

DungeonCrawler

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Chapter 1

Source content

This folder should contain only `hpp/cpp` files of your implementation. You can also place `hpp` files in a separate directory `include`.

You can create a summary of files here. It might be useful to describe file relations, and brief summary of their content.

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

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| Item | 14 |
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| PosType | 31 |
| Turn | 37 |

Chapter 3

Class Index

3.1 Class List

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

| | | |
|---------------------------|---|----|
| GameBlock | The base class of this application. Game Block is a unit of the map | 9 |
| Goal | Goal Class inheriting from GameBlock , with fixed speed and BlockType | 13 |
| Item | The item class inherit from Game Block and is the base abstract class for all item | 14 |
| Map | | 17 |
| Monster | Inherit from GameBlock class, and define the Monster attribute and function | 20 |
| Player | Inherit from GameBlock class, and define the Player attribute and function | 24 |
| PosType | | 31 |
| Potion | The potion class inherit from Item abstract class, and define the health potion | 32 |
| Road | Road Class inheriting from GameBlock , with fixed speed and BlockType | 35 |
| Turn | | 37 |
| Wall | Wall Class inheriting from GameBlock , with fixed speed and BlockType | 39 |
| Weapon | Inherit from Item abstract class, and define the weapon | 40 |

Chapter 4

File Index

4.1 File List

Here is a list of all files with brief descriptions:

| | |
|---|----|
| /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/ GameBlock.cpp | 45 |
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| /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/ Potion.cpp | 57 |
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| /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/ Road.hpp | |
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| /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/ Test.cpp | 60 |
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| /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/ Wall.hpp | |
| File with the defination of Wall class | 61 |
| /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/ Weapon.cpp | 63 |
| /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/ Weapon.hpp | |
| File with the defination of Weapon class | 63 |

Chapter 5

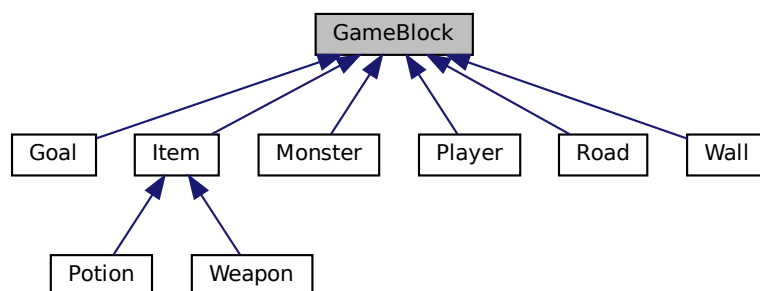
Class Documentation

5.1 GameBlock Class Reference

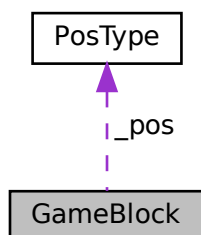
The base class of this application. Game Block is a unit of the map.

```
#include <GameBlock.hpp>
```

Inheritance diagram for GameBlock:



Collaboration diagram for GameBlock:



Public Member Functions

- [GameBlock](#) ([PosType](#) pos, int speed, [BlockType](#) type)
[GameBlock](#) Constructor.
- [GameBlock](#) ()
Default constructor.
- [PosType](#) [Get_Pos](#) () const
Get the position of the [GameBlock](#).
- int [Get_Speed](#) () const
Get the speed of the [GameBlock](#).
- [BlockType](#) [Get_Type](#) () const
Get the type of the [GameBlock](#).
- void [Set_pos](#) ([PosType](#) &pos)
Set the position of the [GameBlock](#).

Public Attributes

- [PosType](#) [_pos](#)
- [sf::Texture](#) [_Texture](#)
- [sf::Sprite](#) [_Sprite](#)

Protected Attributes

- int [_speed](#)
- [BlockType](#) [_type](#)

5.1.1 Detailed Description

The base class of this application. Game Block is a unit of the map.

5.1.2 Constructor & Destructor Documentation

5.1.2.1 [GameBlock\(\)](#) [1/2]

```
GameBlock::GameBlock (
    PosType pos,
    int speed,
    BlockType type )
```

[GameBlock](#) Constructor.

Create a new [GameBlock](#) from [PosType](#), Speed and [BlockType](#)

Parameters

| | |
|--------------|--|
| <i>pos</i> | Position of the GameBlock |
| <i>speed</i> | Speed of the GameBlock |
| <i>type</i> | BlockType of the GameBlock |

5.1.2.2 GameBlock() [2/2]

```
GameBlock::GameBlock ( ) [inline]
```

Default constructor.

5.1.3 Member Function Documentation

5.1.3.1 Get_Pos()

```
PosType GameBlock::Get_Pos ( ) const
```

Get the position of the [GameBlock](#).

Returns

the position of the [GameBlock](#)

5.1.3.2 Get_Speed()

```
int GameBlock::Get_Speed ( ) const
```

Get the speed of the [GameBlock](#).

Returns

the speed of the [GameBlock](#)

5.1.3.3 Get_Type()

```
BlockType GameBlock::Get_Type ( ) const
```

Get the type of the [GameBlock](#).

Returns

the type of the [GameBlock](#)

5.1.3.4 Set_pos()

```
void GameBlock::Set_pos (
    PosType & pos )
```

Set the position of the [GameBlock](#).

Parameters

| | |
|------------|---|
| <i>pos</i> | position of the GameBlock |
|------------|---|

5.1.4 Member Data Documentation

5.1.4.1 `_pos`

`PosType GameBlock::_pos`

5.1.4.2 `_speed`

`int GameBlock::_speed [protected]`

5.1.4.3 `_Sprite`

`sf::Sprite GameBlock::_Sprite`

5.1.4.4 `_Texture`

`sf::Texture GameBlock::_Texture`

5.1.4.5 `_type`

`BlockType GameBlock::_type [protected]`

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

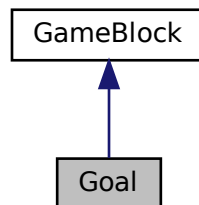
- `/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/GameBlock.hpp`
- `/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/GameBlock.cpp`

5.2 Goal Class Reference

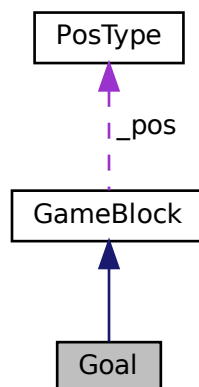
[Goal](#) Class inheriting from [GameBlock](#), with fixed speed and BlockType.

```
#include <Goal.hpp>
```

Inheritance diagram for Goal:



Collaboration diagram for Goal:



Public Member Functions

- [Goal](#) ([PosType](#) pos)
[Goal](#) constructor.

Additional Inherited Members

5.2.1 Detailed Description

[Goal](#) Class inheriting from [GameBlock](#), with fixed speed and BlockType.

5.2.2 Constructor & Destructor Documentation

5.2.2.1 Goal()

```
Goal::Goal (
    PosType pos ) [inline]
```

[Goal](#) constructor.

Parameters

| | |
|------------|--------------------------------------|
| <i>pos</i> | Position of the Goal |
|------------|--------------------------------------|

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

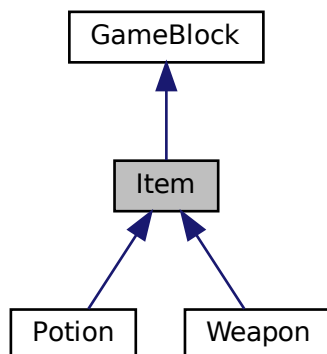
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Goal.hpp](#)

5.3 Item Class Reference

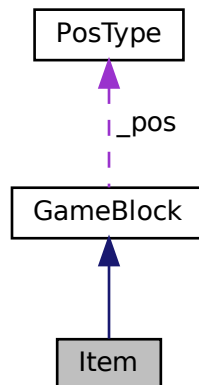
The item class inherit from Game Block and is the base abstract class for all item.

```
#include <Item.hpp>
```

Inheritance diagram for Item:



Collaboration diagram for Item:



Public Member Functions

- `Item (PosType pos, const std::string &name, ItemTypeEnum type)`
Item constructor.
- `virtual void UseItem (Player &player)=0`
Pure Virtual function UseItem.
- `virtual ~Item ()`
Item destructor.

Protected Attributes

- `std::string name_`
- `ItemTypeEnum type_`

Additional Inherited Members

5.3.1 Detailed Description

The item class inherit from Game Block and is the base abstract class for all item.

5.3.2 Constructor & Destructor Documentation

5.3.2.1 Item()

```

Item::Item (
    PosType pos,
    const std::string & name,
    ItemTypeEnum type )

```

`Item` constructor.

Parameters

| | |
|-------------|--------------------------------------|
| <i>pos</i> | Position of the Item |
| <i>name</i> | Name of the Item |
| <i>type</i> | ItemType of the Item |

5.3.2.2 ~Item()

```
virtual Item::~Item ( ) [inline], [virtual]
```

[Item](#) destructor.

