OOP LAB 1

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Chapter 1

OOP LAB 1

A simple CLI tool for transforming arrays/sequences to YAML strings and backwards.

This is first lab in MEPHI's OOP course. Specifications can be seen in specifications.pdf file.

1.1 Requirements

build-essential (cmake, g++)

For generating documentation install: doxygen, latexmk.

1.2 Installation

Clone this repository to your computer.

```
git clone ...
```

1.3 Usage

1.3.1 Build

Run build.sh file to complie and run programm.

```
./build.sh 2 # build and run
./build.sh 3 # build and run with valgring
./build.sh 6 # for doxygen assemblage. After completion doxygen files can be found in "docs" directory.
```

1.3.2 Interface

After running build.sh follow menus' instructions. This tool has two operation mods: to YAML string (1) and from YAML string (2). Third option in menu is for changing function that is being called in menu options (more details in specification file).

1.4 Tests

This lab work can be tested with google tests, which are in a "tests" folder.

To run tests you need to install: libgtest-dev, libgmock-dev.

Use build.sh to compile and run tests:
```
./build.sh 1 # build and run tests
```

To check coverage you can use build.sh with 4 (for task library) and 5 (for dialog functions):
```
./build.sh 4 # Generate coverage files for task directory
./build.sh 5 # Generate coverage files for dialog directory
```

After running build.sh you can find coverage files in "COVERAGES" directory.

1.5 License

MIT

Chapter 2

File Index

2.1 File List

Here is a list of all documented files with brief descriptions:

Chapter 3

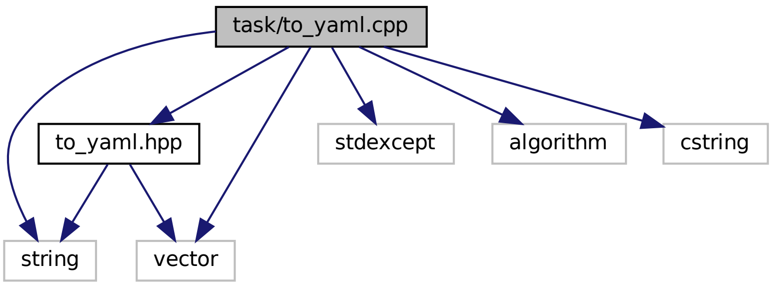
File Documentation

3.1 task/to_yaml.cpp File Reference

asdfadsgsdadfdsa

```
#include "to_yaml.hpp"
#include <stdexcept>
#include <algorithm>
#include <string>
#include <vector>
#include <cstring>
```

Include dependency graph for to_yaml.cpp:



Functions

- bool check_format (std::string_view name)

  adfasdf
- size_t to_size (int num)

  asdfasdgasdg
- char $*$ to_yaml (const std::vector$<$ int $>$ &array, const char $*$name)

  this is certified hood functions
- char $*$ **to_yaml** (const std::vector$<$ int $>$ &array, const char $*$name, size_t in_size, size_t &out_size)
- std::string **to_yaml** (const std::vector$<$ int $>$ &array, std::string_view name)

3.1.1 Detailed Description

asdfadsgsdadfdsa

Author

your name (you@domain.com)

Version

0.1

Date

2024-09-19

Copyright

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3.1.2 Function Documentation

3.1.2.1 check_format()

```
bool check_format (
            std::string_view name )
```

adfasdf

Parameters

name	

Returns

true

false

Definition at line 27 of file to_yaml.cpp.

```
                                    {
    if (name.size() == 0) return false;
    if (name.find(" ") != std::string::npos) return false;
    if (name.find("\t") != std::string::npos) return false;
    if (!isalnum(name.at(0))) return false;
    return true;
}
```

3.1.2.2 to_size()

```
size_t to_size (
              int num )
```

asdfasdgasdg

Parameters

num	

Returns

size_t

Definition at line 40 of file to_yaml.cpp.

```
                             {
    size_t ans = 1;
    if (num < 0){
        ans += 1;
        num *= (-1);
    }
    while (num > 9){
        num /= 10;
        ans += 1;
    }
    return ans;
}
```

3.1.2.3 to_yaml()

```
char* to_yaml (
              const std::vector< int > & array,
              const char * name )
```

this is certified hood functions

Parameters

array	
name	

Returns

char* null-terminated string in YAML format

Exceptions

invalid_argument	if name is not in YAML format

Definition at line 60 of file to_yaml.cpp.

```
                                                                     {
    size_t out_size;
    char* ans = to_yaml(array, name, std::strlen(name)+1, out_size);
    return ans;
}
```

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