Theatre

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

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

Chapter 2

Class Index

2.1 Class List

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

Chapter 3

File Index

3.1 File List

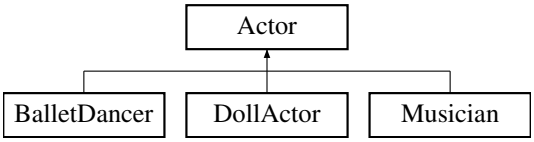
Here is a list of all documented files with brief descriptions:

Chapter 4

Class Documentation

4.1 Actor Class Reference

Inheritance diagram for Actor:



Public Member Functions

- **Actor** (string name, string role)
- string GetName ()

  Implementation of the Actor class.
- string GetRole ()

  Getter of Role.
- bool operator== (Actor actor)

  Overloading == operator.
- virtual void Play ()

  Play actor role.

Protected Attributes

- string **name**
- string **role**

4.1.1 Member Function Documentation

4.1.1.1 GetName()

```
string Actor::GetName ( )
```

Implementation of the Actor class.

Author

Dasha

Version

1

Date

November 2023

Contains a constructor; method for playing. Operator == for comparing the fields of two actors.

Getter of Name

Returns

Name

4.1.1.2 GetRole()

```
string Actor::GetRole ( )
```

Getter of Role.

Returns

Role

4.1.1.3 operator==()

```
bool Actor::operator== (
            Actor actor )
```

Overloading == operator.

Parameters

actor	other actor

Returns

True if yes, False if no

4.1.1.4 Play()

```
void Actor::Play ( )  [virtual]
```

Play actor role.

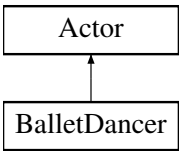
Reimplemented in BalletDancer, DollActor, and Musician.

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

- TheatreTest/Actor.h
- TheatreTest/Actor.cpp

4.2 BalletDancer Class Reference

Inheritance diagram for BalletDancer:



Public Member Functions

- **BalletDancer** (string name, string role)
- void Play () override

  Implementation of the BalletDancer class.

Public Member Functions inherited from Actor

- **Actor** (string name, string role)
- string GetName ()

  Implementation of the Actor class.
- string GetRole ()

  Getter of Role.
- bool operator== (Actor actor)

  Overloading == operator.

Additional Inherited Members

Protected Attributes inherited from Actor

- string **name**
- string **role**

4.2.1 Member Function Documentation

4.2.1.1 Play()

```
void BalletDancer::Play ( )  [override], [virtual]
```

Implementation of the BalletDancer class.

Author

Dasha

Version

1

Date

November 2023

Contains a constructor; method for playing.

Play balletdancer role

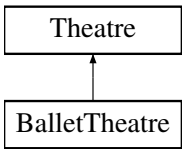
Reimplemented from Actor.

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

- TheatreTest/BalletDancer.h
- TheatreTest/BalletDancer.cpp

4.3 BalletTheatre Class Reference

Inheritance diagram for BalletTheatre:



Public Member Functions

- **BalletTheatre** (string name, string adress, string director, vector< Performance > performances)
- void Introduction () override

  Implementation of the BalletTheatre class.

Public Member Functions inherited from Theatre

- **Theatre** (string name, string address, string director, vector< Performance > performances)
- string GetName ()

  Getter of Name.
- Performance **GetPerformance** (int i)
- void StartPeroformance (Ticket ticket)

  Start of performance.
- void **ShowAfisha** ()

  afisha output

Additional Inherited Members

4.3.1 Member Function Documentation

4.3.1.1 Introduction()

```
void BalletTheatre::Introduction ( )  [override], [virtual]
```

Implementation of the BalletTheatre class.

Author

Dasha

Version

1

Date

November 2023

Contains a constructor; method for start introdaction.

Start Introdaction

Reimplemented from Theatre.

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

- TheatreTest/BalletTheatre.h
- TheatreTest/BalletTheatre.cpp

4.4 Date Class Reference

Public Member Functions

- **Date** (int hours, int minutes, int day, int month, int year)
- string GetDate ()

  Implementation of the Date class.
- bool operator== (Date date)

  Overloading == operator.