5.3.3 Member Function Documentation

5.3.3.1 UseItem()

```
virtual void Item::UseItem (
    Player & player ) [pure virtual]
```

Pure Virtual function UseItem.

Parameters

| | |
|---------------|---|
| <i>player</i> | Player on wich the Item will be use |
|---------------|---|

Implemented in [Weapon](#), and [Potion](#).

5.3.4 Member Data Documentation

5.3.4.1 name_

```
std::string Item::name_ [protected]
```

5.3.4.2 type_

```
ItemTypeEnum Item::type_ [protected]
```

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

- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Item.hpp](#)
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Item.cpp](#)

5.4 Map Class Reference

```
#include <Map.hpp>
```

Public Member Functions

- [Map](#) (const std::string &file_name)
The map constructor.
- [Map](#) ()
- void [ReadMap](#) (const std::string &file_name)
read the map from text file
- [BlockType](#) [GetBlock](#) ([PosType](#) pos)
Get BlockType of the specific pos.
- std::vector< std::shared_ptr< [Monster](#) > > [GetMonsters](#) ()
Get vector of Monsters on the [Map](#) object.
- std::vector< std::shared_ptr< [Item](#) > > [GetItems](#) ()
Get BlockType of the specific pos.
- std::vector< std::vector< std::shared_ptr< [GameBlock](#) > > > [GetMap](#) ()
Get the vector 2D that is the map.

Public Attributes

- std::shared_ptr< [Player](#) > [player](#)

Protected Attributes

- std::vector< std::shared_ptr< [Monster](#) > > [monsters_](#)
- std::vector< std::shared_ptr< [Item](#) > > [items_](#)
- std::vector< std::vector< std::shared_ptr< [GameBlock](#) > > > [map_](#)

5.4.1 Constructor & Destructor Documentation

5.4.1.1 Map() [1/2]

```
Map::Map (
    const std::string & file_name )
```

The map constructor.

Parameters

| | |
|------------------|--------------------------------------|
| <i>file_name</i> | text file from where the map is read |
|------------------|--------------------------------------|

5.4.1.2 Map() [2/2]

```
Map::Map ( )
```

5.4.2 Member Function Documentation

5.4.2.1 GetBlock()

```
BlockType Map::GetBlock (
    PosType pos )
```

Get BlockType of the specific pos.

Parameters

| | |
|------------|----------------------|
| <i>pos</i> | Position of interest |
|------------|----------------------|

Returns

BlockType of the specific pos

5.4.2.2 GetItems()

```
std::vector< std::shared_ptr< Item > > Map::GetItems ( )
```

Get BlockType of the specific pos.

Parameters

| | |
|------------|----------------------|
| <i>pos</i> | Position of interest |
|------------|----------------------|

Returns

BlockType of the specific pos

5.4.2.3 GetMap()

```
std::vector< std::vector< std::shared_ptr< GameBlock > > > Map::GetMap ( )
```

Get the vector 2D that is the map.

Returns

A 2D vector of [GameBlock](#)

5.4.2.4 GetMonsters()

```
std::vector< std::shared_ptr< Monster > > Map::GetMonsters ( )
```

Get vector of Monsters on the [Map](#) object.

Returns

a vector of [Monster](#) references

5.4.2.5 ReadMap()

```
void Map::ReadMap (
    const std::string & file_name )
```

read the map from text file

Parameters

| | |
|------------------|--|
| <i>file_name</i> | |
|------------------|--|

5.4.3 Member Data Documentation**5.4.3.1 items_**

```
std::vector<std::shared_ptr<Item> > Map::items_ [protected]
```

5.4.3.2 map_

```
std::vector<std::vector<std::shared_ptr<GameBlock> > > Map::map_ [protected]
```

5.4.3.3 monsters_

```
std::vector<std::shared_ptr<Monster> > Map::monsters_ [protected]
```

5.4.3.4 player

```
std::shared_ptr<Player> Map::player
```

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

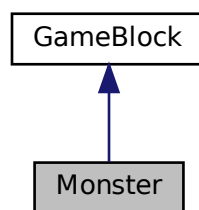
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Map.hpp](#)
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Map.cpp](#)

5.5 Monster Class Reference

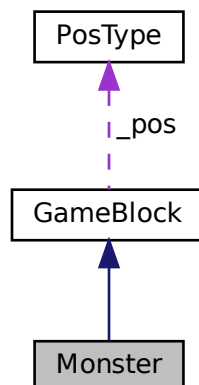
The [Monster](#) class inherit from [GameBlock](#) class, and define the [Monster](#) attribute and function.

```
#include <Monster.hpp>
```

Inheritance diagram for Monster:



Collaboration diagram for Monster:



Public Member Functions

- [Monster](#) (const [PosType](#) &pos, int speed, const std::string &name, int hp, int attackPoint)
Monster constructor.
- const std::string [getName](#) () const
Get the monster name.
- int [getHp](#) () const
Get the monster health.
- void [ChangeHp](#) (int hp)
Change the health of the monster.
- void [Move](#) ([PosType](#) newPos)
Will move the monster to a new position.
- [PosType](#) [NextPos](#) ([DirectionType](#) d)
Will give the next position that the monster should have, given a position.
- bool [Attack](#) ([Player](#) &p)
Will attack a [Player](#), its HP will be diminished from the monster attack point.

Protected Attributes

- std::string [name_](#)
- int [HP_](#)
- int [AttackPoint_](#)

Additional Inherited Members

5.5.1 Detailed Description

The [Monster](#) class inherit from [GameBlock](#) class, and define the [Monster](#) attribute and function.

5.5.2 Constructor & Destructor Documentation

5.5.2.1 Monster()

```
Monster::Monster (
    const PosType & pos,
    int speed,
    const std::string & name,
    int hp,
    int attackPoint )
```

[Monster](#) constructor.

Parameters

| | |
|--------------------|---------------------------------------|
| <i>pos</i> | Position of the monster |
| <i>speed</i> | speed of the monster |
| <i>name</i> | name of the monster |
| <i>hp</i> | Hp of the monster |
| <i>attackPoint</i> | Attack of the Monster |

5.5.3 Member Function Documentation

5.5.3.1 Attack()

```
bool Monster::Attack (
    Player & p )
```

Will attack a [Player](#), its HP will be diminished from the monster attack point.

Parameters

| | |
|----------|-----------------------------|
| <i>p</i> | The player that is attacked |
|----------|-----------------------------|

Returns

True if the [Player](#) is dead, false otherwise

5.5.3.2 ChangeHp()

```
void Monster::ChangeHp (
    int hp )
```

Change the health of the monster.

Parameters

| | |
|-----------|-------------------------------|
| <i>hp</i> | the new health of the monster |
|-----------|-------------------------------|

5.5.3.3 getHp()

```
int Monster::getHp ( ) const
```

Get the monster health.

Returns

the monster health

5.5.3.4 getName()

```
const std::string Monster::getName ( ) const
```

Get the monster name.

Returns

the monster name

5.5.3.5 Move()

```
void Monster::Move (
    PosType newpos )
```

Will move the monster to a new position.

Parameters

| | |
|---------------|---------------------------------|
| <i>newpos</i> | the new position of the monster |
|---------------|---------------------------------|

5.5.3.6 NextPos()

```
PosType Monster::NextPos (
    DirectionType d )
```

Will give the next position that the monster should have, given a position.

Parameters

| | |
|----------|-------------------------------|
| <i>d</i> | The direction of the movement |
|----------|-------------------------------|

Returns

The next position depending of the movement

5.5.4 Member Data Documentation

5.5.4.1 AttackPoint_

```
int Monster::AttackPoint_ [protected]
```

5.5.4.2 HP_

```
int Monster::HP_ [protected]
```

5.5.4.3 name_

```
std::string Monster::name_ [protected]
```

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

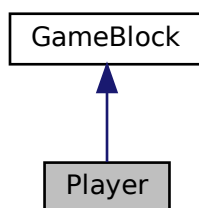
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Monster.hpp](#)
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Monster.cpp](#)

5.6 Player Class Reference

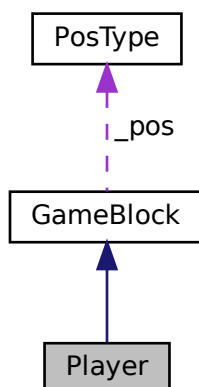
The [Player](#) class inherit from [GameBlock](#) class, and define the [Player](#) attribute and function.

```
#include <Player.hpp>
```

Inheritance diagram for Player:



Collaboration diagram for Player:



Public Member Functions

- [Player](#) ([PosType](#) pos, const std::string &name, int HP, int AttackPoint)
Player constructor.
- [Player](#) ()
Player default constructor.
- const std::string [getName](#) () const
Get the player name.
- int [getHp](#) () const
Get the player health.
- int [getAttackPoint](#) () const
Get the player attack.
- void [ChangeHp](#) (int hp)
Change the health of the player.
- void [setAttackPoint](#) (int AttackPt)
Change the Attack of the player.
- const std::vector< std::shared_ptr< [Item](#) > > & [getItemInventory](#) () const
Get the item inventory of the player.
- void [PickUpItem](#) (std::shared_ptr< [Item](#) > ItemToPick)
Add an item to the player ItemInventory.
- void [UseItem](#) ()
Will call the function UseItem of the first [Item](#) in the ItemInventory.
- void [nextItem](#) ()
Will change the first item of the ItemInventory to the second one, putting the first at the back.
- bool [Attack](#) ([Monster](#) &m)
Will attack a [Monster](#), its HP will be diminished from the player attack point.
- void [Move](#) ([PosType](#) newpos)
Will move the player to a new position.
- [PosType](#) [NextPos](#) ([DirectionType](#) d)
Will give the next position that the player should have, given a position.
- void [Setwin](#) ()
Set Win.
- void [Setloss](#) ()
Set loss.
- bool [isWin](#) () const
Return the value of Win.
- bool [isLoss](#) () const
Return the value of Loss.

