

Lab1 VA

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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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## Chapter 2

# File Index

### 2.1 File List

Here is a list of all files with brief descriptions:

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## Chapter 3

# Class Documentation

### 3.1 Student Class Reference

#### Public Member Functions

- [Student](#) ()
- [Student](#) (ifstream &in)
- [~Student](#) ()
- [Student](#) & [operator=](#) (const [Student](#) &A)

#### Public Attributes

- string [fname](#)
- string [lname](#)
- string [mname](#)
- string [faculty](#)
- int [mark](#)

#### Friends

- ostream & [operator<<](#) (ostream &out, const [Student](#) &A)

#### 3.1.1 Constructor & Destructor Documentation

##### 3.1.1.1 [Student\(\)](#) [1/2]

```
Student::Student ( )
```

### 3.1.1.2 Student() [2/2]

```
Student::Student (
    ifstream & in )
```

### 3.1.1.3 ~Student()

```
Student::~~Student ( )
```

## 3.1.2 Member Function Documentation

### 3.1.2.1 operator=()

```
Student & Student::operator= (
    const Student & A )
```

## 3.1.3 Friends And Related Function Documentation

### 3.1.3.1 operator<<

```
ostream & operator<< (
    ostream & out,
    const Student & A ) [friend]
```

## 3.1.4 Member Data Documentation

### 3.1.4.1 faculty

```
string Student::faculty
```

### 3.1.4.2 fname

```
string Student::fname
```

#### 3.1.4.3 lname

```
string Student::lname
```

#### 3.1.4.4 mark

```
int Student::mark
```

#### 3.1.4.5 mname

```
string Student::mname
```

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

- [lab1va.cpp](#)



## Chapter 4

# File Documentation

### 4.1 lab1va.cpp File Reference

```
#include <iostream>
#include <string>
#include <vector>
#include <algorithm>
#include <fstream>
#include <time.h>
```

#### Classes

- class [Student](#)

#### Functions

- ostream & [operator<<](#) (ostream &out, const [Student](#) &A)
- bool [operator==](#) (const [Student](#) &A, const [Student](#) &B)
- bool [operator!=](#) (const [Student](#) &A, const [Student](#) &B)
- bool [operator>](#) (const [Student](#) &A, const [Student](#) &B)
- bool [operator<](#) (const [Student](#) &A, const [Student](#) &B)
- bool [operator>=](#) (const [Student](#) &A, const [Student](#) &B)
- bool [operator<=](#) (const [Student](#) &A, const [Student](#) &B)
- template<typename T >  
void [selectSort](#) (T a[], size\_t size)
- template<typename T >  
void [bubbleSort](#) (T \*A, size\_t n)
- template<typename T >  
void [shakerSort](#) (T \*A, size\_t n)
- int [main](#) ()

#### 4.1.1 Function Documentation

#### 4.1.1.1 bubbleSort()

```
template<typename T >
void bubbleSort (
    T * A,
    size_t n )
```

#### 4.1.1.2 main()

```
int main ( )
```

#### 4.1.1.3 operator"!="()

```
bool operator!= (
    const Student & A,
    const Student & B )
```

#### 4.1.1.4 operator<()

```
bool operator< (
    const Student & A,
    const Student & B )
```

#### 4.1.1.5 operator<<()

```
ostream & operator<< (
    ostream & out,
    const Student & A )
```

#### 4.1.1.6 operator<=()

```
bool operator<= (
    const Student & A,
    const Student & B )
```

#### 4.1.1.7 operator==( )

```
bool operator== (
    const Student & A,
    const Student & B )
```

#### 4.1.1.8 operator>( )

```
bool operator> (
    const Student & A,
    const Student & B )
```

#### 4.1.1.9 operator>=( )

```
bool operator>= (
    const Student & A,
    const Student & B )
```

#### 4.1.1.10 selectSort()

```
template<typename T >
void selectSort (
    T a[],
    size_t size )
```

#### 4.1.1.11 shakerSort()

```
template<typename T >
void shakerSort (
    T * A,
    size_t n )
```





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