4-2 Milestone Three: Enhancement Two: Algorithms and Data Structure

CS 499

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This artifact is an enhanced version of the last artifact I submitted. I changed the way that it handles the information that’s pulled from the credential.txt file. Instead of a series of arrays to handle each individual category of a user’s properties, everything is now read into a vector and then moved into a struct. This allows me to be able to store and call an individual user’s information in a more uniform way. The vectors allow all the lists to be dynamic in size, so that if a user needed to be added or removed later only the .txt file would need to be altered. The method for displaying the .txt files for the individual job descriptions has also been altered to read by line instead of character so that it preserves the formatting of the .txt document itself. And finally, most of the operations have been moved out of the main function to their own, making the code reusable.

The biggest challenge in altering this artifact was figuring out how the struct was being populated. I had several errors with trying to iterate through the vector with the “subscript being out of range”. This was resolved by changing how the loops were limited on size. This was done by taking the size of the credentials vector and dividing it by four instead of the user struct vector’s size. This should still keep the code reusable because there should always be a multiple of four in the credentials vector, so everything should stay aligned. But, if I was going to modify anything in this build, it would be that specific section to make it completely dynamic somehow.