Protected Attributes

- std::string [name_](#)
- int [HP_](#)
- int [AttackPoint_](#)
- std::vector< std::shared_ptr< [Item](#) > > [ItemInventory_](#)
- bool [Win_](#)
- bool [Loss_](#)

Additional Inherited Members

5.6.1 Detailed Description

The [Player](#) class inherit from [GameBlock](#) class, and define the [Player](#) attribute and function.

5.6.2 Constructor & Destructor Documentation

5.6.2.1 [Player\(\)](#) [1/2]

```
Player::Player (
    PosType pos,
    const std::string & name,
    int HP,
    int AttackPoint )
```

[Player](#) constructor.

Parameters

| | |
|--------------------|------------------------|
| <i>pos</i> | Position of the player |
| <i>name</i> | Name of the player |
| <i>HP</i> | HP of the player |
| <i>AttackPoint</i> | Attack of the player |

5.6.2.2 [Player\(\)](#) [2/2]

```
Player::Player ( ) [inline]
```

[Player](#) default constructor.

5.6.3 Member Function Documentation

5.6.3.1 [Attack\(\)](#)

```
bool Player::Attack (
    Monster & m )
```

Will attack a [Monster](#), its HP will be diminued from the player attack point.

Parameters

| | |
|----------|------------------------------|
| <i>m</i> | The monster that is attacked |
|----------|------------------------------|

Returns

True if the monster is dead, false otherwise

5.6.3.2 ChangeHp()

```
void Player::ChangeHp (
    int hp )
```

Change the health of the player.

Parameters

| | |
|-----------|------------------------------|
| <i>hp</i> | the new health of the player |
|-----------|------------------------------|

5.6.3.3 getAttackPoint()

```
int Player::getAttackPoint ( ) const
```

Get the player attack.

Returns

the player attack

5.6.3.4 getHp()

```
int Player::getHp ( ) const
```

Get the player health.

Returns

the player health

5.6.3.5 getItemInventory()

```
const std::vector< std::shared_ptr< Item > > & Player::getItemInventory ( ) const
```

Get the item inventory of the player.

Returns

the player item inventory

5.6.3.6 getName()

```
const std::string Player::getName ( ) const
```

Get the player name.

Returns

the player name

5.6.3.7 isLoss()

```
bool Player::isLoss ( ) const
```

Return the value of Loss.

5.6.3.8 isWin()

```
bool Player::isWin ( ) const
```

Return the value of Win.

5.6.3.9 Move()

```
void Player::Move (
    PosType newpos )
```

Will move the player to a new position.

Parameters

| | |
|---------------|--------------------------------|
| <i>newpos</i> | the new position of the player |
|---------------|--------------------------------|

5.6.3.10 nextItem()

```
void Player::nextItem ( )
```

Will change the first item of the ItemInventory to the second one, putting the first at the back.

5.6.3.11 NextPos()

```
PosType Player::NextPos (
    DirectionType d )
```

Will give the next position that the player should have, given a position.

Parameters

| | |
|----------|-------------------------------|
| <i>d</i> | The direction of the movement |
|----------|-------------------------------|

Returns

The next position depending of the movement

5.6.3.12 PickupItem()

```
void Player::PickUpItem (
    std::shared_ptr< Item > ItemToPick )
```

Add an item to the player ItemInventory.

Parameters

| | |
|-------------------|--|
| <i>ItemToPick</i> | The item that will be added to the ItemInventory |
|-------------------|--|

5.6.3.13 setAttackPoint()

```
void Player::setAttackPoint (
```

```
int AttackPt )
```

Change the Attack of the player.

Parameters

| | |
|-----------------|------------------------------|
| <i>AttackPt</i> | the new attack of the player |
|-----------------|------------------------------|

5.6.3.14 Setloss()

```
void Player::Setloss ( )
```

Set loss.

5.6.3.15 Setwin()

```
void Player::Setwin ( )
```

Set Win.

5.6.3.16 UseItem()

```
void Player::UseItem ( )
```

Will call the function UseItem of the first [Item](#) in the ItemInventory.

5.6.4 Member Data Documentation

5.6.4.1 AttackPoint_

```
int Player::AttackPoint_ [protected]
```

5.6.4.2 HP_

```
int Player::HP_ [protected]
```

5.6.4.3 ItemInventory_

```
std::vector<std::shared_ptr<Item> > Player::ItemInventory_ [protected]
```

5.6.4.4 Loss_

```
bool Player::Loss_ [protected]
```

5.6.4.5 name_

```
std::string Player::name_ [protected]
```

5.6.4.6 Win_

```
bool Player::Win_ [protected]
```

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

- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Player.hpp](#)
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Player.cpp](#)

5.7 PosType Struct Reference

```
#include <header.hpp>
```

Public Attributes

- int [pos_x](#)
- int [pos_y](#)

5.7.1 Member Data Documentation

5.7.1.1 pos_x

```
int PosType::pos_x
```

5.7.1.2 pos_y

```
int PosType::pos_y
```

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

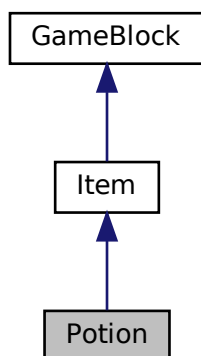
- </home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/header.hpp>

5.8 Potion Class Reference

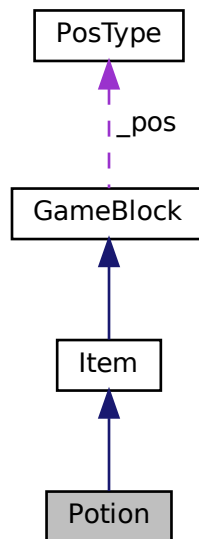
The potion class inherit from [Item](#) abstract class, and define the health potion.

```
#include <Potion.hpp>
```

Inheritance diagram for Potion:



Collaboration diagram for Potion:



Public Member Functions

- `Potion` (int HP, `PosType` pos, const std::string &name)
Potion constructor.
- virtual void `UseItem` (`Player` &player)
Use Item virtual function, that will heal the player of a number of HP.
- int `getHp` () const
Get the HP that the potion will heal.
- virtual `~Potion` ()
Potion destructor.

Protected Attributes

- int `HP_`

Additional Inherited Members

5.8.1 Detailed Description

The potion class inherit from `Item` abstract class, and define the health potion.

5.8.2 Constructor & Destructor Documentation

5.8.2.1 Potion()

```
Potion::Potion (
    int HP,
    PosType pos,
    const std::string & name )
```

[Potion](#) constructor.

Parameters

| | |
|-------------|--|
| <i>HP</i> | The HP that will be restored to the player |
| <i>pos</i> | Position of the item |
| <i>name</i> | Name of the item |

5.8.2.2 ~Potion()

```
virtual Potion::~~Potion ( ) [inline], [virtual]
```

[Potion](#) destructor.

5.8.3 Member Function Documentation

5.8.3.1 getHp()

```
int Potion::getHp ( ) const
```

Get the HP that the potion will heal.

Returns

Return the number of HP that the potion will heal

5.8.3.2 UseItem()

```
void Potion::UseItem (
    Player & player ) [virtual]
```

Use [Item](#) virtual function, that will heal the player of a number of HP.

Parameters

| | |
|---------------|------------------------------|
| <i>player</i> | The player that will be heal |
|---------------|------------------------------|

Implements [Item](#).

