

# My Project

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# Chapter 1

## README

//UŽDUOTIS// Vietoje klasės Studentai reikia sukurti dvi: bazinę (abstrakti) klasę, skirtą bendrai aprašyti žmogų ir tuomet iš jos išvestinę (derived) klasę - [Studentas](#).

Abstrakčioji klasė - tai negalima sukurti žmogaus tipo objektų, o tik objektus gautus iš išvestinių klasių (pvz↔ : [Studentas](#))

Klasė [Zmogus](#):

Pataisyta klasė [Studentas](#):

Patikriname, ar programa veikia:

Patikriname, ar veikia įvestis/išvestis:

Pasirenku 1 - duomenų įvedimas ranka:

Pasirenku 5 - duomenų nuskaitymą iš failo:

Viskas veikia!





## Chapter 2

# Hierarchical Index

### 2.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

duomenys . . . . .	9
Zmogus . . . . .	16
Studentas . . . . .	10



## Chapter 3

# Class Index

### 3.1 Class List

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

<a href="#">duomenys</a>	9
<a href="#">Studentas</a>	10
<a href="#">Zmogus</a>	16



# Chapter 4

## File Index

### 4.1 File List

Here is a list of all files with brief descriptions:

C:/Darbai/2_OP/2_OP/ <a href="#">functions.cpp</a> . . . . .	19
C:/Darbai/2_OP/2_OP/ <a href="#">functions.h</a> . . . . .	21
C:/Darbai/2_OP/2_OP/ <a href="#">masyvai.cpp</a> . . . . .	24
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## Chapter 5

# Class Documentation

### 5.1 duomenys Struct Reference

#### Public Member Functions

- [duomenys\(\)](#)

#### Public Attributes

- string [vard](#)
- string [pav](#)
- int \* [nd](#)
- int [egzaminas](#)
- int [nd\\_kiekis](#)
- double [gal\\_vid](#)
- double [gal\\_bal](#)
- double [gal\\_med](#)

#### 5.1.1 Constructor & Destructor Documentation

##### 5.1.1.1 duomenys()

```
duomenys::duomenys ( ) [inline]
```

#### 5.1.2 Member Data Documentation

##### 5.1.2.1 egzaminas

```
int duomenys::egzaminas
```

##### 5.1.2.2 gal\_bal

```
double duomenys::gal_bal
```

### 5.1.2.3 gal\_med

```
double duomenys::gal_med
```

### 5.1.2.4 gal\_vid

```
double duomenys::gal_vid
```

### 5.1.2.5 nd

```
int* duomenys::nd
```

### 5.1.2.6 nd\_kiekis

```
int duomenys::nd_kiekis
```

### 5.1.2.7 pav

```
string duomenys::pav
```

### 5.1.2.8 vard

```
string duomenys::vard
```

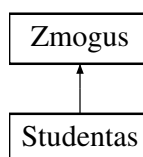
The documentation for this struct was generated from the following file:

- C:/Darbai/2\_OP/2\_OP/[masyvai.cpp](#)

## 5.2 Studentas Class Reference

```
#include <studentas.h>
```

Inheritance diagram for Studentas:





### Public Member Functions

- bool `operator<` (const `Studentas` &other) const
- `Studentas` ()
- `Studentas` (const std::string &vardas, const std::string &pav, int egzaminas, const std::vector< int > &nd, int nd\_kiekis, double gal\_vid, double gal\_med)
- `~Studentas` ()
- `Studentas` (const `Studentas` &other)
- `Studentas` & `operator=` (const `Studentas` &other)
- `Studentas` (`Studentas` &&other) noexcept
- `Studentas` & `operator=` (`Studentas` &&other) noexcept
- const std::string & `getVarDas` () const override
- const std::string & `getPavarde` () const override
- const std::vector< int > & `getNd` () const
- int `getEgzaminas` () const
- double `getGalutinisVid` () const
- double `getGalutinisBal` () const
- double `getGalutineMed` () const
- int `getNdKiekis` () const
- void `setVardas` (const std::string &vardas) override
- void `setPavarde` (const std::string &pavarde) override
- void `setNd` (const std::vector< int > &nd)
- void `setEgzaminas` (int egzaminas)
- void `setGalutinisVid` (double gal\_vid)
- void `setGalutinisBal` (double gal\_bal)
- void `setGalutineMed` (double gal\_med)
- void `setNdKiekis` (int nd\_kiekis)
- void `addnd` (int nd)
- void `skaiciuotiGalutiniBal` ()

