lab3

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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 files with brief descriptions:

Chapter 3

Class Documentation

3.1 housing_estate Struct Reference

Public Member Functions

- housing_estate ()
- housing_estate (int numberHouse, int numberApartment, float square, string name)
- bool operator> (housing_estate &h2)
- bool operator>= (housing_estate &h2)
- bool operator< (housing_estate &h2)
- bool operator<= (housing_estate &h2)

Public Attributes

- int numberHouse
- int numberApartment
- int number_of_rooms
- float square
- string name
- int number_of_residents
- int hash

3.1.1 Constructor & Destructor Documentation

3.1.1.1 housing_estate() [1/2]

```
housing_estate::housing_estate ( )  [inline]
```

3.1.1.2 housing_estate() [2/2]

```
housing_estate::housing_estate (
            int numberHouse,
            int numberApartment,
            float square,
            string name )  [inline]
```

3.1.2 Member Function Documentation

3.1.2.1 operator<()

```
bool housing_estate::operator< (
            housing_estate & h2 )  [inline]
```

3.1.2.2 operator<=()

```
bool housing_estate::operator<= (
            housing_estate & h2 )  [inline]
```

3.1.2.3 operator>()

```
bool housing_estate::operator> (
            housing_estate & h2 )  [inline]
```

3.1.2.4 operator>=()

```
bool housing_estate::operator>= (
            housing_estate & h2 )  [inline]
```

3.1.3 Member Data Documentation

3.1.3.1 hash

```
int housing_estate::hash
```

3.1.3.2 name

```
string housing_estate::name
```

3.1.3.3 number_of_residents

```
int housing_estate::number_of_residents
```

3.1.3.4 number_of_rooms

```
int housing_estate::number_of_rooms
```

3.1.3.5 numberApartment

```
int housing_estate::numberApartment
```

3.1.3.6 numberHouse

```
int housing_estate::numberHouse
```

3.1.3.7 square

```
float housing_estate::square
```

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

- D://main.cpp

3.2 HousingEstateHashTable Class Reference

Public Member Functions

- HousingEstateHashTable ()
- HousingEstateHashTable (const int a)
- void addElement (housing_estate &object)
- int countCollisions () const
- void findElement (const std::string &name) const
- long long curHash (const housing_estate &object) const
- long long curHash (const std::string &name) const

3.2.1 Constructor & Destructor Documentation

3.2.1.1 HousingEstateHashTable() [1/2]

```
HousingEstateHashTable::HousingEstateHashTable ( )  [inline]
```

3.2.1.2 HousingEstateHashTable() [2/2]

```
HousingEstateHashTable::HousingEstateHashTable (
            const int a )  [inline]
```

3.2.2 Member Function Documentation

3.2.2.1 addElement()

```
void HousingEstateHashTable::addElement (
            housing_estate & object )  [inline]
```

3.2.2.2 countCollisions()

```
int HousingEstateHashTable::countCollisions ( ) const  [inline]
```

3.2.2.3 curHash() [1/2]

```
long long HousingEstateHashTable::curHash (
            const housing_estate & object ) const  [inline]
```

3.2.2.4 curHash() [2/2]

```
long long HousingEstateHashTable::curHash (
            const std::string & name ) const  [inline]
```

3.2.2.5 findElement()

```
void HousingEstateHashTable::findElement (
            const std::string & name ) const  [inline]
```

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

- D://main.cpp

Chapter 4

File Documentation

4.1 D://main.cpp File Reference

```
#include <iostream>
#include <fstream>
#include <string.h>
#include <stdio.h>
#include <vector>
#include <sstream>
#include <chrono>
#include <iterator>
#include <algorithm>
#include <map>
#include <set>
```

Classes

- struct housing_estate
- class HousingEstateHashTable

Functions

- long long hashFunctionSimple (string str)
- long long hashFunctionComplicated (string str)
- std::ostream & operator<< (std::ostream &os, const housing_estate &h)
- template<class T >
  std::vector< int > LinearSearch (vector< T > &a, int size, string key)
- template<class T >
  int partition (vector< T > &nums, int low, int high)
- template<class T >
  void quickSort (vector< T > &nums, int low, int high)
- template<class T >
  std::pair< int, int > BinSearch (vector< T > a, string key, int low, int high)
- void File (string file, int method, string key)
- int main ()

Variables

- int meth =1

4.1.1 Function Documentation

4.1.1.1 BinSearch()

```
template<class T >
std::pair< int, int > BinSearch (
             vector< T > a,
             string key,
             int low,
             int high )
```

4.1.1.2 File()

```
void File (
             string file,
             int method,
             string key )
```

4.1.1.3 hashFunctionComplicated()

```
long long hashFunctionComplicated (
             string str )
```

4.1.1.4 hashFunctionSimple()

```
long long hashFunctionSimple (
             string str )
```

4.1.1.5 LinearSearch()

```
template<class T >
std::vector< int > LinearSearch (
             vector< T > & a,
             int size,
             string key )
```

4.1.1.6 main()

```
int main ( )
```

4.1.1.7 operator<<()

```
std::ostream & operator<< (
            std::ostream & os,
            const housing_estate & h )
```

4.1.1.8 partition()

```
template<class T >
int partition (
            vector< T > & nums,
            int low,
            int high )
```

4.1.1.9 quickSort()

```
template<class T >
void quickSort (
            vector< T > & nums,
            int low,
            int high )
```

4.1.2 Variable Documentation

4.1.2.1 meth

```
int meth =1
```

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