5.8.4 Member Data Documentation

5.8.4.1 HP_

```
int Potion::HP_ [protected]
```

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

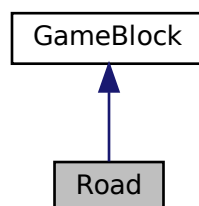
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Potion.hpp](#)
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Potion.cpp](#)

5.9 Road Class Reference

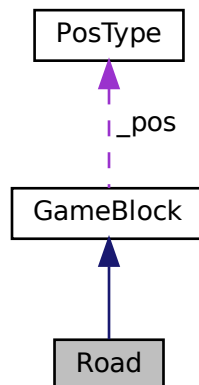
[Road](#) Class inheriting from [GameBlock](#), with fixed speed and BlockType.

```
#include <Road.hpp>
```

Inheritance diagram for Road:



Collaboration diagram for Road:



Public Member Functions

- [Road](#) ([PosType](#) pos)
[Road](#) constructor.

Additional Inherited Members

5.9.1 Detailed Description

[Road](#) Class inheriting from [GameBlock](#), with fixed speed and BlockType.

5.9.2 Constructor & Destructor Documentation

5.9.2.1 Road()

```
Road::Road (  
    PosType pos ) [inline]
```

[Road](#) constructor.

Parameters

| | |
|------------|--------------------------------------|
| <i>pos</i> | Position of the Road |
|------------|--------------------------------------|

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

- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Road.hpp](#)

5.10 Turn Class Reference

```
#include <Turn.hpp>
```

Public Member Functions

- [Turn](#) ([Map](#) &map)
Constructor for a turn class.
- bool [RunPlayerTurn](#) ()
Run the turn after the player's input.
- bool [RunMonsterTurn](#) ()
Move each monster in the map randomly after the player's turn.
- bool [swap](#) (const [PosType](#) &road, const [PosType](#) &moveobj)
Swap the position of the GameObject in the map's 2 dimension vector and update the road's postype(the moveobj's postype will be updated in the turns)

Public Attributes

- `std::vector< std::vector< std::shared_ptr< GameBlock > > > map_`

5.10.1 Constructor & Destructor Documentation

5.10.1.1 Turn()

```
Turn::Turn (
    Map & map )
```

Constructor for a turn class.

Parameters

| | |
|------------|--|
| <i>map</i> | A map object with a 2 dimension vecotor contain every GameObject |
|------------|--|

5.10.2 Member Function Documentation

5.10.2.1 RunMonsterTurn()

```
bool Turn::RunMonsterTurn ( )
```

Move each monster in the map randomly after the player's turn.

Returns

True if the game continues false if the game is ended

5.10.2.2 RunPlayerTurn()

```
bool Turn::RunPlayerTurn ( )
```

Run the turn after the player's input.

Returns

True if the game continues false if the game is ended

5.10.2.3 swap()

```
bool Turn::swap (
    const PosType & road,
    const PosType & moveobj )
```

Swap the position of the GameObject in the map's 2 dimension vector and update the road's postype(the moveobj's postype will be updated in the turns)

Parameters

| | |
|----------------|--|
| <i>raod</i> | The position of the moveobj is moving on |
| <i>moveobj</i> | GameObject that is going to move, it could be a player or moster |

Returns

True

5.10.3 Member Data Documentation

5.10.3.1 map_

```
std::vector<std::vector<std::shared_ptr<GameBlock>>>> Turn::map_
```

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

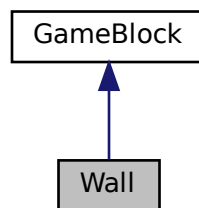
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Turn.hpp](#)
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Turn.cpp](#)

5.11 Wall Class Reference

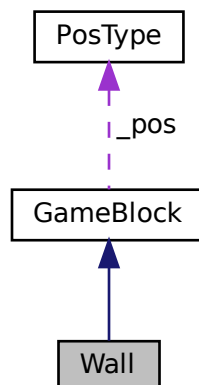
[Wall](#) Class inheriting from [GameBlock](#), with fixed speed and BlockType.

```
#include <Wall.hpp>
```

Inheritance diagram for Wall:



Collaboration diagram for Wall:



Public Member Functions

- [Wall](#) ([PosType](#) pos)
Wall constructor.

Additional Inherited Members

5.11.1 Detailed Description

[Wall](#) Class inheriting from [GameBlock](#), with fixed speed and BlockType.

5.11.2 Constructor & Destructor Documentation

5.11.2.1 Wall()

```
Wall::Wall (
    PosType pos ) [inline]
```

[Wall](#) constructor.

Parameters

| | |
|------------|--------------------------------------|
| <i>pos</i> | Position of the Wall |
|------------|--------------------------------------|

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

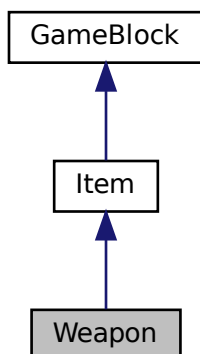
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Wall.hpp](#)

5.12 Weapon Class Reference

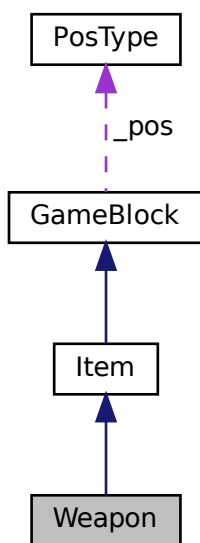
The [Weapon](#) class inherit from [Item](#) abstract class, and define the weapon.

```
#include <Weapon.hpp>
```


Inheritance diagram for Weapon:



Collaboration diagram for Weapon:



Public Member Functions

- [Weapon](#) (int Attack, [PosType](#) pos, const std::string &name)
[Potion](#) constructor.
- virtual void [UseItem](#) ([Player](#) &player)
Use [Item](#) virtual function, that will give Attack to the player.

- int [getAttack](#) () const
Get the attack that will be given by the weapon to the player.
- virtual [~Weapon](#) ()
[Weapon](#) Destructor.

Protected Attributes

- int [Attack_](#)

Additional Inherited Members

5.12.1 Detailed Description

The [Weapon](#) class inherit from [Item](#) abstract class, and define the weapon.

5.12.2 Constructor & Destructor Documentation

5.12.2.1 [Weapon](#)()

```
Weapon::Weapon (
    int Attack,
    PosType pos,
    const std::string & name )
```

[Potion](#) constructor.

Parameters

| | |
|---------------|-------------------------------------|
| <i>Attack</i> | The Attack that the player will get |
| <i>pos</i> | Position of the item |
| <i>name</i> | Name of the item |

5.12.2.2 [~Weapon](#)()

```
virtual Weapon::~Weapon ( ) [inline], [virtual]
```

[Weapon](#) Destructor.

5.12.3 Member Function Documentation

5.12.3.1 `getAttack()`

```
int Weapon::getAttack ( ) const
```

Get the attack that will be given by the weapon to the player.

Returns

The attack that will be given

5.12.3.2 `UseItem()`

```
void Weapon::UseItem (
    Player & player ) [virtual]
```

Use [Item](#) virtual function, that will give Attack to the player.

Parameters

| | |
|---------------------|--------------------------------------|
| <code>player</code> | The player that will be given attack |
|---------------------|--------------------------------------|

Implements [Item](#).

5.12.4 Member Data Documentation

5.12.4.1 `Attack_`

```
int Weapon::Attack_ [protected]
```

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

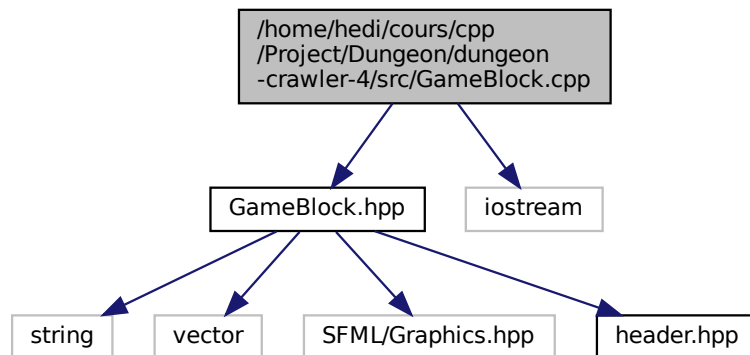
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Weapon.hpp](#)
- [/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Weapon.cpp](#)

Chapter 6

File Documentation

6.1 `/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵` **GameBlock.cpp File Reference**

```
#include "GameBlock.hpp"  
#include "iostream"  
Include dependency graph for GameBlock.cpp:
```



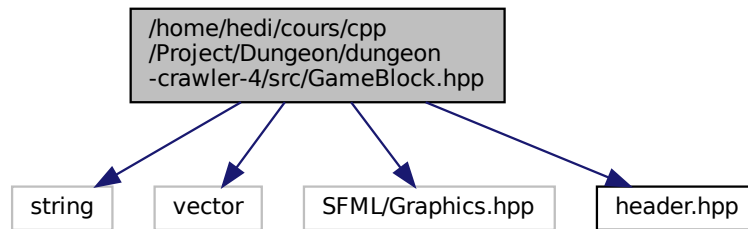
6.2 `/home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵` **GameBlock.hpp File Reference**

File with the definition of `GameBlock` class.

