CS 250 Project 4: Binary Search Tree

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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 files with brief descriptions:

Chapter 3

Class Documentation

3.1 Airplane Class Reference

`#include <Airplane.hpp>`

Public Member Functions

- void Board (Traveller *traveller)
- Traveller * Disboard ()
- bool IsEmpty ()

3.1.1 Member Function Documentation

3.1.1.1 void Airplane::Board (Traveller * *traveller*)

3.1.1.2 Traveller * Airplane::Disboard ( )

3.1.1.3 bool Airplane::IsEmpty ( )

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

- Airplane.hpp
- Airplane.cpp

3.2 Airport Class Reference

`#include <Airport.hpp>`

Public Member Functions

- void LineUp (Traveller *traveller)
- Traveller * NextInLine ()
- bool IsEmpty ()
- int WaitingCount ()
- void SetMaxCapacity (int size)
- int GetMaxCapacity ()

Private Attributes

- int m_maxCapacity

3.2.1 Member Function Documentation

3.2.1.1 int Airport::GetMaxCapacity ( )

3.2.1.2 bool Airport::IsEmpty ( )

3.2.1.3 void Airport::LineUp (Traveller * *traveller*)

3.2.1.4 Traveller * Airport::NextInLine ( )

3.2.1.5 void Airport::SetMaxCapacity (int *size*)

3.2.1.6 int Airport::WaitingCount ( )

3.2.2 Member Data Documentation

3.2.2.1 int Airport::m_maxCapacity [private]

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

- Airport.hpp
- Airport.cpp

3.3 AirTravelSimulator Class Reference

```
#include <AirTravelSimulator.hpp>
```

Collaboration diagram for AirTravelSimulator:

Public Member Functions

- AirTravelSimulator ()
- void Run ()
- bool LineUp ()
- bool Board ()
- bool Disembark ()
- void Stats ()
- void DisplayMessage (Traveller *ptrPerson, State action)

Private Attributes

- State m_state
- TravellerManager m_pplManager
- Airport m_airport
- Airplane m_airplane
- int m_timeStamp
- LinkedList< Traveller * > m_ptrTravellers

3.3.1 Constructor & Destructor Documentation

3.3.1.1 AirTravelSimulator::AirTravelSimulator ( )

3.3.2 Member Function Documentation

3.3.2.1 bool AirTravelSimulator::Board ( )

3.3.2.2 bool AirTravelSimulator::Disembark ( )

3.3.2.3 void AirTravelSimulator::DisplayMessage (Traveller * *ptrPerson,* State *action*)

3.3.2.4 bool AirTravelSimulator::LineUp ( )

3.3.2.5 void AirTravelSimulator::Run ( )

Parameters

<*type*>	asdf

Returns

<type>

3.3.2.6 void AirTravelSimulator::Stats ( )

3.3.3 Member Data Documentation

3.3.3.1 Airplane AirTravelSimulator::m_airplane [private]

3.3.3.2 Airport AirTravelSimulator::m_airport [private]

3.3.3.3 TravellerManager AirTravelSimulator::m_pplManager [private]

3.3.3.4 LinkedList<Traveller*> AirTravelSimulator::m_ptrTravellers [private]

3.3.3.5 State AirTravelSimulator::m_state [private]

3.3.3.6 int AirTravelSimulator::m_timeStamp [private]

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

- AirTravelSimulator.hpp
- AirTravelSimulator.cpp

3.4 Traveller Struct Reference

`#include <Traveller.hpp>`

Public Member Functions

- Traveller ()

Public Attributes

- string name
- int waitingTime
- bool boarded
- int id
- State state

3.4.1 Constructor & Destructor Documentation

3.4.1.1 Traveller::Traveller ( ) [inline]

3.4.2 Member Data Documentation

3.4.2.1 bool Traveller::boarded

3.4.2.2 int Traveller::id

3.4.2.3 string Traveller::name

3.4.2.4 State Traveller::state

3.4.2.5 int Traveller::waitingTime

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

- Traveller.hpp

3.5 TravellerManager Class Reference

`#include <TravellerManager.hpp>`

Collaboration diagram for TravellerManager:

Public Member Functions

- TravellerManager ()
- void LoadNames (string filename)
- void IncreaseWaitingTimes ()
- Traveller * GetTraveller (int index)

Private Attributes

- Traveller m_passengers [1000]

3.5.1 Constructor & Destructor Documentation

3.5.1.1 TravellerManager::TravellerManager ( ) [inline]

3.5.2 Member Function Documentation

3.5.2.1 Traveller* TravellerManager::GetTraveller (int *index*) [inline]

3.5.2.2 void TravellerManager::IncreaseWaitingTimes ( ) [inline]

3.5.2.3 void TravellerManager::LoadNames (string *filename*) [inline]

3.5.3 Member Data Documentation

3.5.3.1 Traveller TravellerManager::m_passengers[1000] [private]

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

- TravellerManager.hpp

Chapter 4

File Documentation

4.1 Airplane.cpp File Reference

```
#include "Airplane.hpp"
```
Include dependency graph for Airplane.cpp:

4.2 Airplane.hpp File Reference

```
#include <iostream>
#include <string>
#include <cstdlib>
#include <fstream>
#include <stack>
#include <queue>
#include <iomanip>
#include "Traveller.hpp"
#include "DataStructures/Stack.hpp"
```
Include dependency graph for Airplane.hpp: This graph shows which files directly or indirectly include this file:

Classes

- class Airplane

4.3 Airport.cpp File Reference

```
#include "Airport.hpp"
```
Include dependency graph for Airport.cpp:

4.4 Airport.hpp File Reference

```
#include <iostream>
#include <cstdlib>
#include <stack>
#include <queue>
#include <iomanip>
#include "Traveller.hpp"
#include "DataStructures/Queue.hpp"
```

Include dependency graph for Airport.hpp: This graph shows which files directly or indirectly include this file:

Classes

- class Airport

4.5 AirTravelSimulator.cpp File Reference

```
#include "AirTravelSimulator.hpp"
```

Include dependency graph for AirTravelSimulator.cpp:

4.6 AirTravelSimulator.hpp File Reference

```
#include <vector>
#include "TravellerManager.hpp"
#include "Airplane.hpp"
#include "Airport.hpp"
#include "States.hpp"
#include "DataStructures/LinkedList.hpp"
```

Include dependency graph for AirTravelSimulator.hpp: This graph shows which files directly or indirectly include this file:

Classes

- class AirTravelSimulator

4.7 main.cpp File Reference

```
#include <iostream>
#include <cstdlib>
#include <ctime>
#include <iomanip>
#include <cstdio>
#include "AirTravelSimulator.hpp"
```

Include dependency graph for main.cpp:

Functions

- int main ()

4.7.1 Function Documentation

4.7.1.1 int main ( )

4.8 names.txt File Reference

4.9 States.hpp File Reference

This graph shows which files directly or indirectly include this file:

Enumerations

- enum State {
  WAITING, LINEUP, BOARDING, DISEMBARKING,
  FINISHED }

4.9.1 Enumeration Type Documentation

4.9.1.1 enum State

Enumerator

WAITING
LINEUP
BOARDING
DISEMBARKING
FINISHED

4.10 Traveller.hpp File Reference

```
#include <string>
#include "States.hpp"
```

Include dependency graph for Traveller.hpp: This graph shows which files directly or indirectly include this file:

Classes

- struct Traveller

4.11 TravellerManager.hpp File Reference

```
#include <fstream>
#include <string>
#include "Traveller.hpp"
```

Include dependency graph for TravellerManager.hpp: This graph shows which files directly or indirectly include this file:

Classes

- class TravellerManager

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