

Design

Well, the first part of the design was finished given this is the second half of the project, meaning I reused the code from the one v. one battles. However, I did change some things about the way my game is implemented and my main function. I added a game class and separated the game play from the main menu, and essentially made the end function a print of results. I also changed the way in which I create my character objects aka the initializing teams function. Since I ask the user how many players per team, I just iterate over the character creation loop until I've reached that number, and add each to the queue. This way, my main file was much more simple, so that I could debug my game play more easily (dividing the functions into smaller functions == more simple == ability to comment out sections of code and debug). Secondly, I used my knowledge of queues and linked lists from our labs to create the lineupQueue and loserList. That part was pretty straightforward because I could just some of the logic from my own code. The rest of the game play additions (e.g. losers, team scoring, recovering) was just interspersed throughout my previous code. Other than that, the addition of the play/exit options, and the recover were pretty easy.

Reflection

If I could do this project over, I'd divide the game play into even more functions. It just got long and tedious to debug with all the game play additions. Also, I'd find a different way to keep track of the scoring system. I kind of added it in the end, and I had to keep track of who was on which team and how that score gets incremented, so I ended up just setting a flag for that, but should probably have come up with a more sophisticated way of keeping track of it. Testing took a really really long time. It was really important with this project to test all parts individually, because it gets a bit tedious when you have a bunch of fighters battling all with a bunch of information of each round.

Test Results

Test case	Input Values	Driver Functions	Expected Outcomes	Observed Outcomes
1. Play	1	Play or exit function	Game play begins, asks for number of fighters on team	Game play begins, asks for number of fighters on team
2. Exit	2	Play or exit function	Says goodbye and exits	Says goodbye and exits
Invalid number	3	Player or exit function	Sorry the input must be a 1 or 2, try again	Sorry the input must be a 1 or 2, try again

Enter character instead of number	f	Play or exit function	Sorry the input must be a 1 or 2, try again	Sorry the input must be a 1 or 2, try again
1 fighter	1	Fighters on team	Next prompts for fighter name on team 1, player 1 Next prompts for fighter name on team 2, player 1	Next prompts for fighter name on team 1, player 1 Next prompts for fighter name on team 2, player 1
2 fighters	2	Fighters on team	Next prompts for fighter name on team 1, player 1 Next prompts for fighter name on team 1, player 2 Next prompts for fighter name on team 2, player 1 Next prompts for fighter name on team 2, player 2	Next prompts for fighter name on team 1, player 1 Next prompts for fighter name on team 1, player 2 Next prompts for fighter name on team 2, player 1 Next prompts for fighter name on team 2, player 2
1 fighter per team Team 1: T1p1, medusa Team 2: T2p1, harry potter		combat	Team 2 score: 1 Harry Potter beats medusa Harry potter restored to lineup with +7 Winning member left on team 2 is harry potter Loser list? Yes, medusa	Team 2 score: 1 Harry Potter beats medusa Harry potter restored to lineup with +7 Winning member left on team 2 is harry potter Loser list? Yes, medusa
2 fighters per team: Team 1: T1p1, barbarian		combat	Medusa beats vampire, medusa restores 2 before returning to the	Medusa beats vampire, medusa restores 2 before returning to the

<p>T1, p2, Vampire</p> <p>Team 2: T2, p1, Blue Men T2, p2, Medusa</p>			<p>lineup, blue men beats barbarian Team 2: 2 Team 1: 0 Medusa, blue men left on team 2 Team 2 wins Losers are: vampire and barbarian</p>	<p>lineup, blue men beats barbarian Team 2: 2 Team 1: 0 Medusa, blue men left on team 2 Team 2 wins Losers are: vampire and barbarian</p>
Entering a character	k	How many fighters per team?	Invalid entry, please enter 1 or greater	Invalid entry, please enter 1 or greater