4.4.1 Member Function Documentation

4.4.1.1 GetDate()

```
string Date::GetDate ( )
```

Implementation of the Date class.

Author

Dasha

Version

1

Date

November 2023

Contains a constructor; method for showing information. Operator == for comparing the fields of two dates.

Getter of Date

Returns

date

4.4.1.2 operator==()

```
bool Date::operator== (
            Date date )
```

Overloading == operator.

Parameters

date	other date

Returns

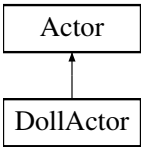
True if yes, False if no

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

- TheatreTest/Date.h
- TheatreTest/Date.cpp

4.5 DollActor Class Reference

Inheritance diagram for DollActor:



Public Member Functions

- **DollActor** (string name, string role)
- void Play () override

  Play doll actor role.

Public Member Functions inherited from Actor

- **Actor** (string name, string role)
- string GetName ()

  Implementation of the Actor class.
- string GetRole ()

  Getter of Role.
- bool operator== (Actor actor)

  Overloading == operator.

Additional Inherited Members

Protected Attributes inherited from Actor

- string **name**
- string **role**

4.5.1 Member Function Documentation

4.5.1.1 Play()

```
void DollActor::Play ( )  [override], [virtual]
```

Play doll actor role.

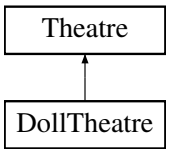
Reimplemented from Actor.

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

- TheatreTest/DollActor.h
- TheatreTest/DollActor.cpp

4.6 DollTheatre Class Reference

Inheritance diagram for DollTheatre:



Public Member Functions

- **DollTheatre** (string name, string adress, string director, vector< Performance > performances)
- void Introduction () override

  Implementation of the DollTheatre class.

Public Member Functions inherited from Theatre

- **Theatre** (string name, string address, string director, vector< Performance > performances)
- string GetName ()

  Getter of Name.
- Performance **GetPerformance** (int i)
- void StartPeroformance (Ticket ticket)

  Start of performance.
- void **ShowAfisha** ()

  afisha output

Additional Inherited Members

4.6.1 Member Function Documentation

4.6.1.1 Introduction()

```
void DollTheatre::Introduction ( )  [override], [virtual]
```

Implementation of the DollTheatre class.

Author

Dasha

Version

1

Date

November 2023

Contains a constructor; method for start introdaction.

Start Introduction

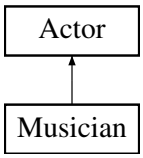
Reimplemented from Theatre.

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

- TheatreTest/DollTheatre.h
- TheatreTest/DollTheatre.cpp

4.7 Musician Class Reference

Inheritance diagram for Musician:



Public Member Functions

- **Musician** (string name, string instrument)
- void Play () override

  Implementation of the Musicion class.

Public Member Functions inherited from Actor

- **Actor** (string name, string role)
- string GetName ()

  Implementation of the Actor class.
- string GetRole ()

  Getter of Role.
- bool operator== (Actor actor)

  Overloading == operator.

Public Attributes

- string **instrument**

Additional Inherited Members

Protected Attributes inherited from Actor

- string **name**
- string **role**

4.7.1 Member Function Documentation

4.7.1.1 Play()

```
void Musician::Play ( )  [override], [virtual]
```

Implementation of the Musicion class.

Author

Dasha

Version

1

Date

November 2023

Contains a constructor; method for playing.

Play role

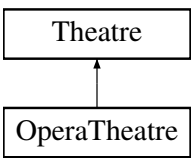
Reimplemented from Actor.

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

- TheatreTest/Musician.h
- TheatreTest/Musician.cpp

4.8 OperaTheatre Class Reference

Inheritance diagram for OperaTheatre:



Public Member Functions

- **OperaTheatre** (string name, string adress, string director, vector< Performance > performances)
- void Introduction () override

  Implementation of the Opera class.

Public Member Functions inherited from Theatre

- **Theatre** (string name, string address, string director, vector< Performance > performances)
- string GetName ()

  Getter of Name.
- Performance **GetPerformance** (int i)
- void StartPeroformance (Ticket ticket)

  Start of performance.
- void **ShowAfisha** ()

  afisha output

Additional Inherited Members

4.8.1 Member Function Documentation

4.8.1.1 Introduction()

```
void OperaTheatre::Introduction ( )  [override], [virtual]
```

Implementation of the Opera class.