### Private Attributes

- std::vector< int > `nd_`
- int `egzaminas_`
- int `nd_kiekis_`
- double `gal_vid_`
- double `gal_bal_`
- double `gal_med_`

### Friends

- std::istream & `operator>>` (std::istream &in, `Studentas` &studentas)
- std::ostream & `operator<<` (std::ostream &out, const `Studentas` &studentas)

### Additional Inherited Members

### Protected Member Functions inherited from `Zmogus`

- `Zmogus` ()=default
- `Zmogus` (const std::string &vardas, const std::string &pav)
- virtual `~Zmogus` ()

## Protected Attributes inherited from [Zmogus](#)

- std::string [vardas\\_](#)
- std::string [pav\\_](#)

## 5.2.1 Constructor & Destructor Documentation

### 5.2.1.1 Studentas() [1/4]

```
Studentas::Studentas ( ) [inline]
```

### 5.2.1.2 Studentas() [2/4]

```
Studentas::Studentas (
    const std::string & vardas,
    const std::string & pav,
    int egzaminas,
    const std::vector< int > & nd,
    int nd_kiekis,
    double gal_vid,
    double gal_med ) [inline]
```

### 5.2.1.3 ~Studentas()

```
Studentas::~~Studentas ( ) [inline]
```

### 5.2.1.4 Studentas() [3/4]

```
Studentas::Studentas (
    const Studentas & other ) [inline]
```

### 5.2.1.5 Studentas() [4/4]

```
Studentas::Studentas (
    Studentas && other ) [inline], [noexcept]
```

## 5.2.2 Member Function Documentation

### 5.2.2.1 addnd()

```
void Studentas::addnd (
    int nd ) [inline]
```

### 5.2.2.2 getEgzaminas()

```
int Studentas::getEgzaminas ( ) const [inline]
```

### 5.2.2.3 getGalutineMed()

```
double Studentas::getGalutineMed ( ) const [inline]
```

### 5.2.2.4 getGalutinisBal()

```
double Studentas::getGalutinisBal ( ) const [inline]
```

### 5.2.2.5 getGalutinisVid()

```
double Studentas::getGalutinisVid ( ) const [inline]
```

### 5.2.2.6 getNd()

```
const std::vector< int > & Studentas::getNd ( ) const [inline]
```

### 5.2.2.7 getNdKiekis()

```
int Studentas::getNdKiekis ( ) const [inline]
```

### 5.2.2.8 getPavarde()

```
const std::string & Studentas::getPavarde ( ) const [inline], [override], [virtual]
```

Implements [Zmogus](#).

### 5.2.2.9 getVardas()

```
const std::string & Studentas::getVardas ( ) const [inline], [override], [virtual]
```

Implements [Zmogus](#).

### 5.2.2.10 operator<()

```
bool Studentas::operator< (
    const Studentas & other ) const [inline]
```

#### 5.2.2.11 operator=() [1/2]

```
Studentas & Studentas::operator= (
    const Studentas & other ) [inline]
```

#### 5.2.2.12 operator=() [2/2]

```
Studentas & Studentas::operator= (
    Studentas && other ) [inline], [noexcept]
```

#### 5.2.2.13 setEgzaminas()

```
void Studentas::setEgzaminas (
    int egzaminas ) [inline]
```

#### 5.2.2.14 setGalutineMed()

```
void Studentas::setGalutineMed (
    double gal_med ) [inline]
```

#### 5.2.2.15 setGalutinisBal()

```
void Studentas::setGalutinisBal (
    double gal_bal ) [inline]
```

#### 5.2.2.16 setGalutinisVid()

```
void Studentas::setGalutinisVid (
    double gal_vid ) [inline]
```

#### 5.2.2.17 setNd()

```
void Studentas::setNd (
    const std::vector< int > & nd ) [inline]
```

#### 5.2.2.18 setNdKiekis()

```
void Studentas::setNdKiekis (
    int nd_kiekis ) [inline]
```

#### 5.2.2.19 setPavarde()

```
void Studentas::setPavarde (
    const std::string & pavarde ) [inline], [override], [virtual]
```

Reimplemented from [Zmogus](#).

