Rogue Reborn

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

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

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Chapter 2

Class Index

2.1 Class List

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

Amulet
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Armor
: Represents armor . . . 11

ArmorTest . . . 13

Coord
: Represents a location within the dungeon or on the screen . . . 14

Corridor
: Regular corridor tile . . . 18

Door
: Door tile . . . 19

Feature
: Models a 'thing' in the dungeon that has position and may be visible . . . 20

Floor
: Regular dungeon floor . . . 22

Food
: Represents food . . . 23

Generator
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Chapter 4

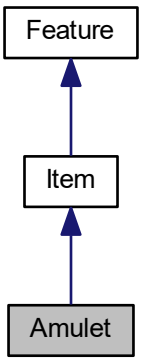
Class Documentation

4.1 Amulet Class Reference

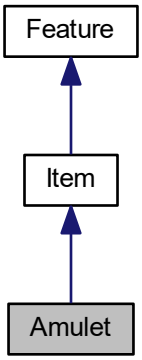
Represents the Amulet of Yendor.

```
#include <amulet.h>
```

Inheritance diagram for Amulet:



Collaboration diagram for Amulet:



Public Member Functions

- Amulet (Coord, Item::Context)

  Constructs an Amulet instance.

Additional Inherited Members

4.1.1 Detailed Description

Represents the Amulet of Yendor.

4.1.2 Constructor & Destructor Documentation

4.1.2.1 Amulet()

```
Amulet::Amulet (
            Coord location,
            Item::Context context )
```

Constructs an Amulet instance.

Parameters

in	*location*	Amulet location
in	*context*	Amulet context

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

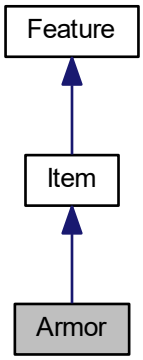
- include/amulet.h
- amulet.cpp

4.2 Armor Class Reference

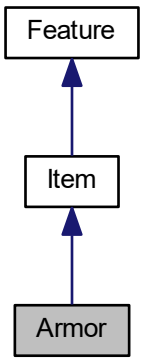
Represents armor.

`#include <armor.h>`

Inheritance diagram for Armor:



Collaboration diagram for Armor:



Public Member Functions

- Armor (Coord)

  Constructs an Armor instance with a random type.
- Armor (Coord, Item::Context, int)

  Constructs an Armor instance.
- int getRating ()

  Gets the rating.

Additional Inherited Members

4.2.1 Detailed Description

Represents armor.

4.2.2 Constructor & Destructor Documentation

4.2.2.1 Armor() [1/2]

```
Armor::Armor (
            Coord location )
```

Constructs an Armor instance with a random type.

Parameters

in	*location*	Armor location

4.2.2.2 Armor() [2/2]

```
Armor::Armor (
            Coord location,
            Item::Context context,
            int type )
```

Constructs an Armor instance.

Parameters

in	*location*	Armor location
in	*context*	Armor context
in	*type*	Armor type

4.2.3 Member Function Documentation

4.2.3.1 getRating()

```
int Armor::getRating ( )
```

Gets the rating.

Returns

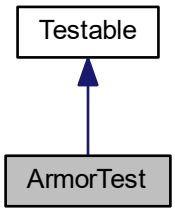
The rating.

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

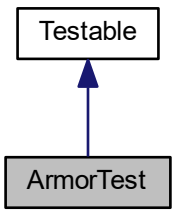
- include/armor.h
- armor.cpp

4.3 ArmorTest Class Reference

Inheritance diagram for ArmorTest:



Collaboration diagram for ArmorTest:



Public Member Functions

- bool **test** ()

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

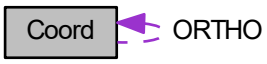
- test/test.armor.cpp

4.4 Coord Class Reference

Represents a location within the dungeon or on the screen.

`#include <coord.h>`

Collaboration diagram for Coord:



Public Member Functions

- Coord (int, int)
  (x,y) constructor.
- Coord ()
  (0,0) constructor.
- int & operator[ ] (int)
  Access param dimension magnitude.
- Coord operator+ (const Coord &)
  Add two coords together.
- Coord operator- (const Coord &)
  Subtract two coords.
- Coord operator∗ (const int &)
  Multiply all vector items by scalar.
- Coord & operator+= (const Coord &)
  Augmented assignment for addition.
- Coord & operator-= (const Coord &)
  Augmented assignment for subtraction.
- bool operator< (const Coord &) const
  Order coords by overall magnitude.
- Coord & operator∗= (const int &)
  Multiply two coords (item by item).
- bool operator== (const Coord &)

True if all vector items equal.

- bool operator!= (const Coord &)

  Inverse of == operator.
- Coord asScreen ()

  Convert position in level to position in screen.
- Coord copy ()

  Return a copy of this coord.
- bool isAdjacentTo (const Coord &) const

  Return distance(taxicab) <= 1.
- std::string toString () const

  Format as x, y.
- int distanceTo (const Coord &) const

  Maximum distance in either dimension.

Static Public Attributes

- static Coord ORTHO [4]

  Set of unit vectors.

4.4.1 Detailed Description

Represents a location within the dungeon or on the screen.

4.4.2 Constructor & Destructor Documentation

4.4.2.1 Coord() [1/2]

```
Coord::Coord (
            int x,
            int y )
```

(x,y) constructor.

4.4.2.2 Coord() [2/2]

```
Coord::Coord ( )
```

(0,0) constructor.

4.4.3 Member Function Documentation

4.4.3.1 asScreen()

```
Coord Coord::asScreen ( )
```

Convert position in level to position in screen.

4.4.3.2 copy()

```
Coord Coord::copy ( )
```

Return a copy of this coord.

4.4.3.3 isAdjacentTo()

```
bool Coord::isAdjacentTo (
            const Coord & other ) const
```

Return distance(taxicab) <= 1.

4.4.3.4 operator"!=()

```
bool Coord::operator!= (
            const Coord & other )
```

Inverse of == operator.

4.4.3.5 operator*()

```
Coord Coord::operator* (
            const int & scalar )
```

Multiply all vector items by scalar.

4.4.3.6 operator*=()

```
Coord & Coord::operator*= (
            const int & scalar )
```

Multiply two coords (item by item).

4.4.3.7 operator+()

```
Coord Coord::operator+ (
            const Coord & other )
```

Add two coords together.

4.4.3.8 operator+=()

```
Coord & Coord::operator+= (
            const Coord & other )
```

Augmented assignment for addition.

4.4.3.9 operator-()

```
Coord Coord::operator- (
            const Coord & other )
```

Subtract two coords.

4.4.3.10 operator-=()

```
Coord & Coord::operator-= (
            const Coord & other )
```

Augmented assignment for subtraction.

4.4.3.11 operator<()

```
bool Coord::operator< (
            const Coord & other ) const
```

Order coords by overall magnitude.

4.4.3.12 operator==()

```
bool Coord::operator== (
            const Coord & other )
```

True if all vector items equal.

4.4.3.13 operator[]()

```
int & Coord::operator[] (
            int dimension )
```

Access param dimension magnitude.

4.4.3.14 toString()

```
std::string Coord::toString ( ) const
```

Format as x, y.

4.4.4 Member Data Documentation

4.4.4.1 ORTHO

```
Coord Coord::ORTHO  [static]
```

Initial value:

```
= {Coord(0,1), Coord(1,0),
                          Coord(0,-1), Coord(-1,0)}
```

Set of unit vectors.

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

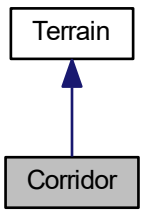
- include/coord.h
- coord.cpp

4.5 Corridor Class Reference

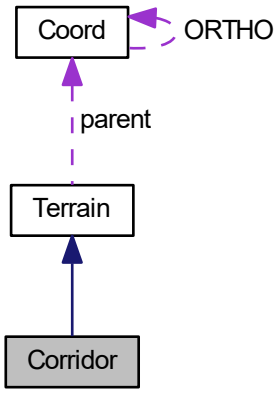
Regular corridor tile.

```
#include <tiles.h>
```

Inheritance diagram for Corridor:



Collaboration diagram for Corridor:



Additional Inherited Members

4.5.1 Detailed Description

Regular corridor tile.

Has limited visibility and full passability

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

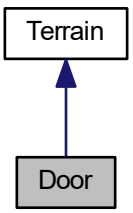
- include/tiles.h
- tiles.cpp

4.6 Door Class Reference

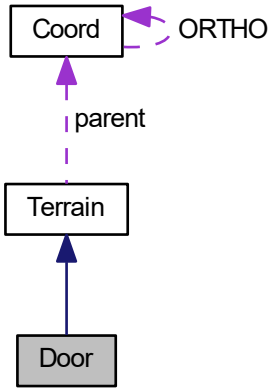
Door tile.

```
#include <tiles.h>
```

Inheritance diagram for Door:



Collaboration diagram for Door:



Additional Inherited Members

4.6.1 Detailed Description

Door tile.

Only cosmetically different from corridor tile.

See also

Corridor

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

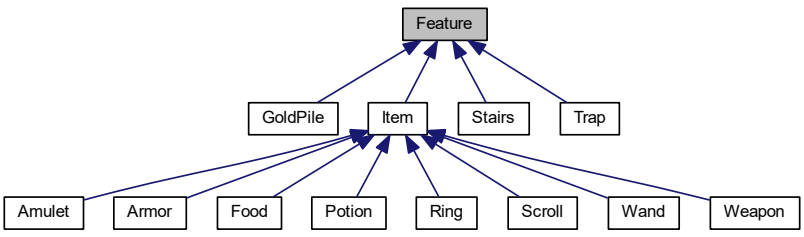
- include/tiles.h
- tiles.cpp

4.7 Feature Class Reference

Models a 'thing' in the dungeon that has position and may be visible.

`#include <feature.h>`

Inheritance diagram for Feature:



Public Member Functions

- Feature (char, Coord)

  Constructor for symbol, location.
- char getSymbol ()

  Getter for symbol.
- Coord getLocation ()

  Getter for location.
- void setLocation (Coord)

  Setter for location.
- virtual ~Feature ()

  Destructor.

4.7.1 Detailed Description

Models a 'thing' in the dungeon that has position and may be visible.

This is to provide a common superclass to various classes that would otherwise cause duplicate code, such as items, staircases, traps, etc

4.7.2 Constructor & Destructor Documentation

4.7.2.1 Feature()

```
Feature::Feature (
            char symbol,
            Coord location )
```

Constructor for symbol, location.

4.7.2.2 ~Feature()

```
Feature::~Feature ( )  [virtual]
```

Destructor.

4.7.3 Member Function Documentation

4.7.3.1 getLocation()

```
Coord Feature::getLocation ( )
```

Getter for location.

See also

location

4.7.3.2 getSymbol()

```
char Feature::getSymbol ( )
```

Getter for symbol.

See also

symbol

4.7.3.3 setLocation()

```
void Feature::setLocation (
            Coord newLoc )
```

Setter for location.

See also

location

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

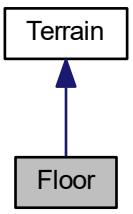
- include/feature.h
- feature.cpp

4.8 Floor Class Reference

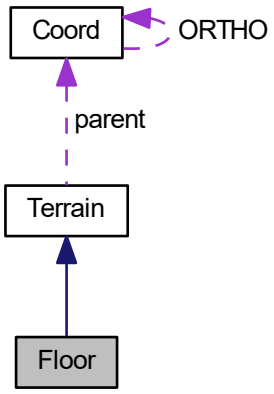
Regular dungeon floor.

```
#include <tiles.h>
```

Inheritance diagram for Floor:



Collaboration diagram for Floor:



Additional Inherited Members

4.8.1 Detailed Description

Regular dungeon floor.

Has full visibility and passability.

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

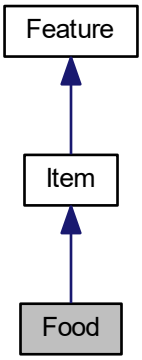
- include/tiles.h
- tiles.cpp

4.9 Food Class Reference

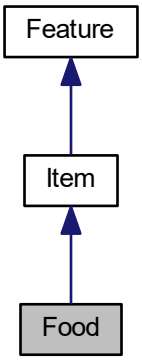
Represents food.

`#include <food.h>`

Inheritance diagram for Food:



Collaboration diagram for Food:



Public Member Functions

- Food (Coord, Item::Context)

  Constructs a Food instance.
- bool activate (PlayerChar *)

  Applies the effects derived from eating this Food.