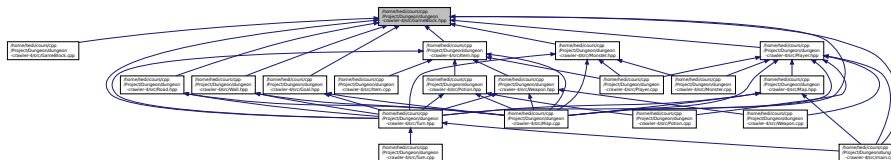
```
#include <string>  
#include <vector>  
#include <SFML/Graphics.hpp>
```

```
#include "header.hpp"
```

Include dependency graph for GameBlock.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class [GameBlock](#)

The base class of this application. Game Block is a unit of the map.

6.2.1 Detailed Description

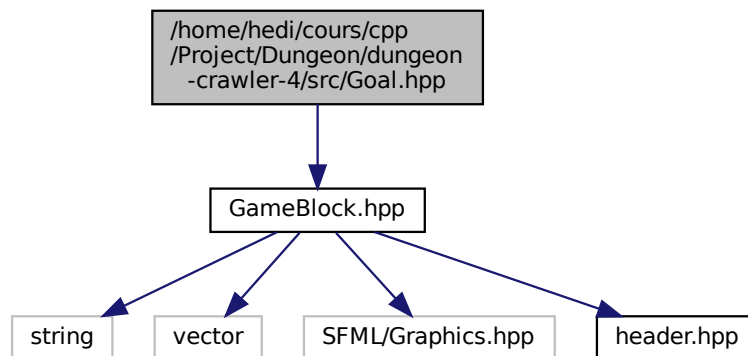
File with the defination of [GameBlock](#) class.

6.3 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵ Goal.hpp File Reference

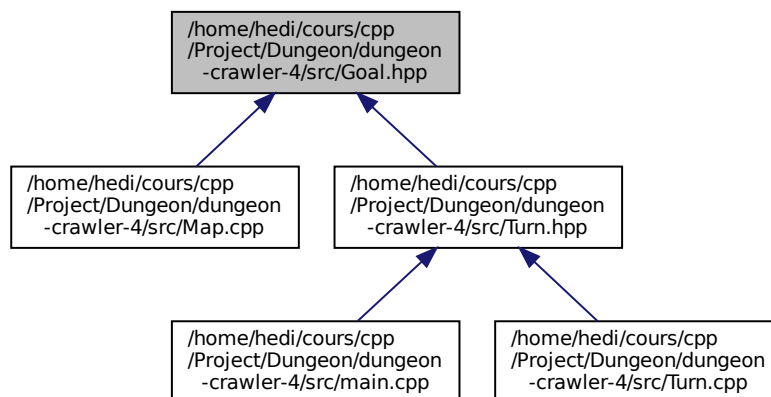
File with the defination of [Goal](#) class.

```
#include "GameBlock.hpp"
```

Include dependency graph for Goal.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class [Goal](#)

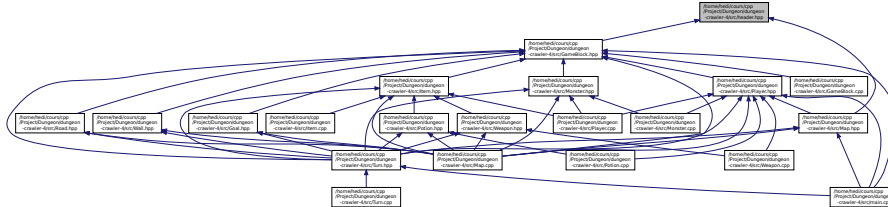
[Goal](#) Class inheriting from [GameBlock](#), with fixed speed and *BlockType*.

6.3.1 Detailed Description

File with the defination of [Goal](#) class.

6.4 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/header.hpp File Reference

This graph shows which files directly or indirectly include this file:



Classes

- struct [Postype](#)

Enumerations

- enum [BlockType](#) {
[RoadType](#) , [WallType](#) , [PlayerType](#) , [MonsterType](#) ,
[ItemType](#) , [GoalType](#) }
- enum [ItemTypeEnum](#) { [PotionType](#) , [WeaponType](#) }
- enum [DirectionType](#) {
[UP](#) , [DOWN](#) , [RIGHT](#) , [LEFT](#) ,
[NONE](#) }

Variables

- const std::string [imagespath](#) = "../images/"
- const std::string [mappath](#) = "../src/"

6.4.1 Enumeration Type Documentation

6.4.1.1 BlockType

enum [BlockType](#)

Enumerator

| | |
|-------------|--|
| RoadType | |
| WallType | |
| PlayerType | |
| MonsterType | |
| ItemType | |
| GoalType | |

6.4.1.2 DirectionType

```
enum DirectionType
```

Enumerator

| | |
|-------|--|
| UP | |
| DOWN | |
| RIGHT | |
| LEFT | |
| NONE | |

6.4.1.3 ItemTypeEnum

```
enum ItemTypeEnum
```

Enumerator

| | |
|------------|--|
| PotionType | |
| WeaponType | |

6.4.2 Variable Documentation

6.4.2.1 imagespath

```
const std::string imagespath = "../images/"
```

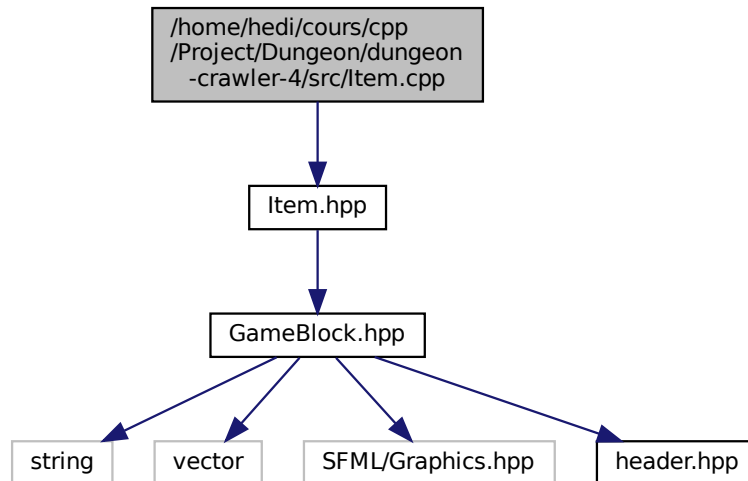
6.4.2.2 mappath

```
const std::string mappath = "../src/"
```

6.5 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵ Item.cpp File Reference

```
#include "Item.hpp"
```

Include dependency graph for Item.cpp:

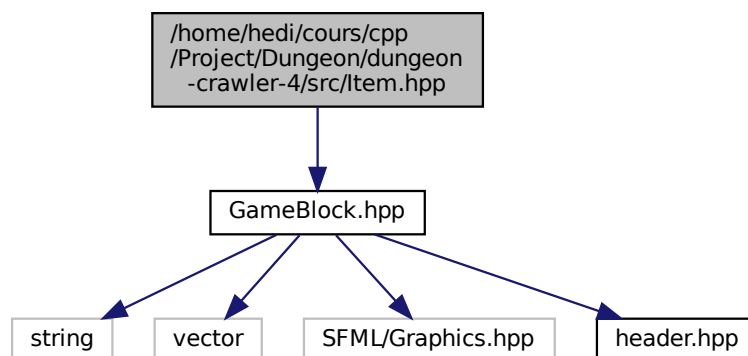


6.6 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵ Item.hpp File Reference

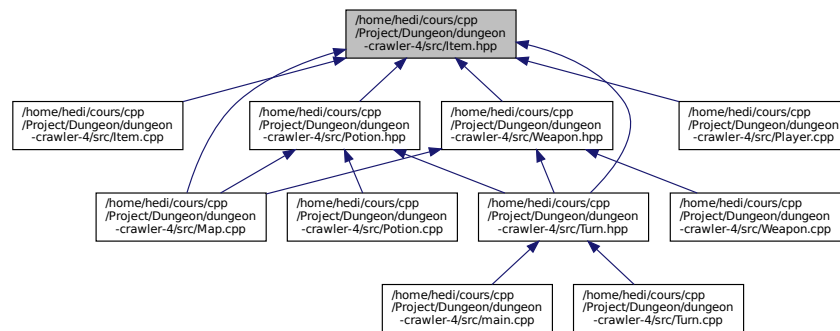
File with the definition of `Item` abstract class.

```
#include "GameBlock.hpp"
```

Include dependency graph for Item.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class [Item](#)

The item class inherit from Game Block and is the base abstract class for all item.

6.6.1 Detailed Description

File with the defination of [Item](#) abstract class.