#### 5.2.2.20 setVardas()

```
void Studentas::setVardas (
    const std::string & vardas ) [inline], [override], [virtual]
```

Reimplemented from [Zmogus](#).

#### 5.2.2.21 skaiciuotiGalutiniBal()

```
void Studentas::skaiciuotiGalutiniBal ( ) [inline]
```

### 5.2.3 Friends And Related Symbol Documentation

#### 5.2.3.1 operator<<

```
std::ostream & operator<< (
    std::ostream & out,
    const Studentas & studentas ) [friend]
```

#### 5.2.3.2 operator>>

```
std::istream & operator>> (
    std::istream & in,
    Studentas & studentas ) [friend]
```

### 5.2.4 Member Data Documentation

#### 5.2.4.1 egzaminas\_

```
int Studentas::egzaminas_ [private]
```

#### 5.2.4.2 gal\_bal\_

```
double Studentas::gal_bal_ [private]
```

#### 5.2.4.3 gal\_med\_

```
double Studentas::gal_med_ [private]
```

#### 5.2.4.4 gal\_vid\_

```
double Studentas::gal_vid_ [private]
```

#### 5.2.4.5 nd\_

```
std::vector<int> Studentas::nd_ [private]
```

#### 5.2.4.6 nd\_kiekis\_

```
int Studentas::nd_kiekis_ [private]
```

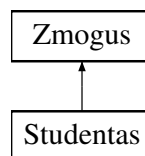
The documentation for this class was generated from the following file:

- C:/Darbai/2\_OP/2\_OP/[studentas.h](#)

## 5.3 Zmogus Class Reference

```
#include <studentas.h>
```

Inheritance diagram for Zmogus:



### Public Member Functions

- virtual const std::string & [getVardas](#) () const =0
- virtual const std::string & [getPavarde](#) () const =0
- virtual void [setVardas](#) (const std::string &vardas)
- virtual void [setPavarde](#) (const std::string &pavarde)

### Protected Member Functions

- [Zmogus](#) ()=default
- [Zmogus](#) (const std::string &vardas, const std::string &pav)
- virtual [~Zmogus](#) ()

### Protected Attributes

- std::string [vardas\\_](#)
- std::string [pav\\_](#)

## 5.3.1 Constructor & Destructor Documentation

### 5.3.1.1 Zmogus() [1/2]

```
Zmogus::Zmogus ( ) [protected], [default]
```

### 5.3.1.2 Zmogus() [2/2]

```
Zmogus::Zmogus (
    const std::string & vardas,
    const std::string & pav ) [inline], [protected]
```

### 5.3.1.3 ~Zmogus()

```
virtual Zmogus::~~Zmogus ( ) [inline], [protected], [virtual]
```

## 5.3.2 Member Function Documentation

### 5.3.2.1 getPavarde()

```
virtual const std::string & Zmogus::getPavarde ( ) const [pure virtual]
```

Implemented in [Studentas](#).

### 5.3.2.2 getVardas()

```
virtual const std::string & Zmogus::getVardas ( ) const [pure virtual]
```

Implemented in [Studentas](#).

### 5.3.2.3 setPavarde()

```
virtual void Zmogus::setPavarde (
    const std::string & pavarde ) [inline], [virtual]
```

Reimplemented in [Studentas](#).

### 5.3.2.4 setVardas()

```
virtual void Zmogus::setVardas (
    const std::string & vardas ) [inline], [virtual]
```

Reimplemented in [Studentas](#).