Additional Inherited Members

4.9.1 Detailed Description

Represents food.

4.9.2 Constructor & Destructor Documentation

4.9.2.1 Food()

```
Food::Food (
            Coord location,
            Item::Context context )
```

Constructs a Food instance.

Parameters

in	*location*	Food location
in	*context*	Food context

4.9.3 Member Function Documentation

4.9.3.1 activate()

```
bool Food::activate (
            PlayerChar * player )
```

Applies the effects derived from eating this Food.

Parameters

player	Reference to the PlayerCharacter instance

Returns

A value reflecting the success of the activation operation.

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

- include/food.h
- food.cpp

4.10 Generator Class Reference

Light wrapper around the std library which provides various random generation utilities.

```
#include <random.h>
```

Static Public Member Functions

- static int intFromRange (int, int)

  Random integer from range (inclusive).
- static double rand ()

  Random double between 0 and 1 (inclusive).
- static bool randBool ()

  Random boolean.
- static Coord randPosition (Coord, Coord)

  Random coord in box deliniated by topleft, bottomright.
- template<typename T >
  static void shuffle (std::vector< T > *)

  Randomly shuffle the vector provided.
- static int nDx (int numDice, int numFaces)

  Rolls the designated dice and returns sum.

4.10.1 Detailed Description

Light wrapper around the std library which provides various random generation utilities.

4.10.2 Member Function Documentation

4.10.2.1 intFromRange()

```
int Generator::intFromRange (
            int lower,
            int upper )  [static]
```

Random integer from range (inclusive).

4.10.2.2 nDx()

```
int Generator::nDx (
            int numDice,
            int numFaces )  [static]
```

Rolls the designated dice and returns sum.

4.10.2.3 rand()

```
double Generator::rand ( )  [static]
```

Random double between 0 and 1 (inclusive).

4.10.2.4 randBool()

```
bool Generator::randBool ( )  [static]
```

Random boolean.

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

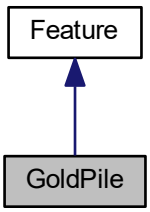
- include/random.h
- random.cpp

4.11 GoldPile Class Reference

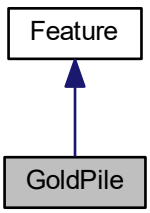
Represents a pile of gold on the ground, which can be picked up by the player to enhance their score.

```
#include <goldpile.h>
```

Inheritance diagram for GoldPile:



Collaboration diagram for GoldPile:



Public Member Functions

- GoldPile (Coord, int)

  Constructor of location, quantity.
- int getQuantity ()

  Getter for quantity.

4.11.1 Detailed Description

Represents a pile of gold on the ground, which can be picked up by the player to enhance their score.

4.11.2 Constructor & Destructor Documentation

4.11.2.1 GoldPile()

```
GoldPile::GoldPile (
            Coord location,
            int quantity )
```

Constructor of location, quantity.

4.11.3 Member Function Documentation

4.11.3.1 getQuantity()

```
int GoldPile::getQuantity ( )
```

Getter for quantity.

See also

quantity

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

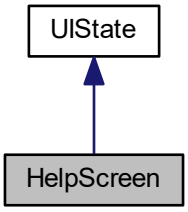
- include/goldpile.h
- goldpile.cpp

4.12 HelpScreen Class Reference

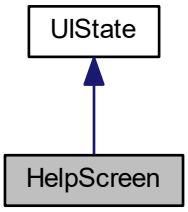
Interface state that shows the various game controls.

`#include <helpscreen.h>`

Inheritance diagram for HelpScreen:



Collaboration diagram for HelpScreen:



Public Member Functions

- HelpScreen (PlayerChar ∗, Level ∗)
  Constructor.
- virtual void draw (TCODConsole ∗)
  Render the controls.
- virtual UIState ∗ handleInput (TCOD_key_t)
  Handle the player input (just quitting).

4.12.1 Detailed Description

Interface state that shows the various game controls.

Environment variables: input device (e.g., keyboard) and output device (e.g., monitor)

4.12.2 Constructor & Destructor Documentation

4.12.2.1 HelpScreen()

```
HelpScreen::HelpScreen (
            PlayerChar * pc,
            Level * lvl )
```

Constructor.

4.12.3 Member Function Documentation

4.12.3.1 draw()

```
void HelpScreen::draw (
            TCODConsole * con )  [virtual]
```

Render the controls.

Reimplemented from UIState.

4.12.3.2 handleInput()

```
UIState * HelpScreen::handleInput (
            TCOD_key_t key )  [virtual]
```

Handle the player input (just quitting).

Reimplemented from UIState.

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

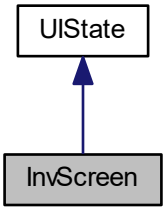
- include/helpscreen.h
- helpscreen.cpp

4.13 InvScreen Class Reference

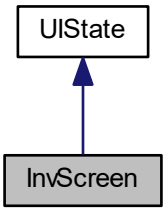
Interface state for viewing the contents of the player inventory.

```
#include <invscreen.h>
```

Inheritance diagram for InvScreen:



Collaboration diagram for InvScreen:



Public Types

- typedef std::function< UIState *(Item *, PlayerChar *, Level *)> **transFunc**
- typedef std::function< bool(Item *)> **filtFunc**

Public Member Functions

- InvScreen (PlayerChar *, Level *, filtFunc, transFunc, bool)

  Constructor.
- void draw (TCODConsole *)

  Draw the inventory.
- UIState * handleInput (TCOD_key_t)

  Handle input (just the quit key).

4.13.1 Detailed Description

Interface state for viewing the contents of the player inventory.

Environment variables: input device (e.g., keyboard) and output device (e.g., monitor)

4.13.2 Constructor & Destructor Documentation

4.13.2.1 InvScreen()

```
InvScreen::InvScreen (
            PlayerChar * player,
            Level * level,
            filtFunc filter,
            transFunc trans,
            bool escapeable )
```

Constructor.

We take the playerchar and level so we can restore them once gameplay resumes. Includes filter for inventory and function for desired return state.

4.13.3 Member Function Documentation

4.13.3.1 draw()

```
void InvScreen::draw (
            TCODConsole * con )  [virtual]
```

Draw the inventory.

Shows like-and-stackable items grouped. Makes sure to not reveal the true names of undiscovered items.

Reimplemented from UIState.

4.13.3.2 handleInput()

```
UIState * InvScreen::handleInput (
            TCOD_key_t key )  [virtual]
```

Handle input (just the quit key).

Reimplemented from UIState.

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

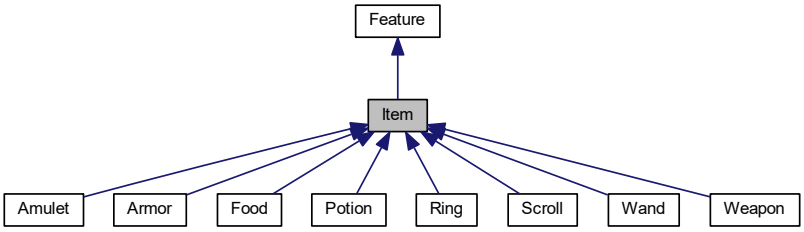
- include/invscreen.h
- invscreen.cpp

4.14 Item Class Reference

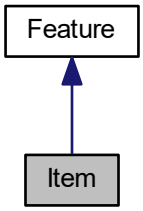
Represents a generic item.

`#include <item.h>`

Inheritance diagram for Item:



Collaboration diagram for Item:



Public Types

- enum Context { **FLOOR**, **INVENTORY** }

  Placement context of this Item.

Public Member Functions

- Item (char, Coord, Context, std::string, std::string, int, bool, bool)

  Constructs an Item instance.
- Item (char, Coord, Context, std::string, std::string, std::string, int, bool, bool)

  Constructs an Item instance.
- bool operator== (const Item &) const

  Item equality definition.
- bool operator< (const Item &) const

Item 'less than' comparison definition.

- Context getContext ()

  Gets the context.
- std::string getClassName ()

  Gets the subclass name.
- void setContext (Context)

  Sets the context.
- std::string getDisplayName ()

  Gets the display name.
- std::string getName ()

  Gets the name.
- int getType ()

  Gets the type.
- bool isIdentified ()

  Determines if the Item is identified.
- bool isStackable ()

  Determines if the Item is stackable.
- bool isThrowable ()

  Determines if Item is throwable.
- void setIdentified (bool)

  Sets the identified status of this Item type.

Static Public Member Functions

- static std::vector< std::string > shuffleNameVector (std::vector< std::string >)

  Returns a shuffled copy of the provided vector of names.

Static Public Attributes

- static const int **BASE_THROW_DMG** = 10

Protected Attributes

- bool canStack

  Denotes whether or not this Item can stack in the inventory.
- bool canThrow

  Denotes whether or not this Item can be thrown.
- std::string className

  Name of this Item's subclass.
- Context context

  Context of this Item.
- bool cursed

  Denotes whether or not this Item is cursed.
- std::string name

  Name of this Item.
- std::string pseudoName

  Name of the unidentified version of this Item.
- int type

  Type of this Item.

Static Protected Attributes

- static std::map< std::string, std::map< int, bool > > identified

  Identification map of the following form: {Class Name : {Type : Status}}.

4.14.1 Detailed Description

Represents a generic item.

4.14.2 Constructor & Destructor Documentation

4.14.2.1 Item() [1/2]

```
Item::Item (
            char symbol,
            Coord location,
            Item::Context context,
            std::string className,
            std::string name,
            int type,
            bool canStack,
            bool canThrow )
```

Constructs an Item instance.

Parameters

in	*symbol*	Character denoting this Item
in	*location*	Item location
in	*context*	Item context
in	*className*	Name of Item subclass using this constructor
in	*name*	Item name
in	*type*	Item type
in	*canStack*	Denotes whether or not this Item can be stacked in the inventory
in	*canThrow*	Denotes whether or not this Item can be thrown

4.14.2.2 Item() [2/2]

```
Item::Item (
            char symbol,
            Coord location,
            Item::Context context,
            std::string className,
            std::string name,
            std::string pseudoName,
            int type,
            bool canStack,
            bool canThrow )
```

Constructs an Item instance.

Parameters

in	*symbol*	Character denoting this Item
in	*location*	Item location
in	*context*	Item context
in	*className*	Name of Item subclass using this constructor
in	*name*	Item name
in	*pseudoName*	Unidentified Item name
in	*type*	Item type
in	*canStack*	Denotes whether or not this Item can be stacked in the inventory
in	*canThrow*	Denotes whether or not this Item can be thrown

4.14.3 Member Function Documentation

4.14.3.1 getClassName()

```
std::string Item::getClassName ( )
```

Gets the subclass name.

Returns

The subclass name.

4.14.3.2 getContext()

```
Item::Context Item::getContext ( )
```

Gets the context.

Returns

The context.

4.14.3.3 getDisplayName()

```
std::string Item::getDisplayName ( )
```

Gets the display name.

Returns

The display name.

4.14.3.4 getName()

```
std::string Item::getName ( )
```

Gets the name.

Returns

The name.

4.14.3.5 getType()

```
int Item::getType ( )
```

Gets the type.

Returns

The type.

4.14.3.6 isIdentified()

```
bool Item::isIdentified ( )
```

Determines if the Item is identified.

Returns

True if identified, False otherwise.

4.14.3.7 isStackable()

```
bool Item::isStackable ( )
```

Determines if the Item is stackable.

Returns

True if stackable, False otherwise.

4.14.3.8 isThrowable()

```
bool Item::isThrowable ( )
```

Determines if Item is throwable.

Returns

True if throwable, False otherwise.

4.14.3.9 operator<()

```
bool Item::operator< (
            const Item & other ) const
```

Item 'less than' comparison definition.

Parameters

in	*item*	Other comparison operand

Returns

True if this Item is less than the given Item, False otherwise

4.14.3.10 operator==()

```
bool Item::operator== (
            const Item & other ) const
```

Item equality definition.

Parameters

in	*item*	Other equality operand

Returns

True if this Item is equivalent to the given Item, False otherwise

4.14.3.11 setContext()

```
void Item::setContext (
            Item::Context newContext )
```

Sets the context.

Parameters

in	*context*	New Item context

4.14.3.12 setIdentified()

```
void Item::setIdentified (
            bool newValue )
```

Sets the identified status of this Item type.

Parameters

in	*newValue*	New identified status of this Item type.