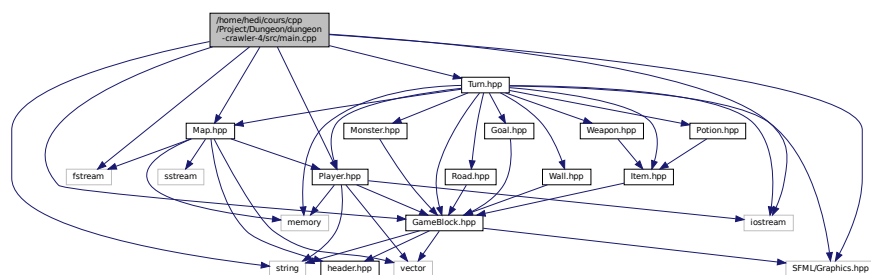
6.7 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/main.cpp File Reference

```

#include "Map.hpp"
#include "iostream"
#include "Turn.hpp"
#include "Player.hpp"
#include <fstream>
#include <string>
#include "GameBlock.hpp"
#include <SFML/Graphics.hpp>

```

Include dependency graph for main.cpp:



Functions

- int [main](#) ()

6.7.1 Function Documentation

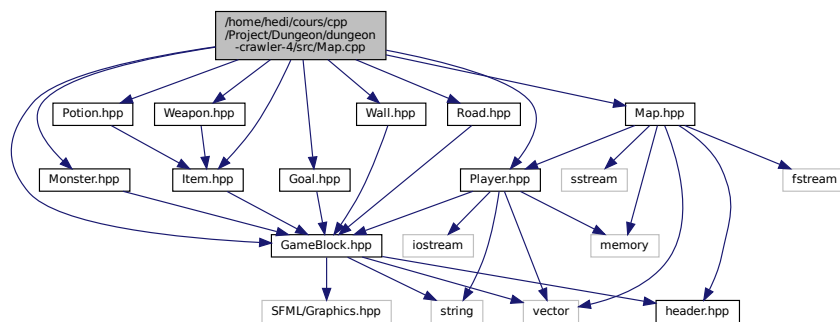
6.7.1.1 main()

```
int main ( )
```

6.8 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/ ↵ Map.cpp File Reference

```
#include "Map.hpp"
#include "GameBlock.hpp"
#include "Player.hpp"
#include "Monster.hpp"
#include "Item.hpp"
#include "Potion.hpp"
#include "Weapon.hpp"
#include "Goal.hpp"
#include "Wall.hpp"
#include "Road.hpp"
```

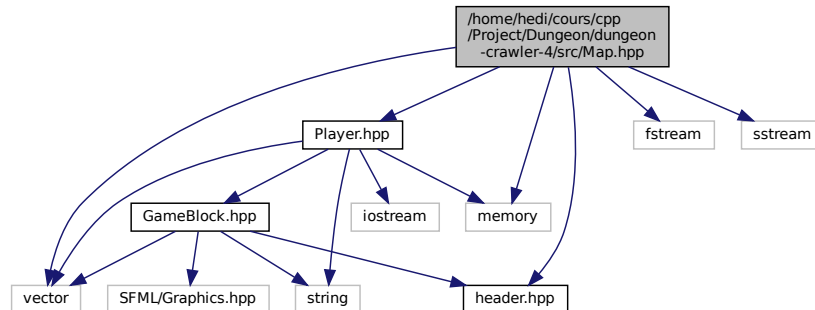
Include dependency graph for Map.cpp:



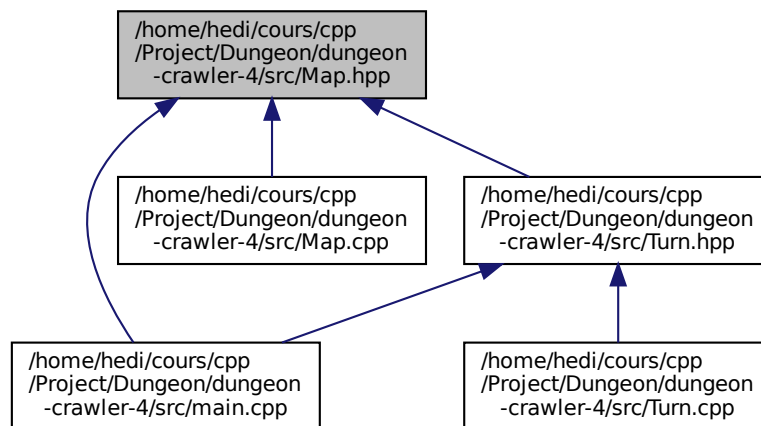
6.9 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/ ↵ Map.hpp File Reference

```
#include <vector>
#include <memory>
#include <fstream>
```

```
#include <sstream>
#include "Player.hpp"
#include "header.hpp"
Include dependency graph for Map.hpp:
```



This graph shows which files directly or indirectly include this file:



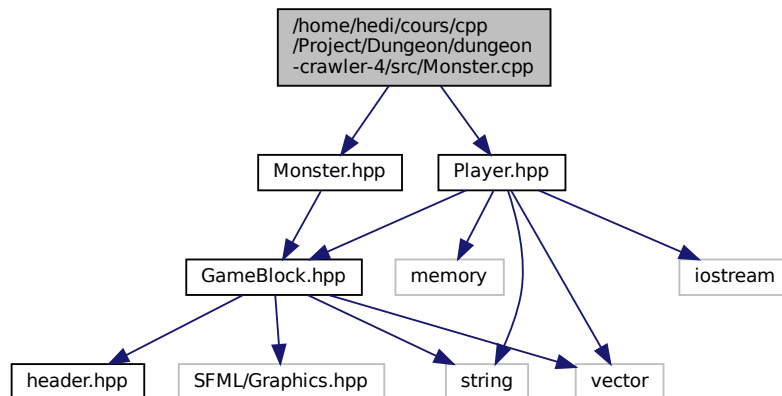
Classes

- class [Map](#)

6.10 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵ Monster.cpp File Reference

```
#include "Monster.hpp"
#include "Player.hpp"
```

Include dependency graph for Monster.cpp:

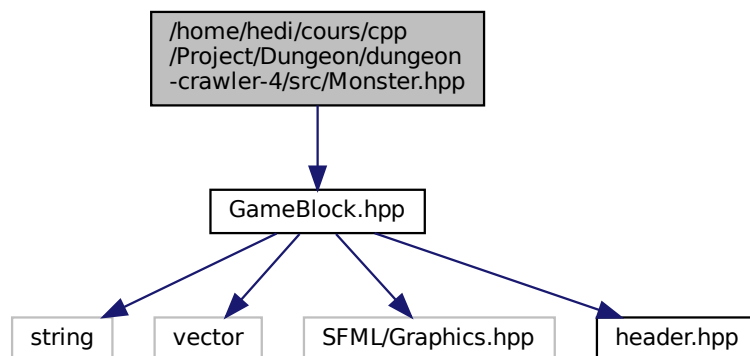


6.11 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↔ Monster.hpp File Reference

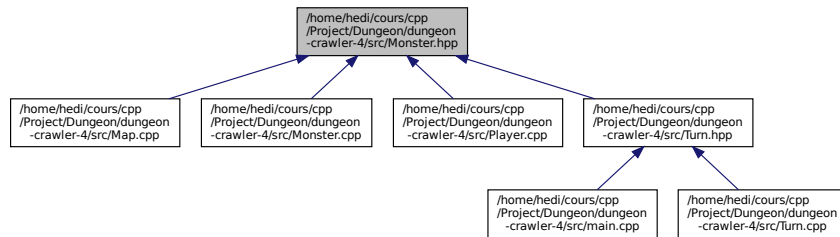
File with the definition of [Monster](#) class.

```
#include "GameBlock.hpp"
```

Include dependency graph for Monster.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class [Monster](#)

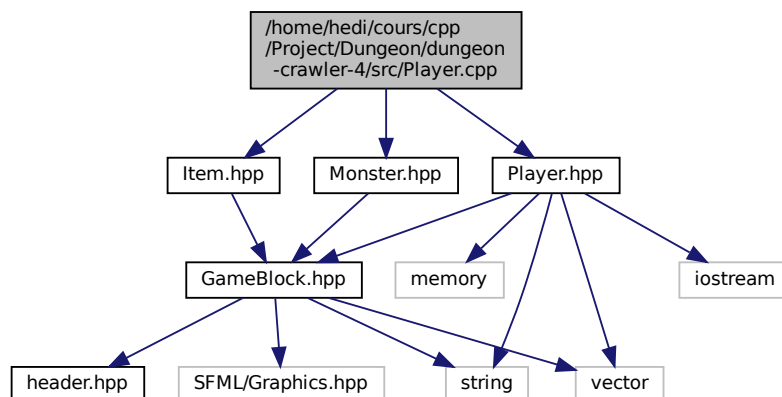
The [Monster](#) class inherit from [GameBlock](#) class, and define the [Monster](#) attribute and function.

6.11.1 Detailed Description

File with the defination of [Monster](#) class.