## 5.3.3 Member Data Documentation

### 5.3.3.1 pav\_

```
std::string Zmogus::pav_ [protected]
```

### 5.3.3.2 vardas\_

```
std::string Zmogus::vardas_ [protected]
```

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

- C:/Darbai/2\_OP/2\_OP/[studentas.h](#)





## Chapter 6

# File Documentation

### 6.1 C:/Darbai/2\_OP/2\_OP/functions.cpp File Reference

```
#include "functions.h"
```

#### Functions

- void [func\\_input\\_hands](#) ()
- void [func\\_generate\\_numbers](#) ()
- void [func\\_generate\\_names](#) ()
- void [func\\_input\\_file](#) ()
- void [generate\\_new\\_file](#) ()
- void [use\\_existing\\_file](#) ()
- void [read\\_list](#) ()
- void [read\\_deque](#) ()
- void [use\\_existing\\_file\\_2](#) ()
- void [read\\_list\\_2](#) ()
- void [read\\_deque\\_2](#) ()
- void [use\\_existing\\_file\\_3](#) ()
- void [read\\_list\\_3](#) ()
- void [read\\_deque\\_3](#) ()
- void [func\\_generate](#) ()
- void [func\\_tests](#) ()
- void [func\\_input\\_output](#) ()

#### 6.1.1 Function Documentation

##### 6.1.1.1 [func\\_generate\(\)](#)

```
void func_generate ( )
```

##### 6.1.1.2 [func\\_generate\\_names\(\)](#)

```
void func_generate_names ( )
```

**6.1.1.3 func\_generate\_numbers()**

```
void func_generate_numbers ( )
```

**6.1.1.4 func\_input\_file()**

```
void func_input_file ( )
```

**6.1.1.5 func\_input\_hands()**

```
void func_input_hands ( )
```

**6.1.1.6 func\_input\_output()**

```
void func_input_output ( )
```

**6.1.1.7 func\_tests()**

```
void func_tests ( )
```

**6.1.1.8 generate\_new\_file()**

```
void generate_new_file ( )
```

**6.1.1.9 read\_deque()**

```
void read_deque ( )
```

**6.1.1.10 read\_deque\_2()**

```
void read_deque_2 ( )
```

**6.1.1.11 read\_deque\_3()**

```
void read_deque_3 ( )
```

**6.1.1.12 read\_list()**

```
void read_list ( )
```

**6.1.1.13 read\_list\_2()**

```
void read_list_2 ( )
```

**6.1.1.14 read\_list\_3()**

```
void read_list_3 ( )
```

**6.1.1.15 use\_existing\_file()**

```
void use_existing_file ( )
```

**6.1.1.16 use\_existing\_file\_2()**

```
void use_existing_file_2 ( )
```

**6.1.1.17 use\_existing\_file\_3()**

```
void use_existing_file_3 ( )
```

**6.2 C:/Darbai/2\_OP/2\_OP/functions.h File Reference**

```
#include <iostream>
#include <vector>
#include <algorithm>
#include <numeric>
#include <iomanip>
#include <ctime>
#include <fstream>
#include <istream>
#include <sstream>
#include <stdexcept>
#include <bits/stdc++.h>
#include <chrono>
#include <list>
#include <deque>
#include "studentas.h"
#include <cassert>
```

## Functions

- void [func\\_input\\_hands](#) ()
- void [func\\_generate\\_numbers](#) ()
- void [func\\_generate\\_names](#) ()
- void [func\\_input\\_file](#) ()
- void [func\\_generate](#) ()
- void [generate\\_new\\_file](#) ()
- void [use\\_existing\\_file](#) ()
- void [read\\_list](#) ()
- void [read\\_deque](#) ()
- void [use\\_existing\\_file\\_2](#) ()
- void [read\\_list\\_2](#) ()
- void [read\\_deque\\_2](#) ()
- void [use\\_existing\\_file\\_3](#) ()
- void [read\\_list\\_3](#) ()
- void [read\\_deque\\_3](#) ()
- void [func\\_tests](#) ()
- void [func\\_input\\_output](#) ()