4.14.3.13 shuffleNameVector()

```
std::vector< std::string > Item::shuffleNameVector (
            std::vector< std::string > nameVector )  [static]
```

Returns a shuffled copy of the provided vector of names.

Parameters

in	*nameVector*	Vector of names

Returns

The shuffled copy of the provided vector of names.

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

- include/item.h
- item.cpp

4.15 ItemZone Class Reference

Container for items.

```
#include <itemzone.h>
```

Public Member Functions

- ItemZone ()
  Constructor for empty container.
- Item * operator[] (int)
  Access item at index, as if ItemZone was just an array.
- void add (Item &)
  Add item to ItemZone, stacking if necessary.
- bool contains (Item *)
  Check if ItemZone contains >= 1 copies of item.
- bool contains (const std::string &name)
  Check if item with given name is in ItemZone.
- std::map< char, std::vector< Item * > > & getContents ()
  Return the contents of the zone directly.
- bool remove (Item *)
  Remove the given item from the zone, potentially destacking if necessary.
- std::vector< Item * > * getItem (char)
  Return struct corresponding to given hotkey.
- int getSize ()
  Return the number of distinct items.

4.15.1 Detailed Description

Container for items.

See also

Item Tracks stackability and how it relates to capacity, provides utility functions, and tracks persistent hotkeys.

4.15.2 Constructor & Destructor Documentation

4.15.2.1 ItemZone()

```
ItemZone::ItemZone ( )
```

Constructor for empty container.

4.15.3 Member Function Documentation

4.15.3.1 add()

```
void ItemZone::add (
            Item & item )
```

Add item to ItemZone, stacking if necessary.

4.15.3.2 contains() [1/2]

```
bool ItemZone::contains (
            Item * item )
```

Check if ItemZone contains >= 1 copies of item.

4.15.3.3 contains() [2/2]

```
bool ItemZone::contains (
            const std::string & name )
```

Check if item with given name is in ItemZone.

4.15.3.4 getContents()

```
std::map< char, std::vector< Item * > > & ItemZone::getContents ( )
```

Return the contents of the zone directly.

4.15.3.5 getItem()

```
std::vector< Item * > * ItemZone::getItem (
            char symbol )
```

Return struct corresponding to given hotkey.

4.15.3.6 getSize()

```
int ItemZone::getSize ( )
```

Return the number of distinct items.

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

- include/itemzone.h
- itemzone.cpp

4.16 Level Class Reference

Public Member Functions

- **Level** (int, PlayerChar *)
- Terrain & **tileAt** (Coord)
- Terrain & **operator[ ]** (Coord)
- void **generate** ()
- bool **contains** (Coord)
- int **getDepth** ()
- PlayerChar * **getPlayer** ()
- void registerMob (Mob *)

  Adds a mob to the mobs known by the level.
- void removeMob (Mob *)

  Removes a mob.
- std::vector< Mob * > getMobs ()

  Gets all the mobs on the level.
- Mob * popTurnClock ()

  Returns the mob who's turn to act is next.
- void pushMob (Mob *, int)

  Moves a mob back in the turn clock equal to the amount specified.
- std::vector< Coord > bfsDiag (Coord, Coord)

  Performs BFS to get the shortest path from the starting coordinate to the end coordinate.
- std::vector< Coord > bfsPerp (Coord, Coord)

  Performs BFS to get the shortest path from the starting coordinate to the end coordinate.
- std::vector< Coord > getAdjPassable (Coord)

  Gets the coordinates to which one can move to from a given source (3x3 box)
- Coord throwLocation (Coord, Coord)

  Given a start and a delta direction, returns the position of where something thrown would land.
- std::vector< Room > & getRooms ()

  Gets the rooms.

- std::vector< Feature * > & getFeatures ()

  Gets the features.
- void removeFeature (Feature *)

  Removes a feature.
- void addFeature (Feature *)

  Adds a feature.
- Mob * monsterAt (Coord)

  Returns the monster that is at the location.
- bool canSee (Coord, Coord)

  Determines ability to see each other.
- std::vector< Coord > getNearestGold (Coord)

  Gets the path to the nearest gold.
- void randomizePlayerLocation ()

  Place the player at a random empty position.

Static Public Member Functions

- static Coord **getSize** ()

4.16.1 Member Function Documentation

4.16.1.1 addFeature()

```
void Level::addFeature (
            Feature * feat )
```

Adds a feature.

Parameters

Feature	The feature to add

4.16.1.2 bfsDiag()

```
std::vector< Coord > Level::bfsDiag (
            Coord start,
            Coord end )
```

Performs BFS to get the shortest path from the starting coordinate to the end coordinate.

As opposed to bfsPerp, this algorithm is allowed to move in any of the 8 directions.

Parameters

Coord	Starting point
Coord	Ending point

Returns

A vector of the absolute coordinates of the shortest path, including start and end, starting at the start and moving forwards one unit vector at a time.

See also

bfsPerp

4.16.1.3 bfsPerp()

```
std::vector< Coord > Level::bfsPerp (
            Coord start,
            Coord end )
```

Performs BFS to get the shortest path from the starting coordinate to the end coordinate.

As opposed to bfsDiag, this algorithm is allowed to move only in the 4 cardinal direcitons.

Parameters

Coord	Starting point
Coord	Ending point

Returns

A vector of the absolute coordinates of the shortest path, including start and end, starting at the start and moving forwards one unit vector at a time.

See also

bfsDiag

4.16.1.4 canSee()

```
bool Level::canSee (
            Coord a,
            Coord b )
```

Determines ability to see each other.

Parameters

in	*Coord*	A
in	*Coord*	B

Returns

True if able to see, False otherwise.

4.16.1.5 getAdjPassable()

```
std::vector< Coord > Level::getAdjPassable (
            Coord ori )
```

Gets the coordinates to which one can move to from a given source (3x3 box)

Parameters

Coord	Coordinate to check from

Returns

A vector of coordinates onto which you can move.

4.16.1.6 getFeatures()

```
std::vector< Feature * > & Level::getFeatures ( )
```

Gets the features.

Returns

The features.

4.16.1.7 getMobs()

```
std::vector< Mob * > Level::getMobs ( )
```

Gets all the mobs on the level.

Returns

The mobs.

4.16.1.8 getNearestGold()

```
std::vector< Coord > Level::getNearestGold (
            Coord ori )
```

Gets the path to the nearest gold.

Parameters

in	*Coord*	Origin to search from

Returns

The path to the nearest gold. NULL if there is no gold to find.

4.16.1.9 getRooms()

```
std::vector< Room > & Level::getRooms ( )
```

Gets the rooms.

Returns

The rooms.

4.16.1.10 monsterAt()

```
Mob * Level::monsterAt (
            Coord s )
```

Returns the monster that is at the location.

Parameters

in	*Coord*	The location to get the monster from

Returns

Returns the pointer to a monster if there is one at the specified location, NULL otherwise.

4.16.1.11 popTurnClock()

```
Mob * Level::popTurnClock ( )
```

Returns the mob who's turn to act is next.

Returns

A mob

4.16.1.12 pushMob()

```
void Level::pushMob (
            Mob * which,
            int delay )
```

Moves a mob back in the turn clock equal to the amount specified.

Parameters

Mob∗	Which mob
int	How far to push back in the clock cycle

4.16.1.13 registerMob()

```
void Level::registerMob (
            Mob * mob )
```

Adds a mob to the mobs known by the level.

Parameters

Mob∗	Pointer to the mob that is to be added

4.16.1.14 removeFeature()

```
void Level::removeFeature (
            Feature * feat )
```

Removes a feature.

Parameters

Feature	The feature to remove

4.16.1.15 removeMob()

```
void Level::removeMob (
            Mob * mob )
```

Removes a mob.

Parameters

Mob∗	Pointer to the mob that is to be removed

4.16.1.16 throwLocation()

```
Coord Level::throwLocation (
            Coord start,
            Coord dir )
```

Given a start and a delta direction, returns the position of where something thrown would land.

Parameters

Coord	Where the object is being thrown from
Coord	The direction in which it is being thrown (Must be a unit vector!)

Returns

Final location

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

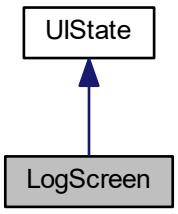
- include/level.h
- level.cpp

4.17 LogScreen Class Reference

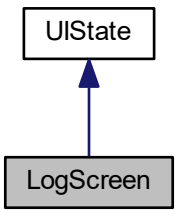
Controls the display of the event log.

`#include <logscreen.h>`

Inheritance diagram for LogScreen:



Collaboration diagram for LogScreen:



Public Member Functions

- LogScreen (PlayerChar *, Level *)

  Constructor, takes info so we can return to regular gameplay with it later.
- virtual UIState * handleInput (TCOD_key_t)

  Allow the player to leave the log screen.
- virtual void draw (TCODConsole *)

  Render the previous log messages, up is more recent.

4.17.1 Detailed Description

Controls the display of the event log.

Environment variables: input device (e.g., keyboard) and output device (e.g., monitor)

4.17.2 Member Function Documentation

4.17.2.1 draw()

```
void LogScreen::draw (
            TCODConsole * con )  [virtual]
```

Render the previous log messages, up is more recent.

Reimplemented from UIState.

4.17.2.2 handleInput()

```
UIState * LogScreen::handleInput (
            TCOD_key_t key )  [virtual]
```

Allow the player to leave the log screen.

Reimplemented from UIState.

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

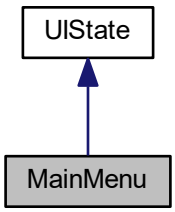
- include/logscreen.h
- logscreen.cpp

4.18 MainMenu Class Reference

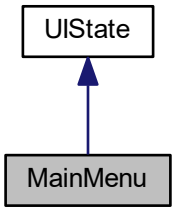
Start screen of the game.

`#include <mainmenu.h>`

Inheritance diagram for MainMenu:



Collaboration diagram for MainMenu:



Public Member Functions

- MainMenu ()
  Constructor.
- virtual void draw (TCODConsole ∗)
  Render the splash art, name prompt.
- virtual UIState ∗ handleInput (TCOD_key_t)
  Handle input (start game, edit name buffer).

4.18.1 Detailed Description

Start screen of the game.

Should include splash art, and name prompt.

Environment variables: input device (e.g., keyboard) and output device (e.g., monitor)

4.18.2 Constructor & Destructor Documentation

4.18.2.1 MainMenu()

```
MainMenu::MainMenu ( )
```

Constructor.

4.18.3 Member Function Documentation

4.18.3.1 draw()

```
void MainMenu::draw (
            TCODConsole * con )  [virtual]
```

Render the splash art, name prompt.

Reimplemented from UIState.

4.18.3.2 handleInput()

```
UIState * MainMenu::handleInput (
            TCOD_key_t key )  [virtual]
```

Handle input (start game, edit name buffer).

Reimplemented from UIState.

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

- include/mainmenu.h
- mainmenu.cpp

4.19 MasterController Class Reference

Controls the top level flow flow of the application and main game loop.

```
#include <mastercontroller.h>
```

Public Member Functions

- MasterController ()

  All game logic is inside, so no params needed for constructor.
- void run ()

  Main game loop.

4.19.1 Detailed Description

Controls the top level flow flow of the application and main game loop.

Called directly from main.

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

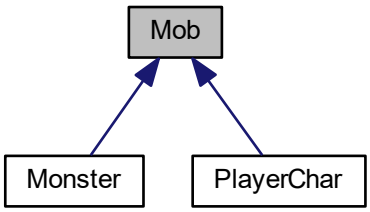
- include/mastercontroller.h
- mastercontroller.cpp

4.20 Mob Class Reference

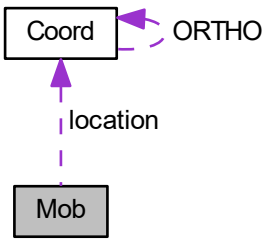
Models a creature in the dungeon, could be the player or a monster.

