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CS-300

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Project One

**Vector Data**

//Pseudocode made to open a file, read the file, and then check for file errors:

open a file

**//check for the return value of the open function**

if "**-1**":

**Printed: File not found.**

else:

file found

//Reading the file:

the file can be read using **getline**

print is using **cout**, or **printf**.

using a **loop** set to a condition of **EOF**.

**Hash Tables**

Pseudo code to open a file read and check for file errors:

open a file.

check for the return value of the open function.

if it is "-1":

File not found.

else:

file found

Reading the file:

the file can be read using getline.

and print using cout, or printf.

using a loop set to a condition of EOF.

**Tree Data**

Pseudo code to open a file read and check for file errors:

open a file .

check for the return value of the open function .

if it is "-1":

File not found.

else:

file found

Reading the file:

the file can be read using getline .

and print using cout, or printf.

using a loop set to a condition of EOF.

**Menu**

Psedocode to load file to data structure

Print using cout or printf

Using a lopp set to a condition of EOF

**Alphabetical Order**

Psedocode to load file to data structure

For A to Z;

For 100 to 400;

Print using cout or printf

Using a lopp set to a condition of EOF

**Evaluation**

When looking at the three different data structures I think all have advantages but also disadvantages. For vector data it is a great at being able to be copied for harder data that needs to be copied like maps because it is already in vector form to begin with. A disadvantage for vector data is that it is not great to be used with continuous data. For hash tables an advantage is the synchronization. A disadvantage is the hash tables do not allow null values. For tree data an advantage is the amount of effort to prepare is lower than others and if missing a value, it does not hurt the process of building. A disadvantage though would be if there is a small change in the data it can change the structure. For my code I think the best option would be the hash table because everything can be synchronized and if I change the data it will not affect the structure.