My Project

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Chapter 1

Class Index

1.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

Chapter 2

File Index

2.1 File List

Here is a list of all documented files with brief descriptions:

Chapter 3

Class Documentation

3.1 Nurse Struct Reference

A structure that stores information about a nurse, including their name, ID number, pay, and work shifts.

`#include <NurseList.h>`

Public Member Functions

- Nurse (const std::string &nurseName, int number, double nursePay, const std::vector< std::string > &nurseShifts)

  Constructs a Nurse object.

Public Attributes

- std::string nurseName
- int nurseNumber
- double nursePay
- std::vector< std::string > nurseShifts
- Nurse * next
- Nurse * prev

3.1.1 Detailed Description

A structure that stores information about a nurse, including their name, ID number, pay, and work shifts.

The Nurse structure holds details about a nurse and is used in the doubly linked list for storing nurse records.

3.1.2 Constructor & Destructor Documentation

3.1.2.1 Nurse()

```
Nurse::Nurse (
            const std::string & nurseName,
            int number,
            double nursePay,
            const std::vector< std::string > & nurseShifts)
```

Constructs a Nurse object.

Constructs a Nurse object with the given name, number, pay, and shift data.

Parameters

nurseName	The nurse's name.
number	The nurse's unique ID number.
nursePay	The nurse's hourly or annual pay.
nurseShifts	A vector of shifts assigned to the nurse.
nurseName	The name of the nurse.
number	The unique identifier for the nurse.
nursePay	The pay of the nurse (hourly or annual).
nurseShifts	The shifts assigned to the nurse in a vector of strings.

3.1.3 Member Data Documentation

3.1.3.1 next

```
Nurse* Nurse::next
```

Pointer to the next nurse in the linked list.

3.1.3.2 nurseName

```
std::string Nurse::nurseName
```

Nurse's name.

3.1.3.3 nurseNumber

```
int Nurse::nurseNumber
```

Unique nurse identifier (e.g., employee number).

3.1.3.4 nursePay

```
double Nurse::nursePay
```

Hourly or annual salary of the nurse.

3.1.3.5 nurseShifts

```
std::vector< std::string > Nurse::nurseShifts
```

A vector containing the nurse's assigned shifts (e.g., 42 shifts).

3.1.3.6 prev

```
Nurse* Nurse::prev
```

Pointer to the previous nurse in the linked list.

The documentation for this struct was generated from the following files:

- NurseList.h
- NurseList.cpp

3.2 NurseList Class Reference

A doubly linked list class for storing and managing a collection of nurses.

```
#include <NurseList.h>
```

Public Member Functions

- NurseList ()

  Constructs an empty NurseList object.
- void addNurse (const std::string &nurseName, int number, double nursePay, const std::vector< std::string > &nurseShifts)

  Adds a new nurse to the list.
- void display () const

  Displays all nurses in the list.

3.2.1 Detailed Description

A doubly linked list class for storing and managing a collection of nurses.

The NurseList class allows adding nurses to a doubly linked list and displaying the list.

3.2.2 Constructor & Destructor Documentation

3.2.2.1 NurseList()

```
NurseList::NurseList ()
```

Constructs an empty NurseList object.

Initializes an empty doubly linked list where both head and tail pointers are set to nullptr.

The constructor initializes the head and tail pointers to nullptr, indicating that the list is empty.

3.2.3 Member Function Documentation

3.2.3.1 addNurse()

```
void NurseList::addNurse (
            const std::string & nurseName,
            int number,
            double nursePay,
            const std::vector< std::string > & nurseShifts)
```

Adds a new nurse to the list.

Adds a new nurse to the end of the list.

Parameters

nurseName	The nurse's name.
number	The nurse's unique ID number.
nursePay	The nurse's hourly or annual pay.
nurseShifts	A vector of shifts assigned to the nurse.

The new nurse is added to the end of the doubly linked list.

Parameters

nurseName	The nurse's name.
number	The nurse's unique ID number.
nursePay	The nurse's hourly or annual pay.
nurseShifts	A vector of shifts assigned to the nurse.

This method dynamically allocates memory for a new nurse and appends the nurse to the end of the list. If the list is empty, the new nurse becomes both the head and the tail of the list. Otherwise, the new nurse is appended to the tail.

3.2.3.2 display()

```
void NurseList::display () const
```

Displays all nurses in the list.

This function traverses the list and prints out details of each nurse.

The documentation for this class was generated from the following files:

- NurseList.h
- NurseList.cpp

Chapter 4

File Documentation

4.1 CSVParser.h

```
00001 // CSVParser.h
00002 #ifndef CSV_PARSER_H
00003 #define CSV_PARSER_H
00004
00005 #include <unordered_map>
00006 #include <string>
00007 #include "NurseList.h"
00008
00018 void readCSV( const std::string& filename , std::unordered_map<std::string , NurseList>& nurse_lists
      );
00019
00020 #endif // CSV_PARSER_H
```

4.2 NurseList.h

```
00001 // NurseList.h
00002 #ifndef NURSE_LIST_H
00003 #define NURSE_LIST_H
00004
00005 #include <iostream>
00006 #include <vector>
00007 #include <string>
00008
00015 struct Nurse {
00016
00017     std::string nurseName;
00018     int nurseNumber;
00019     double nursePay;
00020     std::vector< std::string > nurseShifts;
00021     Nurse* next;
00022     Nurse* prev;
00032     Nurse( const std::string& nurseName , int number , double nursePay , const std::vector<
      std::string >& nurseShifts );
00033
00034 };
00035
00042 class NurseList {
00043 public:
00049     NurseList();
00050
00061     void addNurse( const std::string& nurseName , int number , double nursePay , const std::vector<
      std::string >& nurseShifts );
00062
00068     void display() const;
00069
00070 private:
00071
00072     Nurse* head;
00073     Nurse* tail;
00075 };
00076
00077 #endif // NURSE_LIST_H
```

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