`#include <mob.h>`

Inheritance diagram for Mob:



Collaboration diagram for Mob:



Public Member Functions

- Mob (char, Coord)

  Constructor used by monsters.
- Mob (char, Coord, std::string, int armor, int exp, int mobHP, int level)

  Constructor.
- virtual int **calculateDamage** ()=0
- void changeArmor (int)

  Setter for armor.
- int getArmor ()

  Getter for armor.
- int getExperience ()

  Getter for XP.
- int getHP ()

  Getter for HP.
- int getMaxHP ()

  Getter for max HP.
- int getLevel ()

  Getter for mob level.
- Coord & getLocation ()

  Getter for mob location.
- std::string getName ()

  Getter for name.
- char getSymbol ()

  Getter for symbol.
- <<<<<<< HEAD virtual void hit(int);=======void hit(int);>>>>>>> cdb1cfb0722ce2f90b59a27122f2081c34073b1f bool isDead ()

  Called by other entities when they deal damage.
- void moveLocation (Coord)

  Add current location and param together.
- bool setCurrentHP (int)

  Setter for current HP.
- void setLocation (Coord)

  Setter for location.
- void setMaxHP (int)

  Setter for max hitpoints.
- virtual int turn (Level *)

  Mob enacts its turn on the level, returns number of ticks it took.
- virtual ~Mob ()

  Destructor.

Static Public Member Functions

- static int **diceSum** (int, int)

Protected Attributes

- int armor

  More armor makes it more difficult for enemies to hit the mob.
- int currentHP

  More hitpoints indicates the mob is healthier.
- bool dead

  Indicates whether or not this mob is dead.
- int exp

  More exp indicates the mob is closer to leveling up.
- int level

  Higher level characters are more powerful.
- Coord location

  Current location within the level.
- int maxHP

  Maximum number of hitpoints.
- std::string name

  Name of the mob.

4.20.1 Detailed Description

Models a creature in the dungeon, could be the player or a monster.

4.20.2 Constructor & Destructor Documentation

4.20.2.1 Mob() [1/2]

```
Mob::Mob (
            char symbol,
            Coord location )
```

Constructor used by monsters.

4.20.2.2 Mob() [2/2]

```
Mob::Mob (
            char symbol,
            Coord location,
            std::string name,
            int armor,
            int exp,
            int mobHP,
            int level )
```

Constructor.

See also

armor
exp
maxHP
level

4.20.2.3 ~Mob()

```
Mob::~Mob ( )  [virtual]
```

Destructor.

4.20.3 Member Function Documentation

4.20.3.1 changeArmor()

```
void Mob::changeArmor (
            int  )
```

Setter for armor.

See also

armor

4.20.3.2 getArmor()

```
int Mob::getArmor ( )
```

Getter for armor.

See also

armor

4.20.3.3 getExperience()

```
int Mob::getExperience ( )
```

Getter for XP.

See also

exp

4.20.3.4 getHP()

```
int Mob::getHP ( )
```

Getter for HP.

See also

currentHP

4.20.3.5 getLevel()

```
int Mob::getLevel ( )
```

Getter for mob level.

See also

level

4.20.3.6 getLocation()

```
Coord & Mob::getLocation ( )
```

Getter for mob location.

Can be edited because it returns a reference

See also

location

4.20.3.7 getMaxHP()

```
int Mob::getMaxHP ( )
```

Getter for max HP.

See also

maxHP

4.20.3.8 getName()

```
std::string Mob::getName ( )
```

Getter for name.

See also

name

4.20.3.9 getSymbol()

```
char Mob::getSymbol ( )
```

Getter for symbol.

See also

symbol

4.20.3.10 isDead()

```
bool Mob::isDead ( )
```

Called by other entities when they deal damage.

See also

currentHP Determines if this mob is dead

Returns

True if this mob is dead, false otherwise

4.20.3.11 moveLocation()

```
void Mob::moveLocation (
            Coord location )
```

Add current location and param together.

See also

location

4.20.3.12 setCurrentHP()

```
bool Mob::setCurrentHP (
            int currentHP )
```

Setter for current HP.

See also

currentHP

4.20.3.13 setLocation()

```
void Mob::setLocation (
            Coord location )
```

Setter for location.

See also

location

4.20.3.14 setMaxHP()

```
void Mob::setMaxHP (
            int maxHP )
```

Setter for max hitpoints.

See also

maxHP

4.20.4 Member Data Documentation

4.20.4.1 armor

```
int Mob::armor  [protected]
```

More armor makes it more difficult for enemies to hit the mob.

4.20.4.2 exp

```
int Mob::exp  [protected]
```

More exp indicates the mob is closer to leveling up.

4.20.4.3 level

```
int Mob::level  [protected]
```

Higher level characters are more powerful.

4.20.4.4 location

```
Coord Mob::location  [protected]
```

Current location within the level.

4.20.4.5 maxHP

```
int Mob::maxHP  [protected]
```

Maximum number of hitpoints.

4.20.4.6 name

```
std::string Mob::name  [protected]
```

Name of the mob.

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

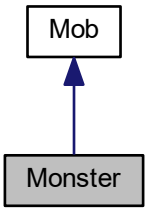
- include/mob.h
- mob.cpp

4.21 Monster Class Reference

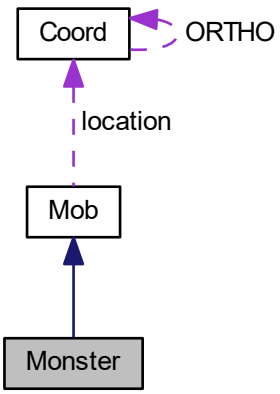
Models a monster in the dungeon.

```
#include <monster.h>
```

Inheritance diagram for Monster:



Collaboration diagram for Monster:



Public Types

- enum Behaviour {
  AGGRESSIVE, **FLYING**, **REGENERATIVE**, **GREEDY**,
  INVISIBLE }

  Monster flags denoting behavioural patterns.

Public Member Functions

- Monster (char, Coord)

  Constructs a Monster instance of the given symbol type.
- void aggrevate ()

  Aggrevates this monster to attack the player.
- virtual void hit (int dmgAmount)

  Override mob implementation to aggrevate monster.
- void attack (Level ∗)

  Attempts to attack a nearby Player Character.
- int calculateDamage ()

  Calculates the damage of this Monster.
- int calculateHitChance (PlayerChar ∗)

  Calculates the hit chance of this Monster.
- int getCarryChance ()

  Gets the carry chance of this Monster.
- bool **hasFlag** (Behaviour)
- bool isAwake ()

  Gets the Monster awake state.
- virtual int turn (Level ∗)

  Performs the actions that make up a Monster's turn.

Static Public Member Functions

- static std::vector< char > getSymbolsForLevel (int)

  Gets the valid Monster symbols based on the current dungeon depth.
- static std::vector< char > getSymbolsForTreasure (int)

  Gets the valid Monster symbols for a treasure room based on the current dungeon depth.

Additional Inherited Members

4.21.1 Detailed Description

Models a monster in the dungeon.

4.21.2 Constructor & Destructor Documentation

4.21.2.1 Monster()

```
Monster::Monster (
            char symbol,
            Coord location )
```

Constructs a Monster instance of the given symbol type.

Parameters

in	*symbol*	Monster symbol
in	*location*	Monster location

Exceptions

e	Illegal argument exception is thrown if an unknown symbol is given

4.21.3 Member Function Documentation

4.21.3.1 attack()

```
void Monster::attack (
            Level * level )
```

Attempts to attack a nearby Player Character.

Parameters

level	Reference to the current Level

4.21.3.2 calculateDamage()

```
int Monster::calculateDamage ( )  [virtual]
```

Calculates the damage of this Monster.

Returns

The computed damage.

Implements Mob.

4.21.3.3 calculateHitChance()

```
int Monster::calculateHitChance (
            PlayerChar * player )
```

Calculates the hit chance of this Monster.

Parameters

Reference	to the player character

Returns

The computed hit chance.

4.21.3.4 getCarryChance()

```
int Monster::getCarryChance ( )
```

Gets the carry chance of this Monster.

Returns

The carry chance of this Monster.

4.21.3.5 getSymbolsForLevel()

```
std::vector< char > Monster::getSymbolsForLevel (
            int depth )  [static]
```

Gets the valid Monster symbols based on the current dungeon depth.

Parameters

in	*depth*	Current dungeon depth

Returns

Vector of valid Monster symbols.

4.21.3.6 getSymbolsForTreasure()

```
std::vector< char > Monster::getSymbolsForTreasure (
            int depth )  [static]
```

Gets the valid Monster symbols for a treasure room based on the current dungeon depth.

Parameters

in	*depth*	Current dungeon depth

Returns

Vector of valid Monster symbols.

4.21.3.7 hit()

```
void Monster::hit (
            int dmgAmount )  [virtual]
```

Override mob implementation to aggrevate monster.

See also

aggrevate

4.21.3.8 isAwake()

```
bool Monster::isAwake ( )
```

Gets the Monster awake state.

Returns

True if the Monster is awake, False otherwise.

4.21.3.9 turn()

```
int Monster::turn (
            Level * level )  [virtual]
```

Performs the actions that make up a Monster's turn.

Parameters

level	Reference to the current Level

Returns

Value denoting the consequential turn delay.

Reimplemented from Mob.

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

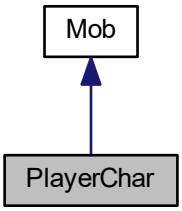
- include/monster.h
- monster.cpp

4.22 PlayerChar Class Reference

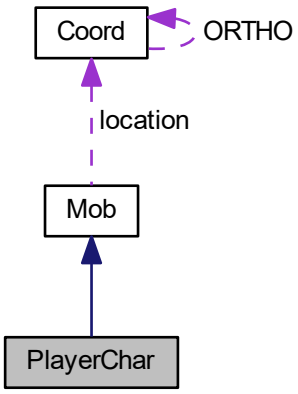
Models the user-controlled player character.

```
#include <playerchar.h>
```

Inheritance diagram for PlayerChar:



Collaboration diagram for PlayerChar:



Public Member Functions

- PlayerChar (Coord, std::string)

  Constructs a PlayerChar instance.
- void activateItem (Item ∗)

  Activates the provided item.
- void addExp (int)

  Adds the given experience to the PlayerChar.
- void appendLog (std::string)

  Appends the given entry to the log.
- void attack (Monster ∗)

  Attacks the given Mob.
- int calculateDamage ()

  Calculates the damage the PlayerChar will inflict.

- int calculateHitChance (Monster *)

  Calculates the hit chance of the PlayerChar.
- void changeCurrentHP (int)

  Increases the current HP of the PlayerChar by the passed parameter.
- void changeFoodLife (int)

  Increases the food life of the PlayerChar by the passed parameter.
- void collectGold (GoldPile *)

  Adds the gold contained in the given GoldPile to the PlayerChar's gold total.
- bool dropItem (Item *, Level *)

  Attemps to drop the given Item.
- void eat (Food *)

  Attempts to eat the given Food.
- void equipArmor (Armor *)

  Attempts to equip the given Armor.
- void equipRingLeft (Ring *)

  Attempts to equip the given Ring on the PlayerChar's left hand.
- void equipRingRight (Ring *)

  Attempts to equip the given Ring on the PlayerChar's right hand.
- void equipWeapon (Weapon *)

  Attempts to equip the given Weapon.
- int getDexterity ()

  Gets the PlayerChar's dexterity.
- int getFoodLife ()

  Gets the PlayerChar's food life.
- int getGold ()

  Gets the PlayerChar's gold total.
- ItemZone & getInventory ()

  Gets the PlayerChar's inventory.
- int getStrength ()

  Gets the PlayerChar's strength.
- int getMaxStrength ()

  Gets the PlayerChar's maximum strength.
- int getSightRadius ()

  Gets the PlayerChar's sight radius.
- bool hasAmulet ()

  Determines whether or not PlayerChar has the Amulet of Yendor.
- void move (Coord)

  Relocates the PlayerChar and updates the food life.
- void pickupItem (Item *)

  Attempts to place the provided Item in the PlayerChar's inventory.
- void quaff (Potion *, Mob *)

  Attempts to apply the effects of the provided Potion to the given Mob.
- void read (Scroll *, Level *)

  Attempts to read the given Scroll.
- bool removeArmor ()

  Attempts to remove the PlayerChar's equipped Armor.
- bool removeRingLeft ()

  Attempts to remove the PlayerChar's equipped left Ring.
- bool removeRingRight ()

  Attempts to remove the PlayerChar's equipped right Ring.
- bool removeWeapon ()

Attempts to remove the PlayerChar's equipped Weapon.

- void setDexterity (int)

  Sets the PlayerChar's dexterity.
- void setFoodLife (int)

  Sets the food life of the PlayerChar.
- bool throwItem (Item *)

  Attempts to throw the given Item.
- void wait ()

  Updates the PlayerChar's food life during a wait action.
- bool zap (Wand *, Level *)

  Attempts to spend a charge of the provided Wand.
- void updateHealthRegen ()

  Updates the PlayerChar's health according to i.
- std::vector< std::string > & getLog ()

  Gets the PlayerChar's log.