Author

Dasha

Version

1

Date

November 2023

Contains a constructor; method for start introdaction.

Start Introduction

Reimplemented from Theatre.

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

- TheatreTest/Opera.h
- TheatreTest/Opera.cpp

4.9 OrderService Class Reference

Public Member Functions

- **OrderService** (vector< Theatre > theatres)
- Ticket OrderTicket ()

  Order Ticket to visiting performance.

4.9.1 Member Function Documentation

4.9.1.1 OrderTicket()

```
Ticket OrderService::OrderTicket ( )
```

Order Ticket to visiting performance.

Returns

ticket

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

- TheatreTest/OrderService.h
- TheatreTest/OrderService.cpp

4.10 Performance Class Reference

Public Member Functions

- **Performance** (string name, Date date)
- string GetName ()

  Implementation of the Performmance class.
- string GetDate ()

  Getter of Date.
- int GetActorsCount ()

  Getter of Actors count.
- string GetPlace (int i)

  Take place.
- void **ShowPlaces** ()

  Show list avaible places.
- bool operator== (Performance perfomance)

  Overloading == operator.
- void **Start** ()

  Start performance.
- void AddActor (Actor actor)

  Add new actor.
- void RemoveActor (Actor actor)

  Remove actor.
- void CreatePlaces (int row, int place)

  Initialize size of hall.

4.10.1 Member Function Documentation

4.10.1.1 AddActor()

```
void Performance::AddActor (
            Actor actor )
```

Add new actor.

Parameters

actor	new actor

4.10.1.2 CreatePlaces()

```
void Performance::CreatePlaces (
            int row,
            int place )
```

Initialize size of hall.

Parameters

row,place	size

4.10.1.3 GetActorsCount()

```
int Performance::GetActorsCount ( )
```

Getter of Actors count.

Returns

actors count

4.10.1.4 GetDate()

```
string Performance::GetDate ( )
```

Getter of Date.

Returns

date

4.10.1.5 GetName()

```
string Performance::GetName ( )
```

Implementation of the Performmance class.

Author

Dasha

Version

1

Date

November 2023

Contains a constructor; method for showing information and starting performances.

Getter of Name

Returns

Name

4.10.1.6 GetPlace()

```
string Performance::GetPlace (
            int i )
```

Take place.

Returns

place

4.10.1.7 operator==()

```
bool Performance::operator== (
            Performance perfomance )
```

Overloading == operator.

Parameters

performance	other performance

Returns

True if yes, False if no

4.10.1.8 RemoveActor()

```
void Performance::RemoveActor (
            Actor actor )
```

Remove actor.

Parameters

actor	removable actor

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

- TheatreTest/Performance.h
- TheatreTest/Performance.cpp

4.11 Place Class Reference

Public Member Functions

- **Place** (int row, int place)
- void Take ()

  Implementation of the Place class.
- void **Cancel** ()

  Cancel taking place.
- string GetPlace ()

  Getter of Place.
- bool IsEmpty ()

  Place is empty or not.

4.11.1 Member Function Documentation

4.11.1.1 GetPlace()

```
string Place::GetPlace ( )
```

Getter of Place.

Returns

place

4.11.1.2 IsEmpty()

```
bool Place::IsEmpty ( )
```

Place is empty or not.

Returns

True if yes, False if no

4.11.1.3 Take()

```
void Place::Take ( )
```

Implementation of the Place class.

Author

Dasha

Version

1

Date

November 2023

Contains a constructor; method for showing information and working with places.

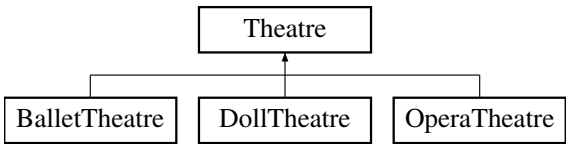
Take this place

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

- TheatreTest/Place.h
- TheatreTest/Place.cpp

4.12 Theatre Class Reference

Inheritance diagram for Theatre:



Public Member Functions

- **Theatre** (string name, string address, string director, vector< Performance > performances)
- string GetName ()

  Getter of Name.
- Performance **GetPerformance** (int i)
- void StartPeroformance (Ticket ticket)

  Start of performance.
- void **ShowAfisha** ()

  afisha output

Protected Member Functions

- virtual void Introduction ()

  Implementation of the Opera class.

