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:

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2 Class Index

Chapter 2

File Index

2.1 File List

Here is a list of all files with brief descriptions:

entry.cpp	13
entry.h	14
hash_table.cpp	15
hash_table.h	17
main.cpp	20

File Index

Chapter 3

Class Documentation

3.1 Entry Class Reference

```
CSV.
#include <entry.h>
```

Public Member Functions

- Entry ()
- Entry (string fio, string street, int home, int flat, int birth)
- Entry (string fio, string street, int home, int flat, int birth, uint64_t hash)
- void addHash (uint64_t hash)
- bool operator> (Entry &second)
- bool operator< (Entry &second)
- bool operator>= (Entry &second)
- bool operator<= (Entry &second)

Public Attributes

- string fio
- string street
- int home
- int flat
- int birth
- uint64_t hash

3.1.1 Detailed Description

```
CSV.
Author

Version
1.0

Date
2023
```

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3.1.2 Constructor & Destructor Documentation

3.1.2.1 Entry() [1/3]

```
Entry::Entry ( )
```

3.1.2.2 Entry() [2/3]

3.1.2.3 Entry() [3/3]

```
Entry::Entry (
    string fio,
    string street,
    int home,
    int flat,
    int birth,
    uint64_t hash)
```

3.1.3 Member Function Documentation

3.1.3.1 addHash()

3.1.3.2 operator<()

3.1.3.3 operator<=()

3.1.3.4 operator>()

3.1.3.5 operator>=()

3.1.4 Member Data Documentation

3.1.4.1 birth

int Entry::birth

3.1.4.2 fio

string Entry::fio

3.1.4.3 flat

int Entry::flat

3.1.4.4 hash

uint64_t Entry::hash

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3.1.4.5 home

```
int Entry::home
```

3.1.4.6 street

```
string Entry::street
```

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

- entry.h
- entry.cpp

3.2 hash_table Class Reference

```
#include <hash_table.h>
```

Public Member Functions

- hash_table ()
- hash_table (const int a)
- void addElement (const Entry &object)
- int countCollisions () const
- void findElement (const string &name) const
- uint64_t curHash (const Entry &object) const
- uint64_t curHash (const string &name) const

3.2.1 Detailed Description

Author

Version

1.0

Date

2023

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3.2.2 Constructor & Destructor Documentation

3.2.2.1 hash_table() [1/2]

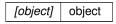
```
hash_table::hash_table ( ) [inline]
```

3.2.2.2 hash_table() [2/2]

3.2.3 Member Function Documentation

3.2.3.1 addElement()

Parameters



Returns

3.2.3.2 countCollisions()

```
int hash_table::countCollisions ( ) const
```

Returns

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3.2.3.3 curHash() [1/2]

. 1-hashWithPower 2-rot13 3-rs 4-hashWithSum

Parameters

```
[object] object
```

Returns

3.2.3.4 curHash() [2/2]

. 1-hashWithPower 2-rot13 3-rs 4-hashWithSum

Parameters

[name]	name

Returns

3.2.3.5 findElement()

```
void hash_table::findElement ( const\ string\ \&\ name\ )\ const
```

Parameters

[name]	name

Returns

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

- hash_table.h
- hash_table.cpp

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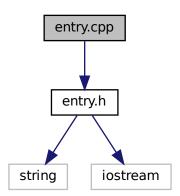
Chapter 4

File Documentation

4.1 CMakeLists.txt File Reference

4.2 entry.cpp File Reference

#include "entry.h"
Include dependency graph for entry.cpp:



Functions

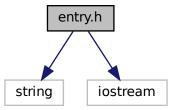
• ostream & operator<< (ostream &out, const Entry &entry)

4.2.1 Function Documentation

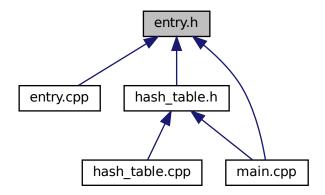
4.2.1.1 operator<<()

4.3 entry.h File Reference

```
#include <string>
#include <iostream>
Include dependency graph for entry.h:
```



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



Classes

• class Entry

Functions

ostream & operator<< (ostream &out, const Entry &entry)