Additional Inherited Members

4.22.1 Detailed Description

Models the user-controlled player character.

4.22.2 Constructor & Destructor Documentation

4.22.2.1 PlayerChar()

```
PlayerChar::PlayerChar (
            Coord location,
            std::string name )
```

Constructs a PlayerChar instance.

Parameters

in	*location*	PlayerChar location
in	*name*	PlayerChar name

4.22.3 Member Function Documentation

4.22.3.1 activateItem()

```
void PlayerChar::activateItem (
            Item * )
```

Activates the provided item.

Parameters

item	Item to be activated

4.22.3.2 addExp()

```
void PlayerChar::addExp (
            int exp )
```

Adds the given experience to the PlayerChar.

Parameters

exp	Experience to be added

4.22.3.3 appendLog()

```
void PlayerChar::appendLog (
            std::string entry )
```

Appends the given entry to the log.

Parameters

in	*entry*	Entry to be appended to the log.

4.22.3.4 attack()

```
void PlayerChar::attack (
            Monster * monster )
```

Attacks the given Mob.

Parameters

monster	Monster to be attacked.

4.22.3.5 calculateDamage()

```
int PlayerChar::calculateDamage ( )  [virtual]
```

Calculates the damage the PlayerChar will inflict.

Returns

The damage to be inflicted.

Implements Mob.

4.22.3.6 calculateHitChance()

```
int PlayerChar::calculateHitChance (
            Monster * monster )
```

Calculates the hit chance of the PlayerChar.

Parameters

monster	Moster to be hit

Returns

The chance the PlayerChar will hit their target.

4.22.3.7 changeCurrentHP()

```
void PlayerChar::changeCurrentHP (
            int amount )
```

Increases the current HP of the PlayerChar by the passed parameter.

Parameters

amount	Amount to change the current HP.

4.22.3.8 changeFoodLife()

```
void PlayerChar::changeFoodLife (
            int amount )
```

Increases the food life of the PlayerChar by the passed parameter.

Parameters

amount	Amount to change the food life.

4.22.3.9 collectGold()

```
void PlayerChar::collectGold (
            GoldPile * goldpile )
```

Adds the gold contained in the given GoldPile to the PlayerChar's gold total.

Parameters

goldPile	GoldPile to be harvested.

4.22.3.10 dropItem()

```
bool PlayerChar::dropItem (
            Item * item,
            Level * level )
```

Attemps to drop the given Item.

Parameters

item	Item to be dropped
level	Reference to the current Level

Returns

True if the Item was successfully dropped, False otherwise.

4.22.3.11 eat()

```
void PlayerChar::eat (
            Food * food )
```

Attempts to eat the given Food.

Parameters

food	Food to be eaten.

4.22.3.12 equipArmor()

```
void PlayerChar::equipArmor (
            Armor * armor )
```

Attempts to equip the given Armor.

Parameters

armor	Armor to be equipped.

4.22.3.13 equipRingLeft()

```
void PlayerChar::equipRingLeft (
            Ring * ring )
```

Attempts to equip the given Ring on the PlayerChar's left hand.

Parameters

ring	Ring to be equipped.

4.22.3.14 equipRingRight()

```
void PlayerChar::equipRingRight (
            Ring * ring )
```

Attempts to equip the given Ring on the PlayerChar's right hand.

Parameters

ring	Ring to be equipped.

4.22.3.15 equipWeapon()

```
void PlayerChar::equipWeapon (
            Weapon * weapon )
```

Attempts to equip the given Weapon.

Parameters

weapon	Weapon to be equipped.

4.22.3.16 getDexterity()

```
int PlayerChar::getDexterity ( )
```

Gets the PlayerChar's dexterity.

Returns

The PlayerChar's dexterity.

4.22.3.17 getFoodLife()

```
int PlayerChar::getFoodLife ( )
```

Gets the PlayerChar's food life.

Returns

The PlayerChar's food life.

4.22.3.18 getGold()

```
int PlayerChar::getGold ( )
```

Gets the PlayerChar's gold total.

Returns

The PlayerChar's gold total.

4.22.3.19 getInventory()

```
ItemZone & PlayerChar::getInventory ( )
```

Gets the PlayerChar's inventory.

Returns

The PlayerChar's inventory.

4.22.3.20 getLog()

```
std::vector< std::string > & PlayerChar::getLog ( )
```

Gets the PlayerChar's log.

Returns

The PlayerChar's log.

4.22.3.21 getMaxStrength()

```
int PlayerChar::getMaxStrength ( )
```

Gets the PlayerChar's maximum strength.

Returns

The PlayerChar's maximum strength.

4.22.3.22 getSightRadius()

```
int PlayerChar::getSightRadius ( )
```

Gets the PlayerChar's sight radius.

Returns

The PlayerChar's sight radius.

4.22.3.23 getStrength()

```
int PlayerChar::getStrength ( )
```

Gets the PlayerChar's strength.

Returns

The PlayerChar's strength.

4.22.3.24 hasAmulet()

```
bool PlayerChar::hasAmulet ( )
```

Determines whether or not PlayerChar has the Amulet of Yendor.

Returns

True if PlayerChar has the Amulet, False otherwise.

4.22.3.25 move()

```
void PlayerChar::move (
            Coord location )
```

Relocates the PlayerChar and updates the food life.

Parameters

location	New PlayerChar location

4.22.3.26 pickupItem()

```
void PlayerChar::pickupItem (
            Item * item )
```

Attempts to place the provided Item in the PlayerChar's inventory.

Parameters

item	Item to be inserted into the PlayerChar's inventory.

4.22.3.27 quaff()

```
void PlayerChar::quaff (
```

```
            Potion * potion,
            Mob * mob )
```

Attempts to apply the effects of the provided Potion to the given Mob.

Parameters

potion	Potion to be quaffed
mob	Mob to quaff the Potion

4.22.3.28 read()

```
void PlayerChar::read (
            Scroll * scroll,
            Level * level )
```

Attempts to read the given Scroll.

Parameters

scroll	Scroll to be read
level	Reference to the current Level

4.22.3.29 removeArmor()

```
bool PlayerChar::removeArmor ( )
```

Attempts to remove the PlayerChar's equipped Armor.

Returns

True if the operation was successful, False otherwise.

4.22.3.30 removeRingLeft()

```
bool PlayerChar::removeRingLeft ( )
```

Attempts to remove the PlayerChar's equipped left Ring.

Returns

True if the operation was successful, False otherwise.

4.22.3.31 removeRingRight()

```
bool PlayerChar::removeRingRight ( )
```

Attempts to remove the PlayerChar's equipped right Ring.

Returns

True if the operation was successful, False otherwise.

4.22.3.32 removeWeapon()

```
bool PlayerChar::removeWeapon ( )
```

Attempts to remove the PlayerChar's equipped Weapon.

Returns

True if the operation was successful, False otherwise.

4.22.3.33 setDexterity()

```
void PlayerChar::setDexterity (
            int dexterity )
```

Sets the PlayerChar's dexterity.

Parameters

dexterity	The PlayerChar's new dexterity

4.22.3.34 setFoodLife()

```
void PlayerChar::setFoodLife (
            int foodLife )
```

Sets the food life of the PlayerChar.

Parameters

foodLife	The new food life of the PlayerChar

4.22.3.35 throwItem()

```
bool PlayerChar::throwItem (
            Item * item )
```

Attempts to throw the given Item.

Returns

True if the Item was thrown, False otherwise.

4.22.3.36 zap()

```
bool PlayerChar::zap (
            Wand * wand,
            Level * level )
```

Attempts to spend a charge of the provided Wand.

Parameters

wand	Wand to be used
level	Reference to the current Level

Returns

True if the operation was successful, False otherwise.

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

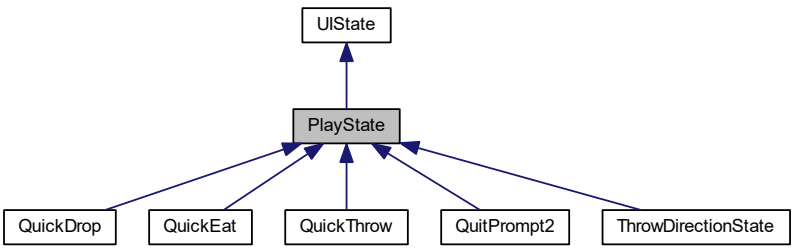
- include/playerchar.h
- playerchar.cpp

4.23 PlayState Class Reference

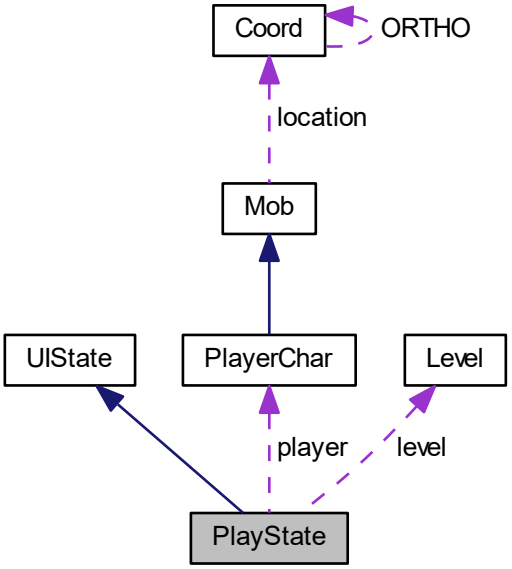
Primary interface state, showing level, player, monsters, etc.

```
#include <playstate.h>
```

Inheritance diagram for PlayState:



Collaboration diagram for PlayState:



Public Member Functions

- PlayState (PlayerChar ∗, Level ∗)

  Constructor.
- virtual void draw (TCODConsole ∗)

  Render, drawing (in this order), ui, tiles, features, mobs.
- virtual UIState ∗ handleInput (TCOD_key_t)

  Handle the various controls.
- virtual ∼PlayState ()

  Delete internal components.

Protected Attributes

- PlayerChar ∗ player

  reference to player character.
- Level ∗ level

  Reference to current dungeon level.

Static Protected Attributes

- static const int **PROMPTX** = 0
- static const int **PROMPTY** = 1

4.23.1 Detailed Description

Primary interface state, showing level, player, monsters, etc.

4.23.2 Constructor & Destructor Documentation

4.23.2.1 PlayState()

```
PlayState::PlayState (
            PlayerChar * play,
            Level * lvl )
```

Constructor.

4.23.2.2 ~PlayState()

```
PlayState::~PlayState ( )  [virtual]
```

Delete internal components.

4.23.3 Member Function Documentation

4.23.3.1 handleInput()

```
UIState * PlayState::handleInput (
            TCOD_key_t key )  [virtual]
```

Handle the various controls.

Reimplemented from UIState.

Reimplemented in ThrowDirectionState, QuickEat, QuickThrow, QuickDrop, and QuitPrompt2.

4.23.4 Member Data Documentation

4.23.4.1 level

```
Level* PlayState::level  [protected]
```

Reference to current dungeon level.

4.23.4.2 player

```
PlayerChar* PlayState::player  [protected]
```

reference to player character.

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

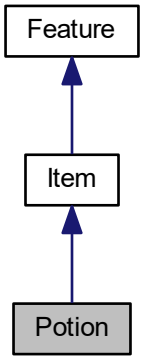
- include/playstate.h
- playstate.cpp

4.24 Potion Class Reference

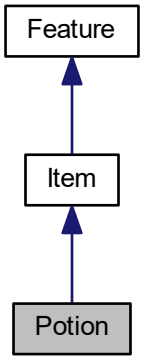
Represents potions.

`#include <potion.h>`

Inheritance diagram for Potion:



Collaboration diagram for Potion:



Public Member Functions

- Potion (Coord)

  Constructs a Potion instance with a random type.
- Potion (Coord, Item::Context, int)

  Constructs a Potion instance.
- bool activate (Mob *)

  Applies the effects derived from quaffing this Potion.

Additional Inherited Members

4.24.1 Detailed Description

Represents potions.

4.24.2 Constructor & Destructor Documentation

4.24.2.1 Potion() [1/2]

```
Potion::Potion (
            Coord location )
```

Constructs a Potion instance with a random type.

Parameters

in	*location*	Potion location

4.24.2.2 Potion() [2/2]

```
Potion::Potion (
            Coord location,
            Item::Context context,
            int type )
```

Constructs a Potion instance.