4.12.1 Member Function Documentation

4.12.1.1 GetName()

```
string Theatre::GetName ( )
```

Getter of Name.

Returns

Name

4.12.1.2 Introduction()

```
void Theatre::Introduction ( )  [protected], [virtual]
```

Implementation of the Opera class.

Author

Dasha

Version

1

Date

November 2023

Contains a constructor; methods for start introdaction and showing information.

Introduction output

Reimplemented in BalletTheatre, DollTheatre, and OperaTheatre.

4.12.1.3 StartPeroformance()

```
void Theatre::StartPeroformance (
            Ticket ticket )
```

Start of performance.

Parameters

ticket	ticket of performance

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

- TheatreTest/Theatre.h
- TheatreTest/Theatre.cpp

4.13 Ticket Class Reference

Public Member Functions

- **Ticket** (Performance performance, string place, int price)
- Performance GetPerformance ()

  Implementation of the Ticket class.
- void **ShowInfo** ()

  Show information about performance.

4.13.1 Member Function Documentation

4.13.1.1 GetPerformance()

```
Performance Ticket::GetPerformance ( )
```

Implementation of the Ticket class.

Author

Dasha

Version

1

Date

November 2023

Contains a constructor; method for showing ticket information.

Getter of Performance

Returns

performance

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

- TheatreTest/Ticket.h
- TheatreTest/Ticket.cpp

Chapter 5

File Documentation

5.1 Actor.h

```
00001 #pragma once
00002
00003 #include <iostream>
00004
00005 using namespace std;
00006
00007 class Actor {
00008 protected:
00009     string name;
00010     string role;
00011 public:
00012     Actor(string name, string role) : name(name), role(role) {}
00013
00014     string GetName();
00015     string GetRole();
00016
00017
00018     bool operator ==(Actor actor);
00019
00020     void virtual Play();
00021 };
```

5.2 BalletDancer.h

```
00001 #pragma once
00002 #include "Actor.h"
00003
00004 class BalletDancer : public Actor {
00005 public:
00006
00007     BalletDancer(string name, string role) : Actor(name, role) {}
00008
00009     void Play() override;
00010 };
```

5.3 BalletTheatre.h

```
00001 #pragma once
00002 #include "Theatre.h"
00003
00004 class BalletTheatre : public Theatre {
00005 public:
00006     BalletTheatre(string name, string adress, string director, vector<Performance> performances) :
      Theatre(name, adress, director, performances) {}
00007
00008     void Introduction() override;
00009 };
```

5.4 Date.h

```
00001 #pragma once
00002 #include <string>
00003
00004 using namespace std;
00005
00006 class Date
00007 {
00008 private:
00009     int hours;
00010     int minutes;
00011     int day;
00012     int month;
00013     int year;
00014
00015 public:
00016     Date(int hours, int minutes, int day, int month, int year) : hours(hours), minutes(minutes),
      day(day), month(month), year(year) {}
00017
00018     string GetDate();
00019
00020     bool operator ==(Date date);
00021 };
```

5.5 DollActor.h

```
00001 #pragma once
00002 #include "Actor.h"
00003
00004 class DollActor : public Actor {
00005 public:
00006
00007     DollActor(string name, string role) : Actor(name, role) {}
00008
00009     void Play() override;
00010 };
```

5.6 DollTheatre.h

```
00001 #pragma once
00002 #include "Theatre.h"
00003
00004 class DollTheatre : public Theatre {
00005 public:
00006     DollTheatre(string name, string adress, string director, vector<Performance> performances) :
      Theatre(name, adress, director, performances) {}
00007
00008     void Introduction() override;
00009 };
```

5.7 Musician.h

```
00001 #pragma once
00002 #include "Actor.h"
00003
00004 class Musician : public Actor {
00005 public:
00006     string instrument;
00007
00008     Musician(string name, string instrument) : Actor(name, instrument), instrument(instrument) {}
00009
00010     void Play() override;
00011 };
```