6.12 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Player.cpp File Reference

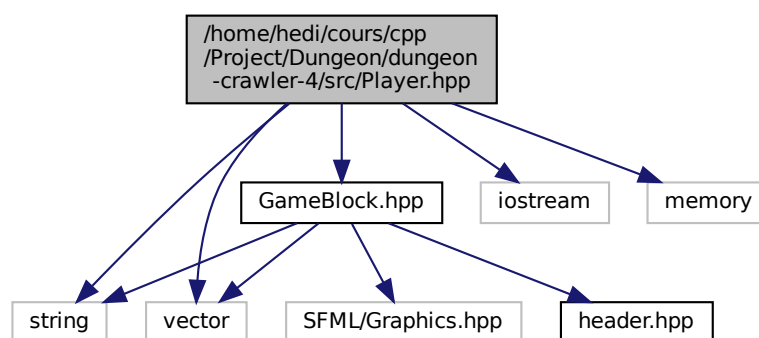
```
#include "Player.hpp"
#include "Monster.hpp"
#include "Item.hpp"
Include dependency graph for Player.cpp:
```



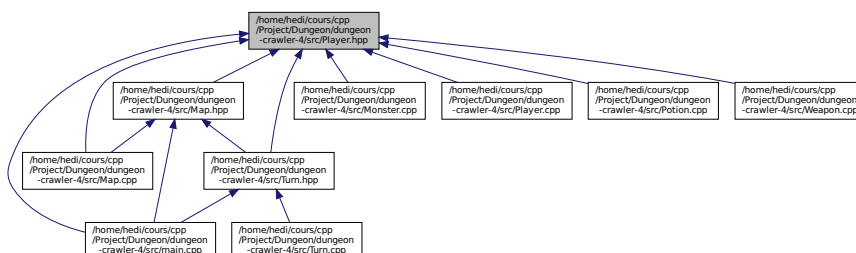
6.13 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/ ↩ Player.hpp File Reference

File with the definition of [Player](#) class.

```
#include "GameBlock.hpp"
#include <string>
#include <vector>
#include <iostream>
#include <memory>
Include dependency graph for Player.hpp:
```



This graph shows which files directly or indirectly include this file:



Classes

- class [Player](#)

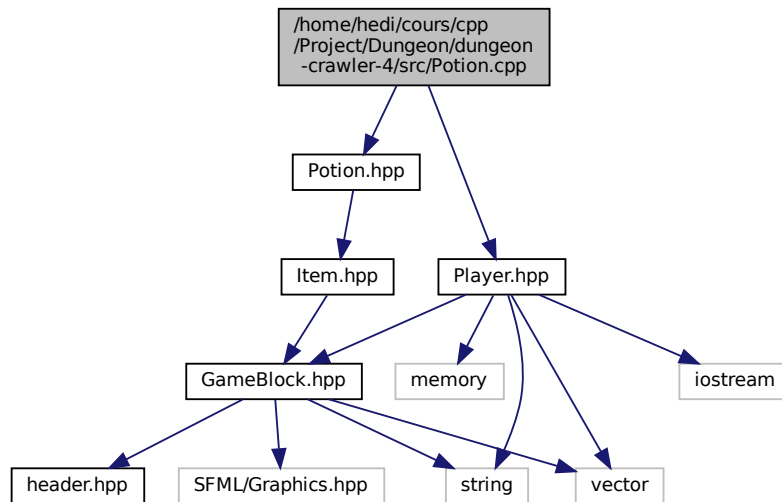
The [Player](#) class inherit from [GameBlock](#) class, and define the [Player](#) attribute and function.

6.13.1 Detailed Description

File with the definition of [Player](#) class.

6.14 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵ Potion.cpp File Reference

```
#include "Potion.hpp"  
#include "Player.hpp"  
Include dependency graph for Potion.cpp:
```

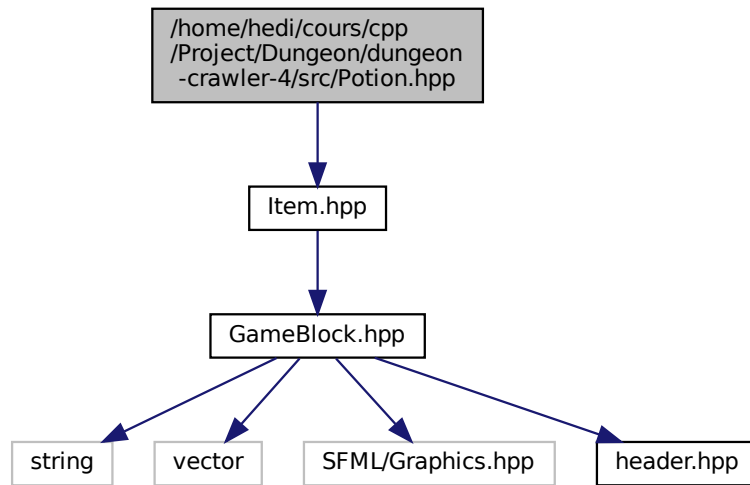


6.15 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵ Potion.hpp File Reference

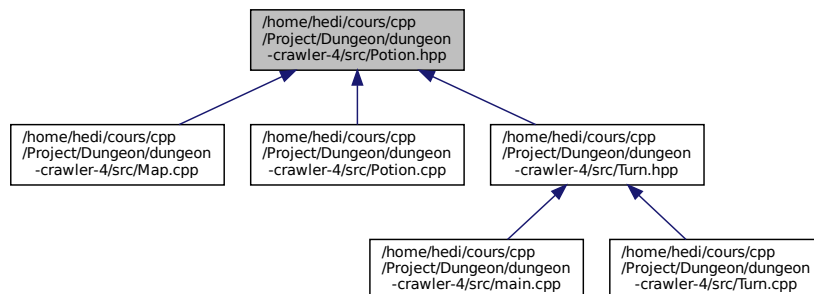
File with the definition of `Potion` class.

```
#include "Item.hpp"
```

Include dependency graph for Potion.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class [Potion](#)

The potion class inherit from [Item](#) abstract class, and define the health potion.

6.15.1 Detailed Description

File with the defination of [Potion](#) class.

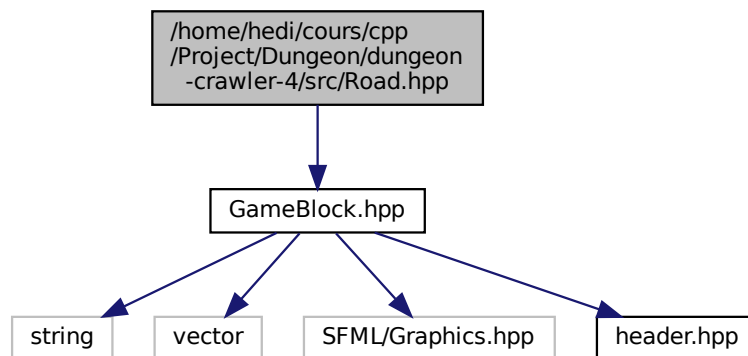
6.16 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/readme.md File Reference

6.17 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/Road.hpp File Reference

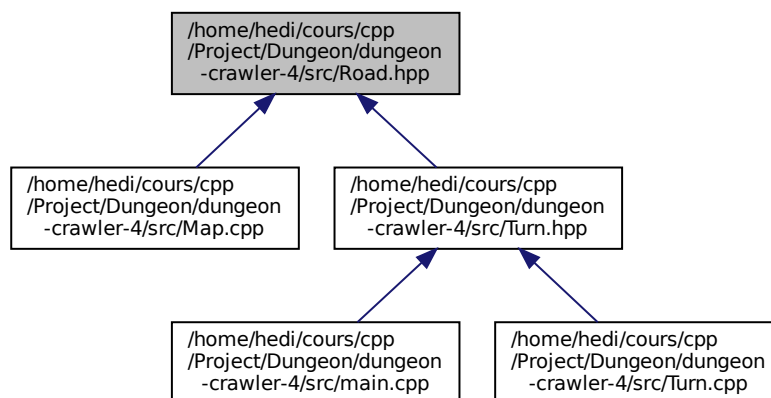
File with the definition of [Road](#) class.

```
#include "GameBlock.hpp"
```

Include dependency graph for Road.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class [Road](#)

[Road](#) Class inheriting from [GameBlock](#), with fixed speed and BlockType.

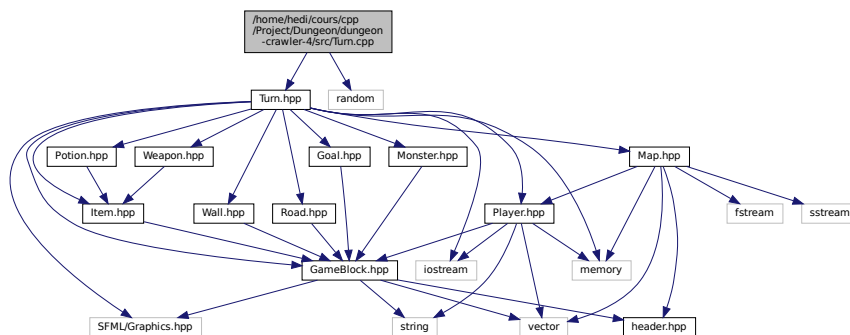
6.17.1 Detailed Description

File with the definition of [Road](#) class.