Parameters

in	*location*	Potion location
in	*context*	Potion context
in	*type*	Potion type

4.24.3 Member Function Documentation

4.24.3.1 activate()

```
bool Potion::activate (
            Mob * mob )
```

Applies the effects derived from quaffing this Potion.

Parameters

mob	Reference to the Mob instance

Returns

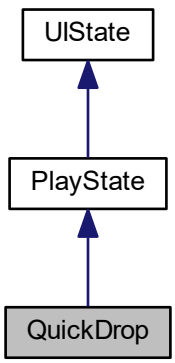
A value reflecting the success of the activation operation.

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

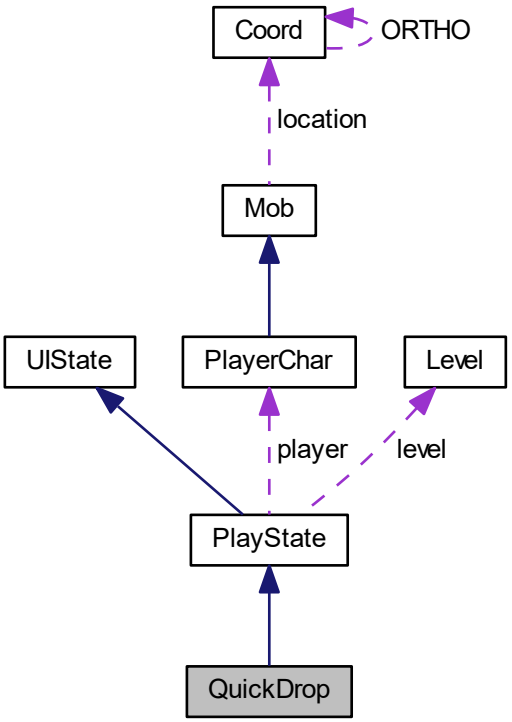
- include/potion.h
- potion.cpp

4.25 QuickDrop Class Reference

Inheritance diagram for QuickDrop:



Collaboration diagram for QuickDrop:



Public Member Functions

- **QuickDrop** (PlayerChar *player, Level *level, Item *item)
- virtual UIState * handleInput (TCOD_key_t key)

  Handle the various controls.

Additional Inherited Members

4.25.1 Member Function Documentation

4.25.1.1 handleInput()

```
virtual UIState* QuickDrop::handleInput (
            TCOD_key_t key )  [inline], [virtual]
```

Handle the various controls.

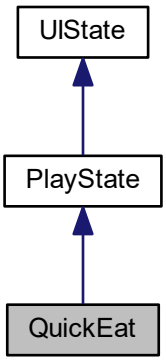
Reimplemented from PlayState.

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

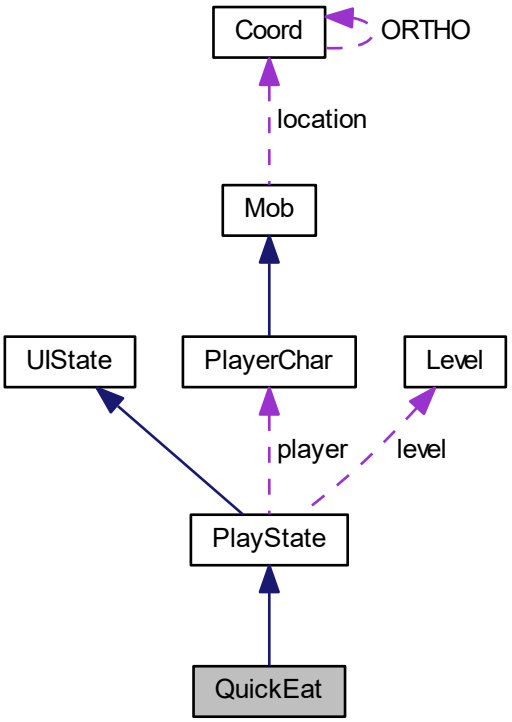
- playstate.cpp

4.26 QuickEat Class Reference

Inheritance diagram for QuickEat:



Collaboration diagram for QuickEat:



Public Member Functions

- **QuickEat** (PlayerChar *player, Level *level, Item *item)
- virtual UIState * handleInput (TCOD_key_t key)

  Handle the various controls.

Additional Inherited Members

4.26.1 Member Function Documentation

4.26.1.1 handleInput()

```
virtual UIState* QuickEat::handleInput (
            TCOD_key_t key )  [inline], [virtual]
```

Handle the various controls.

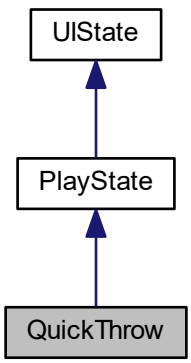
Reimplemented from PlayState.

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

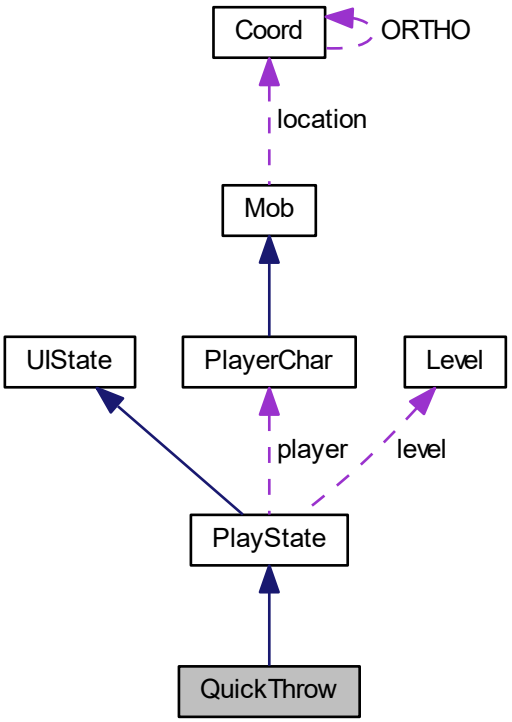
- playstate.cpp

4.27 QuickThrow Class Reference

Inheritance diagram for QuickThrow:



Collaboration diagram for QuickThrow:



Public Member Functions

- **QuickThrow** (PlayerChar *player, Level *level, Item *item, Coord direction)
- virtual UIState * handleInput (TCOD_key_t key)

  Handle the various controls.

Additional Inherited Members

4.27.1 Member Function Documentation

4.27.1.1 handleInput()

```
virtual UIState* QuickThrow::handleInput (
            TCOD_key_t key )  [inline], [virtual]
```

Handle the various controls.

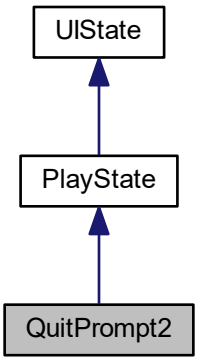
Reimplemented from PlayState.

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

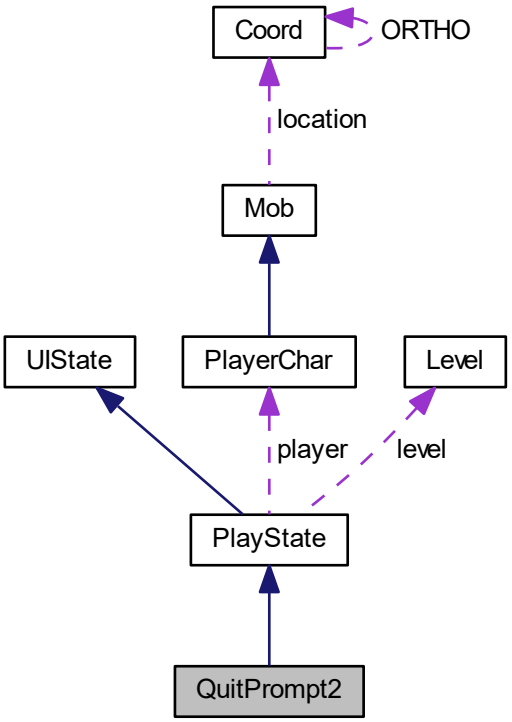
- playstate.cpp

4.28 QuitPrompt2 Class Reference

Inheritance diagram for QuitPrompt2:



Collaboration diagram for QuitPrompt2:



Public Member Functions

- **QuitPrompt2** (PlayerChar *player, Level *level)
- virtual UIState * handleInput (TCOD_key_t key)

  Handle the various controls.
- virtual void draw (TCODConsole *con)

  Render, drawing (in this order), ui, tiles, features, mobs.

Additional Inherited Members

4.28.1 Member Function Documentation

4.28.1.1 handleInput()

```
virtual UIState* QuitPrompt2::handleInput (
            TCOD_key_t key )  [inline], [virtual]
```

Handle the various controls.

Reimplemented from PlayState.

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

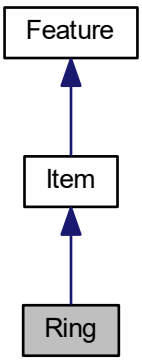
- playstate.cpp

4.29 Ring Class Reference

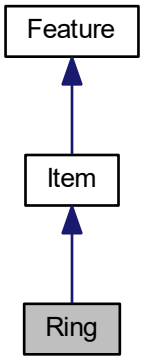
Represents rings.

```
#include <ring.h>
```

Inheritance diagram for Ring:



Collaboration diagram for Ring:



Public Member Functions

- Ring (Coord)

  Constructs a Ring instance with a random type.
- Ring (Coord, Item::Context, int)

  Constructs a Ring instance.
- bool activate (Level ∗)

  Applies the effects derived from equipping this Ring.

Additional Inherited Members

4.29.1 Detailed Description

Represents rings.

4.29.2 Constructor & Destructor Documentation

4.29.2.1 Ring() [1/2]

```
Ring::Ring (
            Coord location )
```

Constructs a Ring instance with a random type.

Parameters

in	*location*	Ring location

4.29.2.2 Ring() [2/2]

```
Ring::Ring (
            Coord location,
            Item::Context context,
            int type )
```

Constructs a Ring instance.

Parameters

in	*location*	Ring location
in	*context*	Ring context
in	*type*	Ring type

4.29.3 Member Function Documentation

4.29.3.1 activate()

```
bool Ring::activate (
            Level * level )
```

Applies the effects derived from equipping this Ring.

Parameters

level	Reference to the Level instance

Returns

A value reflecting the success of the activation operation.

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

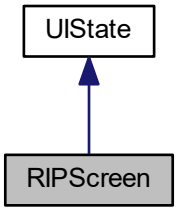
- include/ring.h
- ring.cpp

4.30 RIPScreen Class Reference

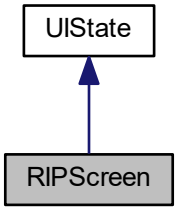
Interface state for post-death/retirement, looking at the high-score table.

```
#include <ripscreen.h>
```

Inheritance diagram for RIPScreen:



Collaboration diagram for RIPScreen:



Public Member Functions

- RIPScreen (PlayerChar ∗, Level ∗level, std::string cause)

  Constructor.
- virtual void draw (TCODConsole ∗)

  Render.
- virtual UIState ∗ handleInput (TCOD_key_t)

  Handle player key input.

4.30.1 Detailed Description

Interface state for post-death/retirement, looking at the high-score table.

Environment variables: input device (e.g., keyboard), monitor, and the file system

4.30.2 Constructor & Destructor Documentation

4.30.2.1 RIPScreen()

```
RIPScreen::RIPScreen (
            PlayerChar * player,
            Level * level,
            std::string cause )
```

Constructor.

Parameters

cause	Cause of death/retirement
level	Level on which player died/retired

4.30.3 Member Function Documentation

4.30.3.1 draw()

```
void RIPScreen::draw (
            TCODConsole * con )  [virtual]
```

Render.

Reimplemented from UIState.

4.30.3.2 handleInput()

```
UIState * RIPScreen::handleInput (
            TCOD_key_t key )  [virtual]
```

Handle player key input.

Reimplemented from UIState.

