on the play button, they will be brought to the next process of the chart, which is displaying the player info screen. This is where the players will be prompted to give input to the program so that the program can display the right information when the game starts. The players will be given a chance to input their usernames as strings then they will be moved to the next input which is inputting the name of their dragon which will also be a string. After they input their dragon name, they will be moved onto the next input which will be inputting the type of their dragon from the given four, they will be asked to pick the type of dragon they want to take into battle. The players will then be given a decision, would they like to click the save button? If they choose not to, the program will loop again to ask them to click it until they decide to click the

save player details button. If they do click the button, then the next process screen will be given to the players, which is displaying the game screen. From this screen, the players will be given options to input their choices on the moves they would like to make. The game then makes a decision on its own without the player input. The game determines if either player one or player two has won the game, if none of the players have won the game yet, the game will loop back to the inputs of asking for each players move. This will go on until a player has won. If player one has won the game, then the next process will go through. The program will then display the player one win screen. On the other hand if player two were to win, then the program will move to the next process which will be to display the player two win screen. After either player one or two has won the game, the next move on the flowchart that both of the processes go to is the end of the flow chart. This is the flow for the program from the beginning when the player opens the program right till when either one of the players wins and wants to close the program.

In terms of the code, there are multiple variables that were named in the report. But the list below was designed to separate the list from the report so as not to confuse anyone and give any readers a better view at all the elements that were used in the program. The elements are as follows:
BTNPlay - this button allows the player to move to the next form which is the player info screen.
BTNBestiary - this button allows the player to enter the bestiary form which will allow them to see what each of the different dragon types are in the game, as well as their stats so that the player can make an informed decision when it comes to picking their dragon when they play the game.
BTNQuit - this button will close the game for the player.

In the next form which is the player info screen, there are a few buttons, textboxes and groupboxes. They go as follows:
GBP1details - this group box holds the details for player one in the game.
GBP2details - this group box holds the details for player two in the game.
TXTPlayer1Name - this text box is here so that the player can input their name into the game and have it displayed when they start playing the game.
TXTPlayer1DragonName - this text box is in place so that the player can put in the name for their dragon and they can then have it outputted when the game starts.
TXTPlayer2Name - this text box is for player two to input their name and have it outputted in the game screen.
TXTPlayer2DragonName - this text box is in place so that player two can enter the name of their dragon and have it displayed when they move to the next screen.
GBP1DragonType - this text box is in place so that player one can select a dragon type from the list of dragons given.
GBP2DragonType - this text box is in place so that player two can select the type of dragon that they want to use when they get to the play game screen.
BTNSaveP1 - this button is used to save the details of all the inputs for the first player so that it may be displayed in the next form.
BTNSaveP2 - this button is used to save all the data that was inputted for the second player so that it may be displayed on the next form.

The next form is where all the details that the players had put in the previous form will be displayed. This is also where some new text boxes are present to display the text of the battle that is going on between the players' dragons.

BTNAttack - this button is used by each player when they would like to declare an attack against the other player's dragon.
BTNSAttack - this button is used when either player would like to use their dragons special attack on the opposing player's dragon during the game.
BTNBlock - this button is used when either player would like to declare a block before they end their turn and let the opponent go next.
The next elements that are present within the game form is the TXTBattleLog which is used to display all the information necessary for players to see what is going on within and during the game.