

My Project

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1 Class Index

1.1 Class List

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

BinaryTree	2
BinaryTree::Node	3
Teacher	4

2 File Index

2.1 File List

Here is a list of all files with brief descriptions:

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3 Class Documentation

3.1 BinaryTree Class Reference

Classes

- struct [Node](#)

Public Member Functions

- [BinaryTree](#) ()
- [BinaryTree](#) (const vector< [Teacher](#) > &teachers)
- void [insert](#) (const [Teacher](#) &obj)
- [Node](#) * [insertRecursively](#) ([Node](#) *node, const [Teacher](#) &obj)
- [Node](#) * [search](#) (const std::string &key)

Private Member Functions

- [Node](#) * [searchRecursively](#) ([Node](#) *node, const std::string &key)

Private Attributes

- [Node](#) * [root](#)

3.1.1 Constructor & Destructor Documentation

BinaryTree() [1/2]

```
BinaryTree::BinaryTree ( ) [inline]
```

BinaryTree() [2/2]

```
BinaryTree::BinaryTree (
    const vector< Teacher > & teachers ) [inline]
```

3.1.2 Member Function Documentation

insert()

```
void BinaryTree::insert (
    const Teacher & obj ) [inline]
```

insertRecursively()

```
Node * BinaryTree::insertRecursively (
    Node * node,
    const Teacher & obj ) [inline]
```

search()

```
Node * BinaryTree::search (
    const std::string & key ) [inline]
```

searchRecursively()

```
Node * BinaryTree::searchRecursively (
    Node * node,
    const std::string & key ) [inline], [private]
```

3.1.3 Member Data Documentation

root

```
Node* BinaryTree::root [private]
```

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

- C:/Users/Turik/CLionProjects/Test/c.cpp

3.2 BinaryTree::Node Struct Reference

Public Member Functions

- [Node](#) ([Teacher](#) obj)

Public Attributes

- [Teacher](#) data
- [Node](#) * left
- [Node](#) * right

3.2.1 Constructor & Destructor Documentation

Node()

```
BinaryTree::Node::Node (
    Teacher obj ) [inline]
```

3.2.2 Member Data Documentation

data

`Teacher` `BinaryTree::Node::data`

left

`Node*` `BinaryTree::Node::left`

right

`Node*` `BinaryTree::Node::right`

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

- `C:/Users/Turik/CLionProjects/Test/c.cpp`

3.3 Teacher Struct Reference

Public Member Functions

- `bool operator==` (`const Teacher &teacher`)
- `bool operator<` (`const Teacher &teacher`)
- `bool operator<=` (`const Teacher &teacher`)
- `bool operator>` (`const Teacher &teacher`)
- `bool operator>=` (`const Teacher &teacher`)

Public Attributes

- `string name` = "Surname_Name_MiddleName"
- `string faculty` = "Faculty"
- `string academic_title` = "Title"
- `string degree` = "Degree"

Friends

- `ostream & operator<<` (`ostream &os, const Teacher &teacher`)

3.3.1 Member Function Documentation

`operator<()`

```
bool Teacher::operator< (  
    const Teacher & teacher ) [inline]
```

operator<=()

```
bool Teacher::operator<= (
    const Teacher & teacher ) [inline]
```

operator==()

```
bool Teacher::operator== (
    const Teacher & teacher ) [inline]
```

operator>()

```
bool Teacher::operator> (
    const Teacher & teacher ) [inline]
```

operator>=()

```
bool Teacher::operator>= (
    const Teacher & teacher ) [inline]
```

3.3.2 Friends And Related Symbol Documentation**operator<<**

```
ostream & operator<< (
    ostream & os,
    const Teacher & teacher ) [friend]
```

3.3.3 Member Data Documentation**academic_title**

```
string Teacher::academic_title = "Title"
```

degree

```
string Teacher::degree = "Degree"
```

faculty

```
string Teacher::faculty = "Faculty"
```

name

```
string Teacher::name = "Surname_Name_MiddleName"
```

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

- C:/Users/Turik/CLionProjects/Test/c.cpp

4 File Documentation

4.1 C:/Users/Turik/CLionProjects/Test/c.cpp File Reference

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

Classes

- struct [Teacher](#)
- class [BinaryTree](#)
- struct [BinaryTree::Node](#)