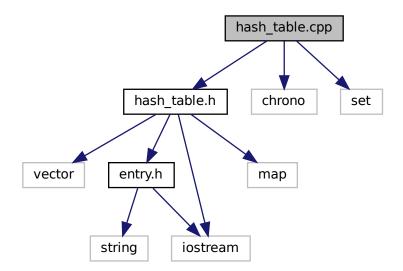
4.3.1 Function Documentation

4.3.1.1 operator << ()

4.4 hash_table.cpp File Reference

```
#include "hash_table.h"
#include <chrono>
#include <set>
```

Include dependency graph for hash_table.cpp:



Functions

- void countUingeHash (const vector< Entry > &vec)
- uint64_t simpleHash (const string &s)
- uint64_t hardHash (const string &s)
- uint64_t hardHash2 (const string &s)
- uint64_t verySimpleHash (const string &s)

4.4.1 Function Documentation

4.4.1.1 countUinqeHash()

```
void countUinqeHash ( \mbox{const vector} < \mbox{Entry} \ > \mbox{\&} \ \mbox{\it vec} \ )
```

Parameters



Returns

4.4.1.2 hardHash()

```
uint64_t hardHash ( const string & s )
```

Returns

4.4.1.3 hardHash2()

```
uint64_t hardHash2 ( const string & s )
```

Returns

2

4.4.1.4 simpleHash()

```
uint64_t simpleHash ( {\rm const\ string\ \&\ }s\ )
```

Returns

4.4.1.5 verySimpleHash()

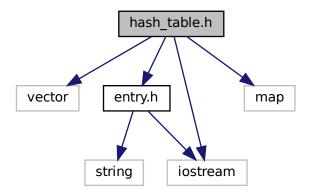
```
uint64_t verySimpleHash ( {\rm const\ string\ \&\ }s\ )
```

Returns

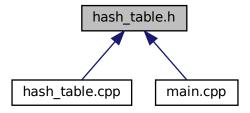
4.5 hash_table.h File Reference

```
#include <vector>
#include "entry.h"
#include <iostream>
#include <map>
```

Include dependency graph for hash_table.h:



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



Classes

class hash_table

Functions

- void countUinqeHash (const vector< Entry > &vec)
- uint64_t simpleHash (const string &s)
- uint64_t hardHash (const string &s)
- uint64_t hardHash2 (const string &s)
- uint64_t verySimpleHash (const string &s)

Variables

• const int magicNumber = 31

4.5.1 Function Documentation

4.5.1.1 countUinqeHash()

```
void countUinqeHash ( \mbox{const vector} < \mbox{Entry} \ > \mbox{\&} \ \mbox{\it vec} \ )
```

Parameters

[vec]	vec

Returns

4.5.1.2 hardHash()

```
uint64_t hardHash ( {\rm const\ string\ \&\ }s\ )
```

Returns

4.5.1.3 hardHash2()

```
uint64_t hardHash2 ( {\tt const\ string\ \&\ s\ )}
```

Returns

2

4.5.1.4 simpleHash()

```
uint64_t simpleHash ( {\rm const\ string\ \&\ }s\ )
```

Returns

4.5.1.5 verySimpleHash()

```
uint64_t verySimpleHash ( {\tt const\ string\ \&\ s\ )}
```

Returns

4.5.2 Variable Documentation

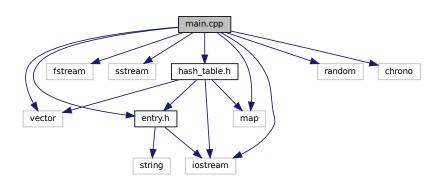
4.5.2.1 magicNumber

```
const int magicNumber = 31
```

4.6 main.cpp File Reference

```
#include <iostream>
#include <vector>
#include <fstream>
#include <sstream>
#include "entry.h"
#include "hash_table.h"
#include <random>
#include <map>
#include <chrono>
```

Include dependency graph for main.cpp:



Functions

- void parseFromFile (vector< Entry > &data, string path)
- void handleFile (string fileName, int hashAlgo, const string &name)
- int main ()

4.6.1 Function Documentation

4.6.1.1 handleFile()

```
void handleFile (
    string fileName,
    int hashAlgo,
    const string & name )
```

Parameters

[fileName]	fileName , .
[hashAlgo]	hashAlgo
[name]	name

Returns

4.6.1.2 main()

```
int main ( )
```

4.6.1.3 parseFromFile()

Parameters

[data]	data
[path]	path

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Returns

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