5.8 Opera.h

```
00001 #pragma once
00002 #include  "Theatre.h"
00003
```

```
00004 class OperaTheatre : public Theatre {
00005 public:
00006     OperaTheatre(string name, string adress, string director, vector<Performance> performances) :
      Theatre(name, adress, director, performances) {}
00007
00008     void Introduction() override;
00009 };
```

5.9 OrderService.h

```
00001 #pragma once
00002 #include <vector>
00003 #include "Performance.h"
00004 #include "Ticket.h"
00005 #include "Theatre.h"
00006
00007 class OrderService {
00008 private:
00009     vector<Theatre> theatres;
00010     int ticketPrices[3] = { 5, 20, 15 };
00011
00012     void ShowTheatres();
00013
00014     void ShowPrice();
00015
00016     Theatre ChooseTheatre();
00017
00018     Performance ChoosePerformance(Theatre theatre);
00019
00020     string ChoosePlace(Performance performance);
00021
00022     int ChoosePrice();
00023
00024 public:
00025     OrderService(vector<Theatre> theatres) : theatres(theatres) {}
00026     Ticket OrderTicket();
00027 };
```

5.10 pch.h

```
00001 //
00002 // pch.h
00003 //
00004
00005 #pragma once
00006
00007 #include "gtest/gtest.h"
00008
00009 #include <iostream>
00010 #include <string>
00011
00012 using namespace std;
00013
00014
00015
00016
00017
00018
00019
00020
00021
00022
00023
00024
00025
00026
```

5.11 Performance.h

```
00001 #pragma once
00002 #include <string>
00003 #include "Date.h"
00004 #include <vector>
00005 #include "Place.h"
00006 #include "Actor.h"
```

```
00007
00008
00009 using namespace std;
00010
00011 class Performance {
00012 private:
00013     string name;
00014     Date date;
00015     vector<Actor> actors;
00016     vector<Place> places;
00017 public:
00018     Performance(string name, Date date) : name(name), date(date) {}
00019
00020     string GetName();
00021     string GetDate();
00022     int GetActorsCount();
00023     string GetPlace(int i);
00024
00025     void ShowPlaces();
00026
00027     bool operator ==(Performance perfomance);
00028
00029     void Start();
00030
00031     void AddActor(Actor actor);
00032
00033     void RemoveActor(Actor actor);
00034
00035     void CreatePlaces(int row, int place);
00036 };
```

5.12 Place.h

```
00001 #pragma once
00002 #include <string>
00003
00004 using namespace std;
00005
00006 class Place
00007 {
00008 private:
00009     int row;
00010     int place;
00011     bool isEmpty = true;
00012 public:
00013     Place(int row, int place) :row(row), place(place) {}
00014
00015     void Take();
00016     void Cancel();
00017
00018     string GetPlace();
00019
00020     bool IsEmpty();
00021 };
```

5.13 Theatre.h

```
00001 #pragma once
00002 #include <string>
00003 #include <vector>
00004 #include "Performance.h"
00005 #include "Ticket.h"
00006
00007 using namespace std;
00008
00009 class Theatre {
00010 private:
00011     string name;
00012     string address;
00013     string director;
00014     vector<Performance> performances;
00015
00016 protected:
00017     void virtual Introduction();
00018 public:
00019     Theatre(string name, string address, string director, vector<Performance> performances)
      :name(name), address(address), director(director), performances(performances) {}
00020
00021     string GetName();
```

```
00022     Performance GetPerformance(int i);
00023
00024     void StartPeroformance(Ticket ticket);
00025
00026     void ShowAfisha();
00027 };
```

5.14 Ticket.h

```
00001 #pragma once
00002 #include <string>
00003 #include "Performance.h"
00004 #include "Place.h"
00005 using namespace std;
00006
00007 class Ticket {
00008 private:
00009     Performance performance;
00010     string place;
00011     double price;
00012
00013 public:
00014     Ticket(Performance performance, string place, int price) :performance(performance), place(place),
      price(price) {}
00015
00016     Performance GetPerformance();
00017
00018     void ShowInfo();
00019 };
```

Index