

Project Outline

30003673



Programming iii

tafe

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# What data structures are you using?

For this project I have used LinkedList<T> to save my songs for the audio player form. I have also used arrays such as lists and strings, to collect elements (values or variables)

# Where are you using hashing techniques?

From the admin page when a user logs in with a valid username and password, the admin password will be parsed to ensure a secure backend.

# What sorting algorithm are you using and how is this different from selection sort?

For this project have used Radix sort. In computer science, radix sort is a non-comparative sorting algorithm. It avoids comparison by creating and distributing elements into buckets according to their radix. Radix is a very good sorting method and very time efficient. It can go through large amounts of data

This algorithm is different from selection sort as selection sort mainly uses O(n^2)

Bubble sort has a worst-case and average complexity of О(n2), where n is the number of items being sorted. ... Even other О(n2) sorting algorithms, such as insertion sort, generally run faster than bubble sort, and are no more complex. Therefore, bubble sort is not a practical sorting algorithm.

# What search technique are you using?

For this project I am using a simple binary search to easily search through data

# What third party libraries are you using?

For this project I have used CSVHelper to store and save all data to a .csv file in the debug folder

# Where can I find the documentation for this?

A documentation for this project can found in a word document saved on my desktop and backed up on my external USB. Additionally all the cod is saved on my repository located on GitHub.

# A mock-up of the GUI

A screenshot of a cell phone

Description automatically generated

# What source control are you using?

For this project I will be using GitHub for all the source control

A screenshot of a social media post

Description automatically generated

# What coding standards are you enforcing?

For this project I will be enforcing the C# Coding Conventions guide provided by Microsoft

(<https://docs.microsoft.com/en-us/dotnet/csharp/programming-guide/inside-a-program/coding-conventions>)

# What tests are you going to run?

For this project I will be stress testing, and testing the stability of loading large employee lists. Also testing to see if the application can handle saving large amounts of data at once.