Linear Search-Technical Documentation

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1 File Documentation

1.1 210101117_Assignment1B.cpp File Reference

```
#include "stdafx.h"
#include <iostream>
#include <stdio.h>
#include <fstream>
#include <vector>
#include <string>
#include <sstream>
#include <algorithm>
```

Functions

- pair< bool, int > **linearSearch** (vector< string > &data, string &key)

    Perform linear search on a vector.
- string **normalizeFloatString** (const string &input)

    Normalize the string representation of a floating-point number.
- int **main** ()

    Main function to read data from a file, perform linear search, and display the results.

1.1.1 Function Documentation

linearSearch()

```
pair< bool, int > linearSearch (
            vector< string > & data,
            string & key )
```

Perform linear search on a vector.

This function searches for a key in a vector of strings using linear search.

Parameters

data	Vector containing the data to be searched.
key	The key to be searched in the vector.

Returns

A pair indicating whether the key is found (true/false) and the index of its first occurrence in the vector.

main()

```
int main ( )
```

Main function to read data from a file, perform linear search, and display the results.

This function orchestrates the entire application, reading data from a file, displaying the elements, obtaining user input, and performing a linear search.

Returns

0 on successful execution.

normalizeFloatString()

```
string normalizeFloatString (
            const string & input )
```

Normalize the string representation of a floating-point number.

This function normalizes the string representation of a floating-point number by removing trailing and leading zeroes. If the input is not a floating-point number, the original string is returned.

Parameters

| input | The input string to be normalized. |

Returns

Normalized string removing trailing and leading zeroes if it's a floating-point number; otherwise, the original string itself.

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