CS 302 Project 1

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

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le	re is a list of all files with brief descriptions:	
	project1.cpp	ť
	project1.h	1

File Index

Class Documentation

3.1 Employee Class Reference

```
#include ject1.h>
```

Public Member Functions

- void setName (string newName)
- void setEmployeeID (int newEmployeeID)
- void setAge (int newAge)
- void setSalary (double newSalary)
- string getName ()
- int getEmployeeID ()
- int getAge ()
- double getSalary ()

3.1.1 Member Function Documentation

```
3.1.1.1 int Employee::getAge ( )
```

Retrieves the age data member from an employee object.

Parameters

None.

Precondition

None, but caveat emptor - value could be temp or garbage if good data has not yet been entered.

Postcondition

The stored int in the age data member will be returned by the function.

Returns

Int stored in age data member.

3.1.1.2 int Employee::getEmployeeID ()

Retrieves the employeeID data member from an employee object.

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None.

Precondition

None, but caveat emptor - value could be temp or garbage if good data has not yet been entered.

Postcondition

The stored int in the employeeID data member will be returned by the function.

Returns

Int stored in employeeID data member.

3.1.1.3 string Employee::getName ()

Retrieves the name data member from an employee object.

Parameters

None.

Precondition

None, but caveat emptor - value could be temp or garbage if good data has not yet been entered.

Postcondition

The stored string in the name data member will be returned by the function.

Returns

String stored in name data member.

3.1.1.4 double Employee::getSalary ()

Retrieves the salary data member from an employee object.

Parameters

None.

Precondition

None, but caveat emptor - value could be temp or garbage if good data has not yet been entered.

Postcondition

The stored double in the salary data member will be returned by the function.

Returns

Double stored in salary data member.

3.1.1.5 void Employee::setAge (int newAge)

Sets the age data member for an employee object. Use in conjunction with file read-in to load the employee data.

Parameters

newAge	The age to be stored.
--------	-----------------------

Precondition

None.

Postcondition

The parameter int will be stored as the age data member of the object.

Returns

None.

3.1.1.6 void Employee::setEmployeeID (int newEmployeeID)

Sets the employeeID data member for an employee object. Use in conjunction with file read-in to load the employee data.

Parameters

newEmployeeID	The employeeID to be stored.
---------------	------------------------------

Precondition

None.

Postcondition

The parameter int will be stored as the employeeID data member of the object.

Returns

None.

3.1.1.7 void Employee::setName (string newName)

Sets the name data member for an employee object. Use in conjunction with file read-in to load the employee data. Parameters

newName The name to be stored.	

Precondition

None.

Postcondition

The parameter string will be stored as the name data member of the object.

Returns

None.

3.1.1.8 void Employee::setSalary (double newSalary)

Sets the salary data member for an employee object. Use in conjunction with file read-in to load the employee data.

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Parameters

newSalary	The salary to be stored.

Precondition

None.

Postcondition

The parameter double will be stored as the salary data member of the object.

Returns

None.

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

- · project1.h
- project1.cpp

3.2 EmployeeContainer Class Reference

#include <project1.h>

Public Member Functions

- int getNumEmployees ()
- double getAvgSalary ()
- int getAvgAge ()
- void sortByID ()
- bool addEmployee (Employee targetEmployee)
- bool exportEmployeeData ()

3.2.1 Member Function Documentation

3.2.1.1 bool EmployeeContainer::addEmployee (Employee targetEmployee)

Attempts to add a new employee object to the first empty element of the EmployeeContainer.

Parameters

targetEmployee	The employee to be stored.	
		,

Precondition

None.

Postcondition

If successful, the newEmployee object will be stored in the first empty element of the container and num-Employees will be incremented by 1. Otherwise, the container is unchanged and numEmployees remains the same.

Returns

True if the addition was successful, or false otherwise (eg if the container was full).

3.2.1.2	bool Em	ployeeCo	ontainer::ex	portEmplo	veeData (()	1
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Prints stored employee information to console from the first stored element to the last. Note that if the data has been previously sorted, this will print employee's data to the console in order of ascending employeeID. If the data

has not been sorted, this will print employee's data to the console in order of ascending employee'D. If the data has not been sorted, employee data will be printed in the order in which it was entered into the container. In other words, in order to print sorted data, use the sortByID method before this one.
Parameters
None.
Precondition
None.
Postcondition
If successful, the information will be printed to the console. Otherwise, nothing will be printed.
Returns
True if data was printed, or false otherwise (eg if the container was empty and there was nothing to print).
3.2.1.3 int EmployeeContainer::getAvgAge()
Calculates the average age of the employee objects stored in the EmployeeContainer.
Parameters
None.
Precondition
None.
Postcondition
The calculated age will be returned by the function. If the container is empty, the function will return -1.
Returns
The calculated average of the ages of the employees stored in the EmployeeContainer, or -1 if the container is empty.
3.2.1.4 double EmployeeContainer::getAvgSalary ()
Calculates the average of the salaries of the employee objects stored in the EmployeeContainer.
Parameters
None.
Precondition

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None.

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Postcondition

The calculated value will be returned by the function. If the container is empty, the function will return -1.

Returns

The calculated average of the employee salaries stored in the EmployeeContainer, or -1 if the container is empty.

3.2.1.5 int EmployeeContainer::getNumEmployees ()

Returns the number of employee objects stored in the EmployeeContainer.

Parameters

None.

Precondition

None.

Postcondition

The stored int in the numEmployees data member will be returned by the function. If the container is empty, the function will return 0.

Returns

Int stored in numEmployees data member.

3.2.1.6 void EmployeeContainer::sortByID ()

Sorts the employees within the EmployeeContainer in ascending order of employeeID in subsequent elements of the container (ie employee with the lowest employeeID in the first element, employee with the highest employeeID in the final used element).

Parameters

None.

Precondition

None.

Postcondition

The employees will be sorted within the EmployeeContainer. If the number of employees is less than or equal to 1, no sorting can be done and no action will be performed.

Returns

None.

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

- · project1.h
- project1.cpp

File Documentation

4.1 project1.cpp File Reference

```
#include <iostream>
#include <fstream>
#include <string>
#include "project1.h"
```

4.1.1 Detailed Description

CS 302 Project 1 - code shell for use in employee data sorting/analyzing program

Author

Patrick Austin

Date

1/28/2015

4.2 project1.h File Reference

```
#include <string>
```

Classes

- class Employee
- class EmployeeContainer

4.2.1 Detailed Description

CS 302 Project 1 - code shell for use in employee data sorting/analyzing program

Author

Patrick Austin

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Date

1/28/2015

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