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

- include/ripscreen.h
- ripscreen.cpp

4.31 Room Class Reference

Models a room - a rectangular region of which there are (usually) 9 in any given dungeon level.

```
#include <room.h>
```

Public Types

- enum **Darkness** { **DARK**, **LIT** }
- enum **Treasure** { **TREASURE**, **WORTHLESS** }
- enum **Hidden** { **HIDDEN**, **VISIBLE** }

Public Member Functions

- **Room** (Coord, Coord, Darkness, Treasure, Hidden, Coord, bool)
- **Room** (Coord, Coord)
- Coord **operator[ ]** (int)
- void dig (Level &)

  Clears a passable room in the designated level.
- Coord **getPosition1** ()
- Coord **getPosition2** ()
- Coord **getRoomSize** ()
- Coord **getRoomIndex** ()
- bool exists ()

  A non-existent room is one which is a 1x1 tunnel tile.
- bool touches (Coord)

  Tells you whether or not the coordinate touches the room.
- void printInfo (int)

  A diagnostic tool.
- bool contains (Coord &, int border=0)

  Tells you whether or not the coordinate is contained by the room.
- Darkness **getDark** ()

4.31.1 Detailed Description

Models a room - a rectangular region of which there are (usually) 9 in any given dungeon level.

Rooms are connected by tunnels.

See also

Tunnel

4.31.2 Member Function Documentation

4.31.2.1 contains()

```
bool Room::contains (
            Coord & coord,
            int border = 0 )
```

Tells you whether or not the coordinate is contained by the room.

Parameters

Coord	The coordinate to test

Returns

True if the input is within the room, false otherwise.

4.31.2.2 dig()

```
void Room::dig (
            Level & level )
```

Clears a passable room in the designated level.

Parameters

Level	The level in which to dig

4.31.2.3 exists()

```
bool Room::exists ( )
```

A non-existent room is one which is a 1x1 tunnel tile.

Returns

True if the room is real, false if it is simply a tunnel piece.

4.31.2.4 printInfo()

```
void Room::printInfo (
            int numToDisplay )
```

A diagnostic tool.

Parameters

in	*An*	integer to go along with the info (Used when printing info of multiple rooms).

4.31.2.5 touches()

```
bool Room::touches (
            Coord c )
```

Tells you whether or not the coordinate touches the room.

Parameters

in	*Coord*	The location to test

Returns

True if coord can touch or intersect with the room, false otherwise

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

- include/room.h
- room.cpp

4.32 ScoreItem Struct Reference

Public Member Functions

- **ScoreItem** (int gold, int depth, std::string name, std::string death)
- std::string **encode** ()
- bool **operator**< (const ScoreItem &other) const

Static Public Member Functions

- static ScoreItem **decode** (std::string line)
- static bool **readItem** (std::stringstream &ss, std::string &str)

Public Attributes

- int **gold**
- int **depth**
- std::string **name**
- std::string **death**

Static Public Attributes

- static const char **DELIM** = ','

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

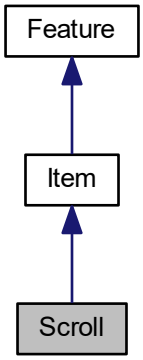
- ripscreen.cpp

4.33 Scroll Class Reference

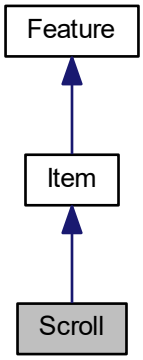
Represents scrolls.

`#include <scroll.h>`

Inheritance diagram for Scroll:



Collaboration diagram for Scroll:



Public Member Functions

- Scroll (Coord)

  Constructs a Scroll instance with a random type.
- Scroll (Coord, Item::Context, int)

  Constructs a Scroll instance.
- bool activate (Level *)

  Applies the effects derived from reading this Scroll.

Static Public Member Functions

- static std::vector< std::string > initializeScrollNames ()

  Initializes the unidentified names of each Scroll.

Additional Inherited Members

4.33.1 Detailed Description

Represents scrolls.

4.33.2 Constructor & Destructor Documentation

4.33.2.1 Scroll() [1/2]

```
Scroll::Scroll (
            Coord location )
```

Constructs a Scroll instance with a random type.

Parameters

in	*location*	Scroll location

4.33.2.2 Scroll() [2/2]

```
Scroll::Scroll (
            Coord location,
            Item::Context context,
            int type )
```

Constructs a Scroll instance.

Parameters

in	*location*	Scroll location
in	*context*	Scroll context
in	*type*	Scroll type

4.33.3 Member Function Documentation

4.33.3.1 activate()

```
bool Scroll::activate (
            Level * level )
```

Applies the effects derived from reading this Scroll.

Parameters

level	Reference to the Level instance

Returns

A value reflecting the success of the activation operation.

4.33.3.2 initializeScrollNames()

```
std::vector< std::string > Scroll::initializeScrollNames ( )  [static]
```

Initializes the unidentified names of each Scroll.

Returns

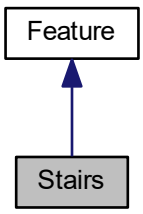
Returns a vector of strings denoting random Scroll names indexed by type.

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

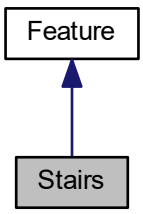
- include/scroll.h
- scroll.cpp

4.34 Stairs Class Reference

Inheritance diagram for Stairs:



Collaboration diagram for Stairs:



Public Member Functions

- **Stairs** (Coord, bool)
- bool **getDirection** ()

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

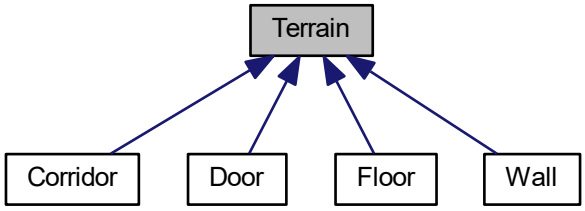
- include/stairs.h
- stairs.cpp

4.35 Terrain Class Reference

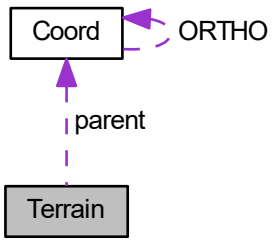
Represents a tile in the dungeon.

`#include <terrain.h>`

Inheritance diagram for Terrain:



Collaboration diagram for Terrain:



Public Types

- enum Passability { **Blocked**, **Passable** }

  Tiles can be walk-through-able or not.
- enum Visibility { **Opaque**, **Corridor**, **Transparent** }

  Tiles can have full, limited (Corridor), or no visibility.
- enum Mapped { **Seen**, **UnSeen** }

  Whether the player has previous seen the tile.

Public Member Functions

- Terrain (char, Visibility, Passability)

  Constructor.
- char getSymbol ()

  Getter for character.
- Passability isPassable ()

  Getter for passable.
- Mapped isSeen ()

  Getter for seen.
- Visibility getVisibility ()

  Getter for visible.
- void setIsSeen (Mapped)

  Setter for seen.

Public Attributes

- bool checked = false

  Used by other modules for various searches.
- Coord parent

  Used by other modules for various searches.

4.35.1 Detailed Description

Represents a tile in the dungeon.

4.35.2 Member Enumeration Documentation

4.35.2.1 Mapped

```
enum Terrain::Mapped
```

Whether the player has previous seen the tile.

4.35.2.2 Passability

```
enum Terrain::Passability
```

Tiles can be walk-through-able or not.

4.35.3 Constructor & Destructor Documentation

4.35.3.1 Terrain()

```
Terrain::Terrain (
            char character,
            Terrain::Visibility vis,
            Terrain::Passability pass )
```

Constructor.

4.35.4 Member Function Documentation

4.35.4.1 getSymbol()

```
char Terrain::getSymbol ( )
```

Getter for character.

See also

character

4.35.4.2 getVisibility()

```
Terrain::Visibility Terrain::getVisibility ( )
```

Getter for visible.

See also

visible

4.35.4.3 isPassable()

```
Terrain::Passability Terrain::isPassable ( )
```

Getter for passable.

See also

passable

4.35.4.4 isSeen()

```
Terrain::Mapped Terrain::isSeen ( )
```

Getter for seen.

See also

seen

4.35.4.5 setIsSeen()

```
void Terrain::setIsSeen (
            Terrain::Mapped newState )
```

Setter for seen.

See also

seen

4.35.5 Member Data Documentation

4.35.5.1 checked

```
bool Terrain::checked = false
```

Used by other modules for various searches.

See also

parent

4.35.5.2 parent

```
Coord Terrain::parent
```

Used by other modules for various searches.

See also

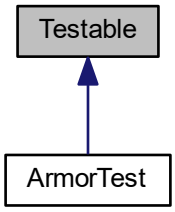
checked

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

- include/terrain.h
- terrain.cpp

4.36 Testable Class Reference

Inheritance diagram for Testable:



Public Member Functions

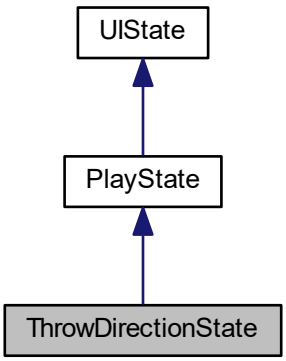
- virtual bool **test** ()=0

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

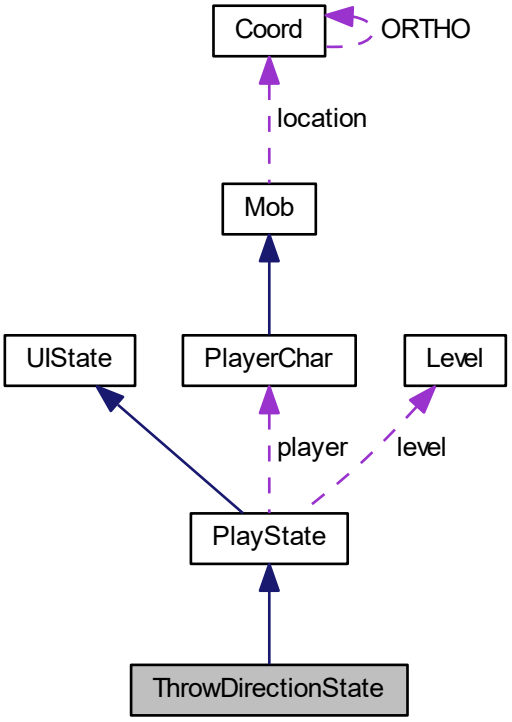
- test/test.testable.cpp

4.37 ThrowDirectionState Class Reference

Inheritance diagram for ThrowDirectionState:



Collaboration diagram for ThrowDirectionState:



Public Member Functions

- **ThrowDirectionState** (PlayerChar *player, Level *level)
- virtual void draw (TCODConsole *con)

  Render, drawing (in this order), ui, tiles, features, mobs.
- virtual UIState * handleInput (TCOD_key_t key)

  Handle the various controls.

Additional Inherited Members

4.37.1 Member Function Documentation

4.37.1.1 handleInput()

```
virtual UIState* ThrowDirectionState::handleInput (
            TCOD_key_t key )  [inline], [virtual]
```

Handle the various controls.

Reimplemented from PlayState.

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

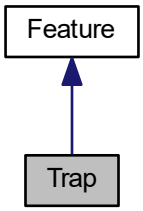
- playstate.cpp

4.38 Trap Class Reference

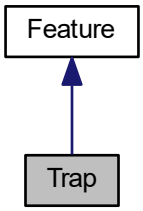
Various hidden traps throughout the dungeon can trigger and endanger the player.

`#include <trap.h>`

Inheritance diagram for Trap:



Collaboration diagram for Trap:



Public Member Functions

- Trap (Coord location, unsigned char type, bool visible)

  Constructor.
- void activate (Mob *)

  Trigger the trap on the given mob.

4.38.1 Detailed Description

Various hidden traps throughout the dungeon can trigger and endanger the player.

4.38.2 Constructor & Destructor Documentation

4.38.2.1 Trap()

```
Trap::Trap (
            Coord location,
            unsigned char type,
            bool visible )
```

Constructor.

Parameters

location	Position of the trap
type	Type of trap (dart, teleport, pitfall, etc)
visible	Whether the trap is revealed

4.38.3 Member Function Documentation

4.38.3.1 activate()

```
void Trap::activate (
            Mob * mob )
```

Trigger the trap on the given mob.

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

- include/trap.h
- trap.cpp

4.39 Tunnel Class Reference

Tunnels are step-orthogonal paths connecting rooms.

```
#include <tunnel.h>
```

Public Types

- enum Direction {
  Up, **Down**, **Left**, **Right**,
  None }

  An enum to represent step directions.

Public Member Functions

- Tunnel (Room *, Room *, Generator)

  Creates a tunnel between the two rooms.
- void dig (Level &)

  Digs the specified tunnel in the given level.

4.39.1 Detailed Description

Tunnels are step-orthogonal paths connecting rooms.