## 6.2.1 Function Documentation

### 6.2.1.1 [func\\_generate\(\)](#)

```
void func_generate ( )
```

### 6.2.1.2 [func\\_generate\\_names\(\)](#)

```
void func_generate_names ( )
```

### 6.2.1.3 [func\\_generate\\_numbers\(\)](#)

```
void func_generate_numbers ( )
```

### 6.2.1.4 [func\\_input\\_file\(\)](#)

```
void func_input_file ( )
```

### 6.2.1.5 [func\\_input\\_hands\(\)](#)

```
void func_input_hands ( )
```

### 6.2.1.6 [func\\_input\\_output\(\)](#)

```
void func_input_output ( )
```

**6.2.1.7 func\_tests()**

```
void func_tests ( )
```

**6.2.1.8 generate\_new\_file()**

```
void generate_new_file ( )
```

**6.2.1.9 read\_deque()**

```
void read_deque ( )
```

**6.2.1.10 read\_deque\_2()**

```
void read_deque_2 ( )
```

**6.2.1.11 read\_deque\_3()**

```
void read_deque_3 ( )
```

**6.2.1.12 read\_list()**

```
void read_list ( )
```

**6.2.1.13 read\_list\_2()**

```
void read_list_2 ( )
```

**6.2.1.14 read\_list\_3()**

```
void read_list_3 ( )
```

**6.2.1.15 use\_existing\_file()**

```
void use_existing_file ( )
```

**6.2.1.16 use\_existing\_file\_2()**

```
void use_existing_file_2 ( )
```

### 6.2.1.17 use\_existing\_file\_3()

```
void use_existing_file_3 ( )
```

## 6.3 functions.h

[Go to the documentation of this file.](#)

```
00001 #ifndef FUNCTIONS_H
00002 #define FUNCTIONS_H
00003
00004 #include <iostream>
00005 #include <vector>
00006 #include <algorithm>
00007 #include <numeric>
00008 #include <iomanip>
00009 #include <ctime>
00010 #include <fstream>
00011 #include <istream>
00012 #include <sstream>
00013 #include <numeric>
00014 #include <stdexcept>
00015 #include <bits/stdc++.h>
00016 #include <chrono>
00017 #include <list>
00018 #include <deque>
00019 #include "studentas.h"
00020 #include <cassert>
00021
00022 using namespace std;
00023
00024 void func_input_hands();
00025 void func_generate_numbers();
00026 void func_generate_names();
00027 void func_input_file();
00028 void func_generate();
00029 void generate_new_file();
00030 //3 STRATEGIJA
00031 void use_existing_file();
00032 void read_list();
00033 void read_deque();
00034 //2 STRATEGIJA
00035 void use_existing_file_2();
00036 void read_list_2();
00037 void read_deque_2();
00038 //3 STRATEGIJA
00039 void use_existing_file_3();
00040 void read_list_3();
00041 void read_deque_3();
00042
00043 void func_tests();
00044 void func_input_output();
00045 #endif /* FUNCTIONS_H */
```

## 6.4 C:/Darbai/2\_OP/2\_OP/masyvai.cpp File Reference

```
#include <iostream>
#include <fstream>
#include <math.h>
#include <iomanip>
#include <vector>
#include <algorithm>
#include <random>
#include <ctime>
```

### Classes

- struct [duomenys](#)

## Functions

- void `func_input_hands` ()
- void `func_generate_numbers` ()
- void `func_generate_names` ()
- int `main` ()

## Variables

- const int `MAX_ND` = 100

## 6.4.1 Function Documentation

### 6.4.1.1 `func_generate_names()`

```
void func_generate_names ( )
```

### 6.4.1.2 `func_generate_numbers()`

```
void func_generate_numbers ( )
```

### 6.4.1.3 `func_input_hands()`

```
void func_input_hands ( )
```

### 6.4.1.4 `main()`

```
int main ( )
```

## 6.4.2 Variable Documentation

### 6.4.2.1 `MAX_ND`

```
const int MAX_ND = 100
```

## 6.5 C:/Darbai/2\_OP/2\_OP/README.md File Reference

## 6.6 C:/Darbai/2\_OP/2\_OP/studentas.h File Reference

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

## Classes

- class [Zmogus](#)
- class [Studentas](#)