6.18 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵ Test.cpp File Reference

6.19 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵ Turn.cpp File Reference

```
#include "Turn.hpp"
#include <random>
Include dependency graph for Turn.cpp:
```

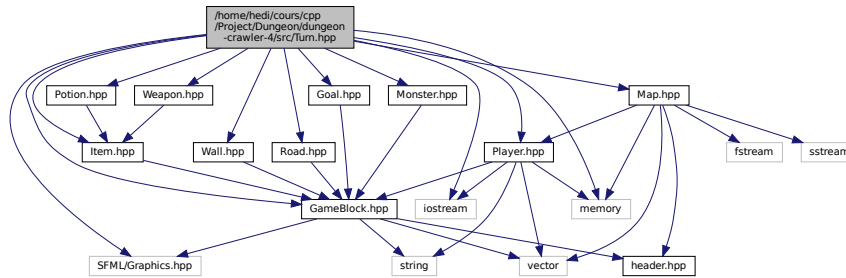


6.20 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵ Turn.hpp File Reference

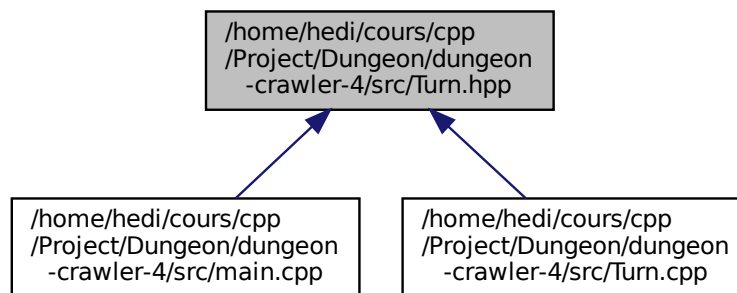
```
#include <SFML/Graphics.hpp>
#include <iostream>
#include <memory>
#include "GameBlock.hpp"
#include "Item.hpp"
#include "Player.hpp"
#include "Wall.hpp"
#include "Road.hpp"
#include "Goal.hpp"
#include "Monster.hpp"
#include "Map.hpp"
#include "Potion.hpp"
```

```
#include "Weapon.hpp"
```

Include dependency graph for Turn.hpp:



This graph shows which files directly or indirectly include this file:



Classes

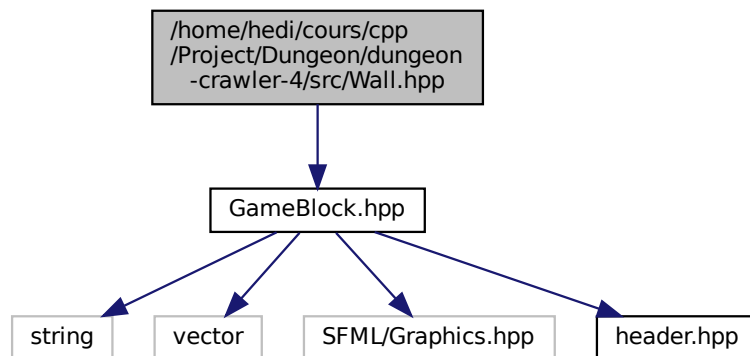
- class [Turn](#)

6.21 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵ Wall.hpp File Reference

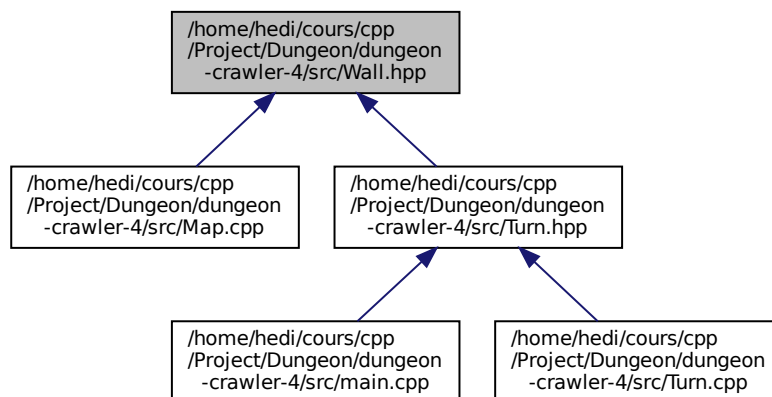
File with the defination of [Wall](#) class.

```
#include "GameBlock.hpp"
```

Include dependency graph for Wall.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class [Wall](#)

[Wall](#) Class inheriting from [GameBlock](#), with fixed speed and BlockType.

6.21.1 Detailed Description

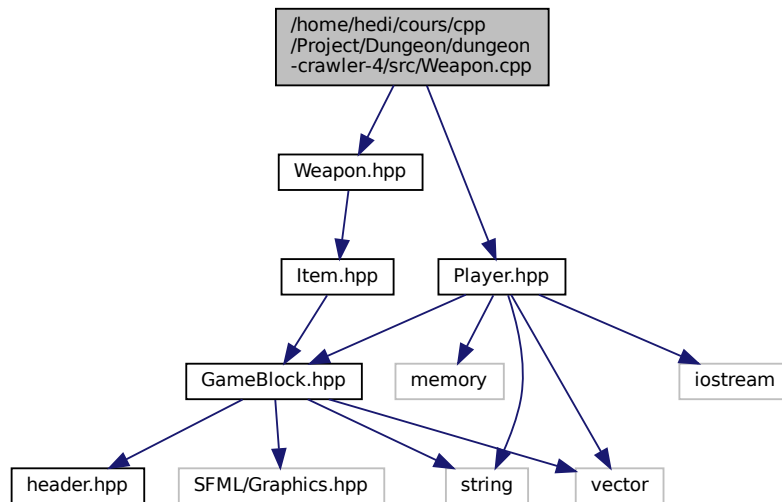
File with the defination of [Wall](#) class.

6.22 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵ Weapon.cpp File Reference

```
#include "Weapon.hpp"
```

```
#include "Player.hpp"
```

Include dependency graph for Weapon.cpp:

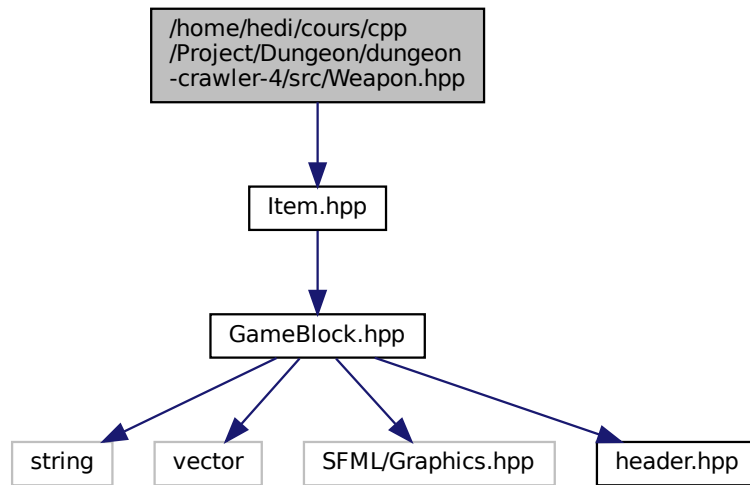


6.23 /home/hedi/cours/cpp/Project/Dungeon/dungeon-crawler-4/src/↵ Weapon.hpp File Reference

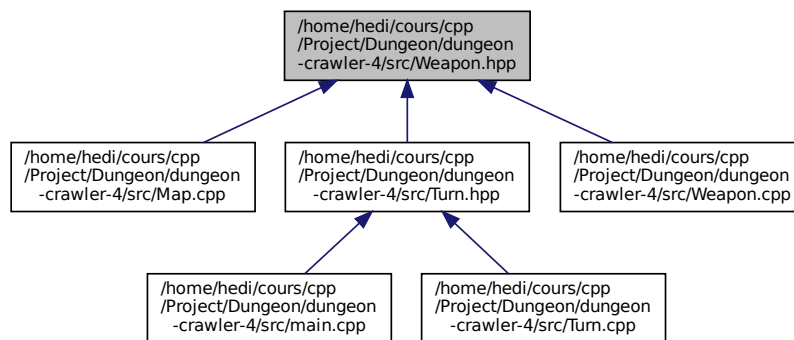
File with the definition of [Weapon](#) class.

```
#include "Item.hpp"
```

Include dependency graph for Weapon.hpp:



This graph shows which files directly or indirectly include this file:



Classes

- class [Weapon](#)

The [Weapon](#) class inherit from [Item](#) abstract class, and define the weapon.

6.23.1 Detailed Description

File with the defination of [Weapon](#) class.

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