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Project 1
Password - Username Implementation Using Hash-Map

Compiler Used: Visual Studio 2019

Number of Files: 3

-Password.cpp (For Testing)

-LinearProbing.h (For Linear Probing Implementation)

-SeparateChaining.h (For Separate Chaining Implementation)

Password.cpp

- Initializes the class Linear Probing Hash Map (LPHM) and tests the functions associated with the Linear Probing
- Read in the "password.txt" file and display them on the console.
- Initialize the class Separate Chaining Hash Map (SPHM) and test the functions associated with the Separate Chaining.
- Do-while loop user to keep testing the "key, value" and verify(key) function verifies the password is entered correctly for the specific username.

LinearProbing.h

- Uses template for practice
- HashMap() creates array and set them to "NULL", it also creates dummy array
- hashCode(string s) computes the hash code to store in the array
- insert(key, value) inserts the node in the particular spot in the array assigned by hashCode(string) function.
- erase(string key) function delete the node
- find(string key) finds the value associated with the key.
- verify(userName, passWord) checks if the user enters the correct username and password.

- print() displays all the nodes.

SeparateChaining.h

- Instantiate Pair class for both key and value
- Create Hash class to instantiate the functions
- Use list.h STL for the arrays
- As in linear Probing, hasFunction(string key) calculates the has code to assign the key in a particular list.
- put(key, value) add key, value pari in the linked list.
- find(key) finds the associated value for the key
- verify(userName, passWord) checks if the user enters the correct username and password.
- print() displays all the nodes.