## Variables

- const int [MAX\\_ND](#) = 100

## 6.6.1 Variable Documentation

### 6.6.1.1 MAX\_ND

```
const int MAX_ND = 100
```

## 6.7 studentas.h

[Go to the documentation of this file.](#)

```
00001 #ifndef STUDENTAS_H
00002 #define STUDENTAS_H
00003
00004 #include <vector>
00005 #include <string>
00006 #include <iostream>
00007
00008 const int MAX_ND = 100;
00009
00010 class Zmogus {
00011 protected:
00012     std::string vardas_, pav_; // Privatūs nariai, kurie saugo žmogaus vardą ir pavardę
00013
00014     Zmogus() = default; // Standartinis konstruktorius, inicializuoja vardą ir pavardę
00015     // Konstruktorius, kuris inicializuoja vardą ir pavardę pagal pateiktus parametrus
00016     Zmogus(const std::string& vardas, const std::string& pav)
00017     : vardas_(vardas), pav_(pav) {}
00018     // Virtualus destruktorius, leidžiantis paveldėtoms klasėms tvarkyti atminties išlaisvinimą
00019     virtual ~Zmogus() {}
00020
00021 public:
00022     // Virtualus get metodai, gražinantys vardą arba pavardę
00023     virtual const std::string& getVardas() const = 0; //kad abstraktus reik prilyginti 0
00024     virtual const std::string& getPavarde() const = 0;
00025     // Virtualus set metodai, nustatantys vardą arba pavardę
00026     virtual void setVardas(const std::string& vardas) { vardas_ = vardas; }
00027     virtual void setPavarde(const std::string& pavarde) { pav_ = pavarde; }
00028
00029 };
00030
00031 class Studentas : public Zmogus {
00032 private:
00033     std::vector<int> nd_;
00034     int egzaminas_, nd_kiekis_;
00035     double gal_vid_, gal_bal_, gal_med_;
00036
00037 public:
00038     bool operator<(const Studentas& other) const {
00039         return gal_vid_ < other.gal_vid_;
00040     }
00041
00042     Studentas() : egzaminas_(0), nd_kiekis_(0), gal_vid_(0), gal_bal_(0), gal_med_(0) {}
00043
00044     Studentas(const std::string& vardas, const std::string& pav, int egzaminas, const
std::vector<int>& nd, int nd_kiekis, double gal_vid, double gal_med)
00045     : Zmogus(vardas, pav), nd_(nd), egzaminas_(egzaminas), nd_kiekis_(nd_kiekis),
gal_vid_(gal_vid), gal_med_(gal_med) {}
00046
00047     ~Studentas() {}
00048
00049     // COPY KONSTRUKTORIUS
00050
```



```

00051     Studentas(const Studentas& other)
00052     : Zmogus(other.getVardas(), other.getPavarde(), nd_(other.nd_), egzaminas_(other.egzaminas_),
00053       nd_kiekis_(other.nd_kiekis_), gal_vid_(other.gal_vid_), gal_bal_(other.gal_bal_),
gal_med_(other.gal_med_) {}
00054
00055     // COPY PRISKYRIMO OPERATORIUS
00056     Studentas& operator=(const Studentas& other)
00057     {
00058         if (this != &other) {
00059             setVardas(other.getVardas());
00060             setPavarde(other.getPavarde());
00061             nd_ = other.nd_;
00062             egzaminas_ = other.egzaminas_;
00063             nd_kiekis_ = other.nd_kiekis_;
00064             gal_vid_ = other.gal_vid_;
00065             gal_bal_ = other.gal_bal_;
00066             gal_med_ = other.gal_med_;
00067         }
00068         return *this;
00069     }
00070
00071     // MOVE KONSTRUKTORIUS
00072     Studentas(Studentas&& other) noexcept
00073     : Zmogus(std::move(other.vardas_), std::move(other.pav_), nd_(std::move(other.nd_)),
00074       egzaminas_(std::move(other.egzaminas_)), nd_kiekis_(std::move(other.nd_kiekis_)),
00075       gal_vid_(std::move(other.gal_vid_)), gal_bal_(std::move(other.gal_bal_)),
gal_med_(std::move(other.gal_med_))
00076     {
00077         other.vardas_ = "";
00078         other.pav_ = "";
00079         other.egzaminas_ = 0;
00080         other.nd_kiekis_ = 0;
00081         other.gal_vid_ = 0;
00082         other.gal_bal_ = 0;
00083         other.gal_med_ = 0;
00084     }
00085
00086     // MOVE PRISKYRIMO OPERATORIUS
00087     Studentas& operator=(Studentas&& other) noexcept
00088     {
00089         if (this != &other) {
00090             setVardas(std::move(other.getVardas()));
00091             setPavarde(std::move(other.getPavarde()));
00092             nd_ = std::move(other.nd_);
00093             egzaminas_ = std::move(other.egzaminas_);
00094             nd_kiekis_ = std::move(other.nd_kiekis_);
00095             gal_vid_ = std::move(other.gal_vid_);
00096             gal_bal_ = std::move(other.gal_bal_);
00097             gal_med_ = std::move(other.gal_med_);
00098
00099             other.vardas_ = "";
00100             other.pav_ = "";
00101             other.egzaminas_ = 0;
00102             other.nd_kiekis_ = 0;
00103             other.gal_vid_ = 0;
00104             other.gal_bal_ = 0;
00105             other.gal_med_ = 0;
00106         }
00107         return *this;
00108     }
00109
00110     const std::string& getVardas() const override { return vardas_; }
00111     const std::string& getPavarde() const override { return pav_; }
00112     const std::vector<int>& getNd() const { return nd_; }
00113     int getEgzaminas() const { return egzaminas_; }
00114     double getGalutinisVid() const { return gal_vid_; }
00115     double getGalutinisBal() const { return gal_bal_; }
00116     double getGalutineMed() const { return gal_med_; }
00117     int getNdKiekis() const { return nd_kiekis_; }
00118
00119     void setVardas(const std::string& vardas) override { Zmogus::setVardas(vardas); }
00120     void setPavarde(const std::string& pavarde) override { Zmogus::setPavarde(pavarde); }
00121     void setNd(const std::vector<int>& nd) { nd_ = nd; nd_kiekis_ = nd.size();
skaiciuotiGalutiniBal(); }
00122     void setEgzaminas(int egzaminas) { egzaminas_ = egzaminas; }
00123     void setGalutinisVid(double gal_vid) { gal_vid_ = gal_vid; }
00124     void setGalutinisBal(double gal_bal) { gal_bal_ = gal_bal; }
00125     void setGalutineMed(double gal_med) { gal_med_ = gal_med; }
00126     void setNdKiekis(int nd_kiekis) { nd_kiekis_ = nd_kiekis; }
00127
00128     void addnd(int nd) { nd_.push_back(nd); nd_kiekis_++; skaiciuotiGalutiniBal(); }
00129
00130     void skaiciuotiGalutiniBal() {
00131         if (nd_.empty()) {
00132             gal_bal_ = egzaminas_;
00133             return;
00134         }