Functions

- ostream & [operator<<](#) (ostream &os, const [Teacher](#) &teacher)
- void [bubbleSort](#) (vector< [Teacher](#) > &teachers)
- void [quickSort](#) (vector< [Teacher](#) > &teachers, int start, int end)
- void [mergeSort](#) (vector< [Teacher](#) > &teachers, int l, int r)
- vector< [Teacher](#) > [readFile](#) (string file, int size)
- int [main](#) ()

4.1.1 Function Documentation

bubbleSort()

```
void bubbleSort (
    vector< Teacher > & teachers )
```

main()

```
int main ( )
```

mergeSort()

```
void mergeSort (
    vector< Teacher > & teachers,
    int l,
    int r )
```

operator<<()

```
ostream & operator<< (
    ostream & os,
    const Teacher & teacher )
```

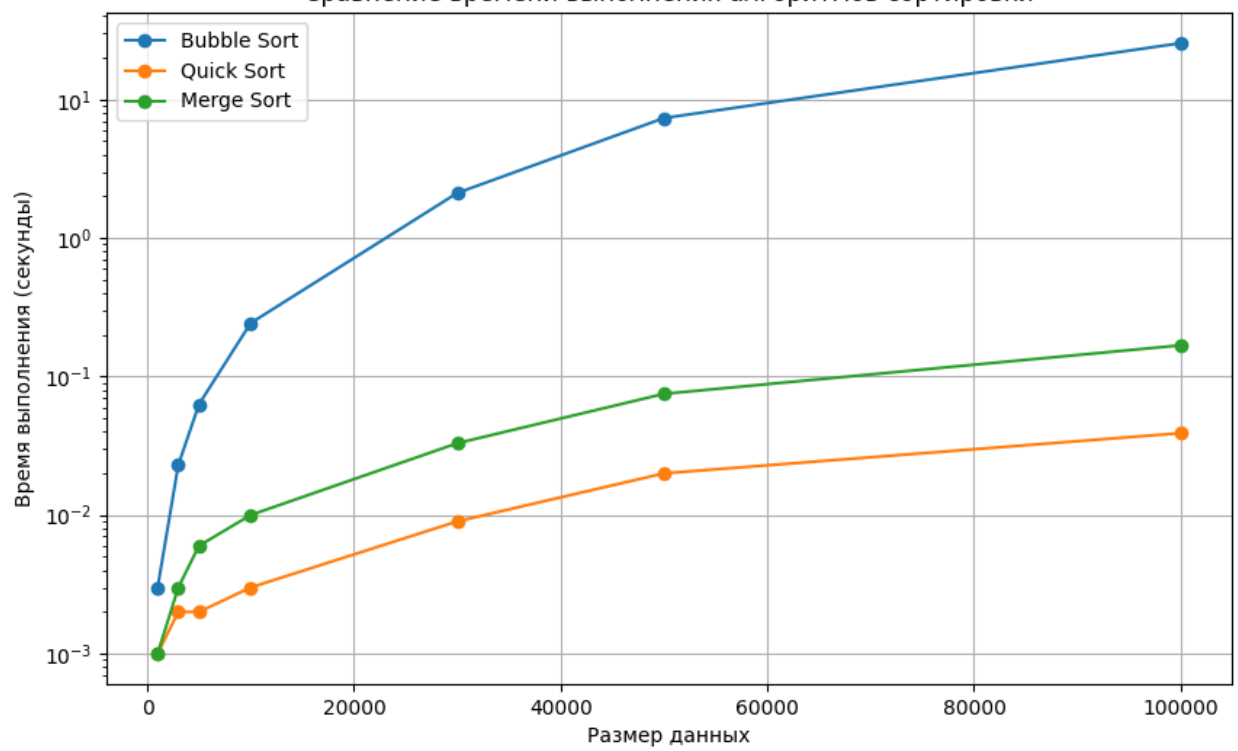
quickSort()

```
void quickSort (
    vector< Teacher > & teachers,
    int start,
    int end )
```

readFile()

```
vector< Teacher > readFile (
    string file,
    int size )
```


Сравнение времени выполнения алгоритмов сортировки



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