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CS165

Assignment 2 Report

**Understanding –**

I’m going to focus more-so on the bigger program for this assignment because I found myself spending much more time than on the other two.

But, for this assignment, we are to create a 2 player guessing game. In this game, the program will prompt the first player to select a number (which I set to being between 1-100) as well as the number of guesses they are allowing (I don’t believe this was specified but I liked the idea).

Then once that occurs (and it checks to make sure the values are within the ranges), it prompts the second user to make a guess and shows them how many guesses they get. If they guess incorrectly it will display the number of guesses they have left as well as if their guess was too high or too low and re-adjust the range.

If the second user gets the number within the specified number of guesses, then great, but if they do not then they will have lost the game and it will show them the number and what their closest guess was.

Then at the end, the program prompts the users if they would like to play again.

**Design –**

At the end of this report I also put the hand written design I did for this, but I will focus more on the reflection. This assignment really showed me the importance of the design and understanding portions, where I kept referring to my notes and my little hand-drawn design during the entire programming process.

**Testing –**

The testing process here was probably about 50% of my time and I caught myself making a lot of subtle mistakes, the biggest ones were infinite or ignored loops. I kept starting while loops that would not give the user a chance to change the value. For example, while guess != answer then do this. The loop ended up prompting over and over and never moved on to the next aspect of the program.

Then I realized I didn’t make checks to see if the users values were acceptable. IE if the original number was within 1-100, if the maximum guesses was within 1-10, and if the user’s guess was within the specified range.

**Reflection –**

This program really caught me doing the worst thing possible and just diving right in. I used to do this a lot as well and in this case even though I did the design beforehand I did not look at it at all for the first revision of the program. I doing so, I started writing from top to bottom with all of the bells and whistles without creating a strong foundation and building outwards from there. The only way I can describe it was trying to build a house from scratch without any true design, plan, or foundation; building separate walls and a roof and windows and such. And just like in real life if you were to try to build a house like that, once it came time to run it, nothing fit in place and everything was breaking everywhere.

So I went back and scrapped the entire program and started from scratch based on my design and understanding. This helped a lot more as I focused first on making things work as they should and then later adding in little bells and whistles. Testing each loop as I progressed along to make sure that they were reacting as they should and not creating infinite loops. Once the whole foundation was built, it was easy to go back and add small tests such as checking if the number was in the valid range and such.

That is something I really need to stick to, as it catches me off guard a lot then I find myself scratching my head and wondering where items were breaking. I need to always make sure to build a strong foundation (whether that is in a program or through my understanding of a subject) before trying to dive in completely and jump 10 steps in the process.