```

```

00135         double suma = 0;
00136         for (int pazymys : nd_) {
00137             suma += pazymys;
00138         }
00139         gal_bal_ = 0.4 * (suma / nd_.size()) + 0.6 * egzaminas_;
00140     }
00141
00142     // Input
00143     friend std::istream& operator<<(std::istream& in, Studentas& studentas) {
00144         in >> studentas.vardas_ >> studentas.pav_;
00145
00146         int pazymys;
00147         studentas.nd_.clear(); // Išvalome namų darbų sąrašą
00148         while (in >> pazymys && pazymys >= 0) {
00149             studentas.addnd(pazymys); // Pridedame naują namų darbo pažymį
00150         }
00151
00152         in >> studentas.egzaminas_; // Skaitome egzamino rezultata
00153
00154         return in;
00155     }
00156
00157     // Output
00158     friend std::ostream& operator<<(std::ostream& out, const Studentas& studentas) {
00159         out << "Vardas: " << studentas.vardas_ << std::endl;
00160         out << "Pavarde: " << studentas.pav_ << std::endl;
00161         out << "Namu darbai: ";
00162         for (int pazymys : studentas.nd_) {
00163             out << pazymys << " ";
00164         }
00165         out << std::endl;
00166         out << "Egzamino rezultatas: " << studentas.egzaminas_ << std::endl;
00167         return out;
00168     }
00169 };
00170
00171 #endif /* STUDENTAS_H */

```

## 6.8 C:/Darbai/2\_OP/2\_OP/vektoriai.cpp File Reference

```
#include "functions.h"
```

### Functions

- int [main](#) ()

### 6.8.1 Function Documentation

#### 6.8.1.1 main()

```
int main ( )
```

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