Report to LW1

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Class Index

1.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:	
Child	7

4 Class Index

File Index

2.1 File List

Here is a list of all files with brief descriptions:	
main.cpp	11

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Class Documentation

3.1 Child Struct Reference

Public Member Functions

• Child (int year, int squad, string name, string date, int shift)

Public Attributes

- int year
- int squad
- string name
- string date
- int shift

Friends

```
• bool operator== (const Child &a, const Child &b)
```

- bool operator< (const Child &a, const Child &b)
- bool operator<= (const Child &a, const Child &b)
- bool operator> (const Child &a, const Child &b)
- bool operator>= (const Child &a, const Child &b)
- ostream & operator<< (ostream &os, const Child &a)

3.1.1 Constructor & Destructor Documentation

3.1.1.1 Child()

```
Child::Child (
    int year,
    int squad,
    string name,
    string date,
    int shift ) [inline]
```

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3.1.2 Friends And Related Function Documentation

3.1.2.1 operator<

3.1.2.2 operator <<

3.1.2.3 operator<=

3.1.2.4 operator==

3.1.2.5 operator>

3.1.2.6 operator>=

3.1 Child Struct Reference 9

3.1.3 Member Data Documentation

3.1.3.1 date

string Child::date

3.1.3.2 name

string Child::name

3.1.3.3 shift

int Child::shift

3.1.3.4 squad

int Child::squad

3.1.3.5 year

int Child::year

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

• main.cpp

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File Documentation

4.1 main.cpp File Reference

```
#include <iostream>
#include <ctime>
#include <fstream>
#include <vector>
#include <chrono>
#include <string>
```

Classes

struct Child

Functions

- string randomString (const int len)
- string randomDate (int minY, int maxY)
- void createInfo ()
- vector< vector< Child >> readInfo ()
- vector< Child > selectSort (vector< Child > vec)
- vector< Child > insertSort (vector< Child > vec)
- vector< Child > shakerSort (vector< Child > vec)
- void writeOutput (string title, vector< vector< Child >> &res)
- void writeTime (string title, vector < chrono::steady_clock::time_point > time)
- int main ()

Variables

```
• string inputFile = "info.txt"
```

- string outputFile = "output.txt"
- string timeStampsFile = "timestamps.txt"
- int dimsNum = 7
- int dims [7] = { 100, 1000, 2000, 5000, 10000, 25000, 100000 }

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4.1.1 Function Documentation

4.1.1.1 createInfo()

```
void createInfo ( )
```

4.1.1.2 insertSort()

```
vector< Child > insertSort ( \label{eq:vector} \mbox{vector} < \mbox{Child} \ > \mbox{\it vec} \ )
```

4.1.1.3 main()

```
int main ( )
```

4.1.1.4 randomDate()

```
string randomDate (
    int minY,
    int maxY )
```

4.1.1.5 randomString()

```
string randomString ( {\tt const\ int\ } \mathit{len}\ )
```

4.1.1.6 readInfo()

```
vector< vector< Child > > readInfo ( )
```

4.1.1.7 selectSort()

```
vector< Child > selectSort ( \label{eq:vector} \mbox{vector} < \mbox{Child} \ > \mbox{\it vec} \ )
```

4.1.1.8 shakerSort()

```
vector< Child > shakerSort (  vector < Child > \textit{vec} \ )
```

4.1.1.9 writeOutput()

```
void writeOutput ( string \ title, vector < \ vector < \ Child >> \& \ res \ )
```

4.1.1.10 writeTime()

```
void writeTime ( string \ title, vector < chrono::steady\_clock::time\_point > time )
```

4.1.2 Variable Documentation

4.1.2.1 dims

```
int dims[7] = { 100, 1000, 2000, 5000, 10000, 25000, 100000 }
```

4.1.2.2 dimsNum

```
int dimsNum = 7
```

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4.1.2.3 inputFile

```
string inputFile = "info.txt"
```

4.1.2.4 outputFile

```
string outputFile = "output.txt"
```

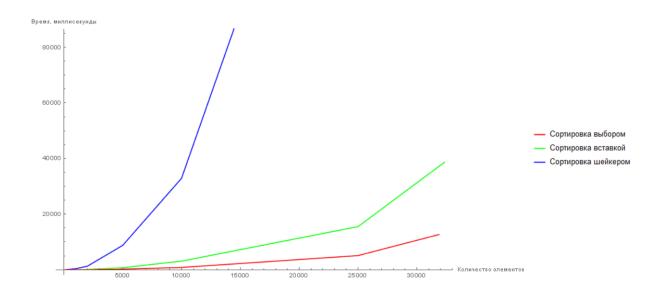
4.1.2.5 timeStampsFile

```
string timeStampsFile = "timestamps.txt"
```

Repository reference

Ref: https://github.com/EvgenijCS202/MP_1

Graphics



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