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CS 202

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Project 1B

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Project 1B Documentation

Purpose:

The purpose of this project was to show knowledge and understanding of multi-dimensional arrays, proper understanding of the srand function, how to properly pass variables through a function either by reference or by value, the use of fstream, getline commands, and a good understanding of how to create a menu using a switch statement. The goal of this project was to demonstrate knowledge of the previous items listed above.

Design:

I designed this program with the specifications posted on WebCampus for Project 1B. The biggest barrier I encountered when creating this program, was having the program know if data has been loaded into the slot machine array. I needed the program to know this so it would not allow the user to access certain menu items until the array had been filled with information. I overcame this barrier by creating a boolean logic variable that gets passed through every function. The boolean variable represented if data had filled the slot machine array, or if it was empty. Another issue I ran into was having the program test to see if a file existed in order for it to import information. I overcame this problem by learning about the fin.good() function. If the file existed it would read from that file, if it did not exist, then it presented the user with an error message. The functions I created for this program were all based off of the menu selections, and are as follows: Randomize slot machine, read in previous data, print current data to screen, print current data to file, print specific grid location of slot machine, and exit. The most difficult function to write was the randomization function due to a lack of practice with the srand function.

Changes:

One of the things I would change for the project is within the functions that use ifstream and ofstream. I could have defined fin and fout within my main function instead of declaring them every a function was called. All I would have to do is pass the fin or fout variable by reference through the functions that used them instead of making them every time. I would also like to change the print to console function so the data printed was easier on the eyes instead of seeming a little jumbled. By jumbled I mean that the columns dont line up perfectly. I would need to make a string length function to have the program create the appropriate amount of spaces needed. Aside from the fin and fout variables, and printing the data out evenly, I believe that the program is optimized to the specification given. It performs all tasks given without error.