4.39.2 Constructor & Destructor Documentation

4.39.2.1 Tunnel()

```
Tunnel::Tunnel (
            Room * p,
            Room * q,
            Generator gen )
```

Creates a tunnel between the two rooms.

Parameters

*Room**	The room to go FROM
*Room**	The room to go TO
Generator	The random generator to use

4.39.3 Member Function Documentation

4.39.3.1 dig()

```
void Tunnel::dig (
            Level & level )
```

Digs the specified tunnel in the given level.

Parameters

Level&	The level in which to dig this tunnel

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

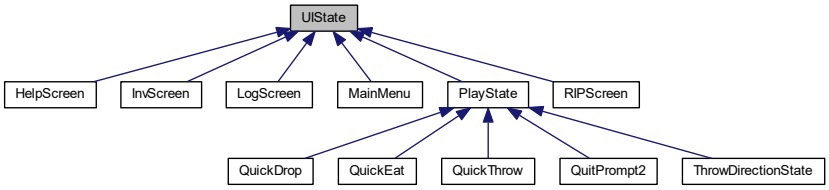
- include/tunnel.h
- tunnel.cpp

4.40 UIState Class Reference

Class modeling a state of the game interface.

`#include <uistate.h>`

Inheritance diagram for UIState:



Public Member Functions

- virtual void draw (TCODConsole ∗)

  Render the current UI.
- virtual UIState ∗ handleInput (TCOD_key_t)

  Do whatever is needed in response to keypresses then return state to transition to (can be self).
- virtual ∼UIState ()

  Destructor.

4.40.1 Detailed Description

Class modeling a state of the game interface.

Game transitions between these states like a finite state machine.

Environment variables: input device (e.g., keyboard) and output device (e.g., monitor)

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

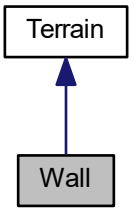
- include/uistate.h
- uistate.cpp

4.41 Wall Class Reference

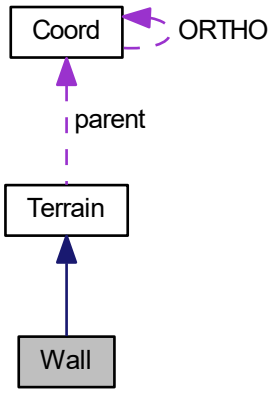
Regular dungeon wall.

`#include <tiles.h>`

Inheritance diagram for Wall:



Collaboration diagram for Wall:



Additional Inherited Members

4.41.1 Detailed Description

Regular dungeon wall.

Has no visiblity or passability.

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

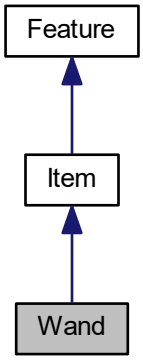
- include/tiles.h
- tiles.cpp

4.42 Wand Class Reference

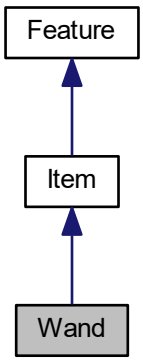
Represents a wand item.

`#include <wand.h>`

Inheritance diagram for Wand:



Collaboration diagram for Wand:



Public Member Functions

- Wand (Coord)

  Constructs a Wand instance with a random type.
- Wand (Coord, Item::Context, int)

Constructs a Wand instance.

- bool activate (Level *)

  Applies the effects derived from using a zap from this Wand.

- int getCharges ()

  Gets the charges.

Additional Inherited Members

4.42.1 Detailed Description

Represents a wand item.

4.42.2 Constructor & Destructor Documentation

4.42.2.1 Wand() [1/2]

```
Wand::Wand (
            Coord location )
```

Constructs a Wand instance with a random type.

Parameters

in	*location*	Wand location

4.42.2.2 Wand() [2/2]

```
Wand::Wand (
            Coord location,
            Item::Context context,
            int type )
```

Constructs a Wand instance.

Parameters

in	*location*	Wand location
in	*context*	Wand context
in	*type*	Wand type

4.42.3 Member Function Documentation

4.42.3.1 activate()

```
bool Wand::activate (
            Level * level )
```

Applies the effects derived from using a zap from this Wand.

Parameters

level	Reference to the Level instance

Returns

A value reflecting the success of the activation operation.

4.42.3.2 getCharges()

```
int Wand::getCharges ( )
```

Gets the charges.

Returns

The charges.

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

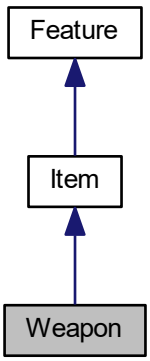
- include/wand.h
- wand.cpp

4.43 Weapon Class Reference

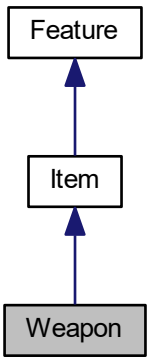
Represents weapons.

```
#include <weapon.h>
```

Inheritance diagram for Weapon:



Collaboration diagram for Weapon:



Public Member Functions

- Weapon (Coord)

  Constructs a Weapon instance with a random type.
- Weapon (Coord, Item::Context, int)

  Constructs a Weapon instance.
- int getChance ()

  Gets the chance of applying a successful hit.
- std::tuple< int, int, int > getDamage ()

  Gets the damage triple corresponding to this Weapon.
- bool isMelee ()

  Determines if this Weapon is a melee weapon.
- void setEnchantments (int, int)

  Sets this Weapon's enchantments.

Additional Inherited Members

4.43.1 Detailed Description

Represents weapons.

4.43.2 Constructor & Destructor Documentation

4.43.2.1 Weapon() [1/2]

```
Weapon::Weapon (
            Coord location )
```

Constructs a Weapon instance with a random type.

Parameters

in	*location*	Weapon location

4.43.2.2 Weapon() [2/2]

```
Weapon::Weapon (
            Coord location,
            Item::Context context,
            int type )
```

Constructs a Weapon instance.

Parameters

in	*location*	Weapon location
in	*context*	Weapon context
in	*type*	Weapon type

4.43.3 Member Function Documentation

4.43.3.1 getChance()

```
int Weapon::getChance ( )
```

Gets the chance of applying a successful hit.

Returns

The chance of applying a successful hit.

4.43.3.2 getDamage()

```
std::tuple< int, int, int > Weapon::getDamage ( )
```

Gets the damage triple corresponding to this Weapon.

Returns

The tuple <Dice Rolls, Dice Value, Enchantment>.

4.43.3.3 isMelee()

```
bool Weapon::isMelee ( )
```

Determines if this Weapon is a melee weapon.

Returns

True if melee, False otherwise.

4.43.3.4 setEnchantments()

```
void Weapon::setEnchantments (
            int enchantHit,
            int enchantDamage )
```

Sets this Weapon's enchantments.

Parameters

enchantHit	Hit enchantment
enchantDamage	Damage enchantment

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

- include/weapon.h
- weapon.cpp

Chapter 5

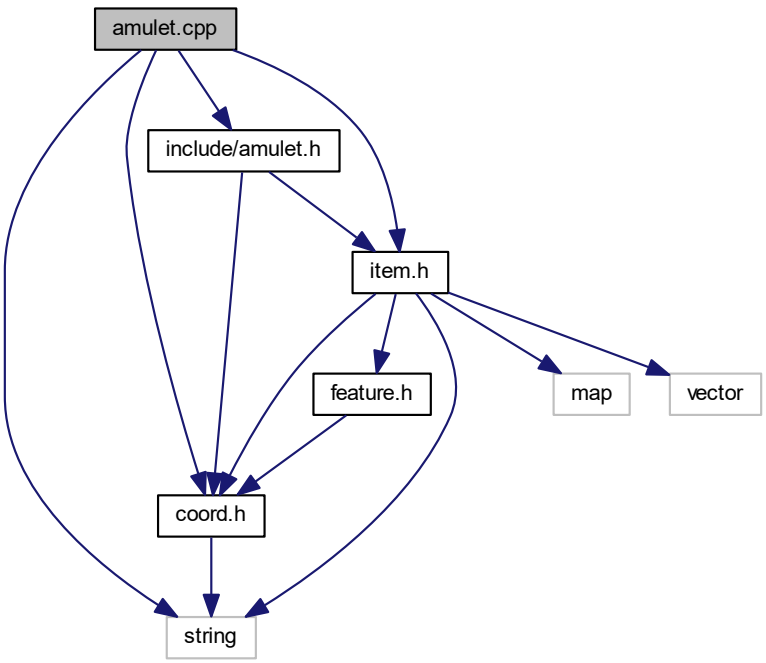
File Documentation

5.1 amulet.cpp File Reference

Member definitions for the Amulet class.

```
#include <string>
#include "include/amulet.h"
#include "include/coord.h"
#include "include/item.h"
```

Include dependency graph for amulet.cpp:



5.1.1 Detailed Description

Member definitions for the Amulet class.

Author

Team Rogue++

Date

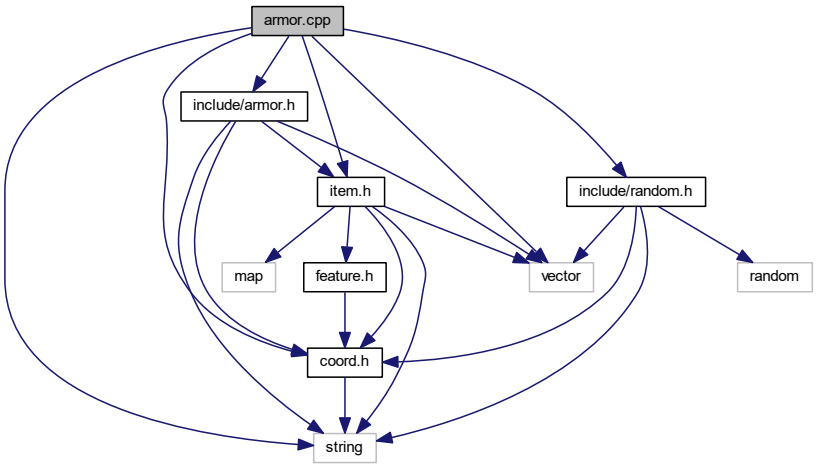
November 13, 2016

5.2 armor.cpp File Reference

Member definitions for the Armor class.

```
#include <string>
#include <vector>
#include "include/armor.h"
#include "include/coord.h"
#include "include/item.h"
#include "include/random.h"
```

Include dependency graph for armor.cpp:



5.2.1 Detailed Description

Member definitions for the Armor class.

Author

Team Rogue++

Date

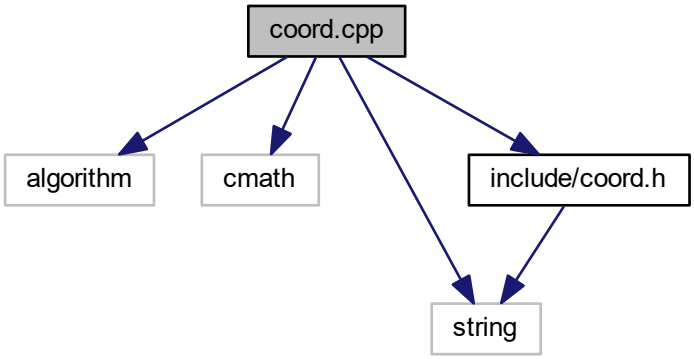
November 13, 2016

5.3 coord.cpp File Reference

Member definitions for the Coord class.

```
#include <algorithm>
#include <cmath>
#include <string>
#include "include/coord.h"
```

Include dependency graph for coord.cpp:



5.3.1 Detailed Description

Member definitions for the Coord class.

Author

Team Rogue++

Date

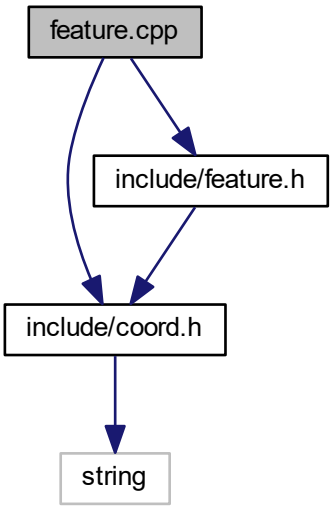
November 13, 2016

5.4 feature.cpp File Reference

Member definitions for the Feature class.

```
#include "include/coord.h"
#include "include/feature.h"
```

Include dependency graph for feature.cpp:



5.4.1 Detailed Description

Member definitions for the Feature class.

Author

Team Rogue++

Date

November 13, 2016

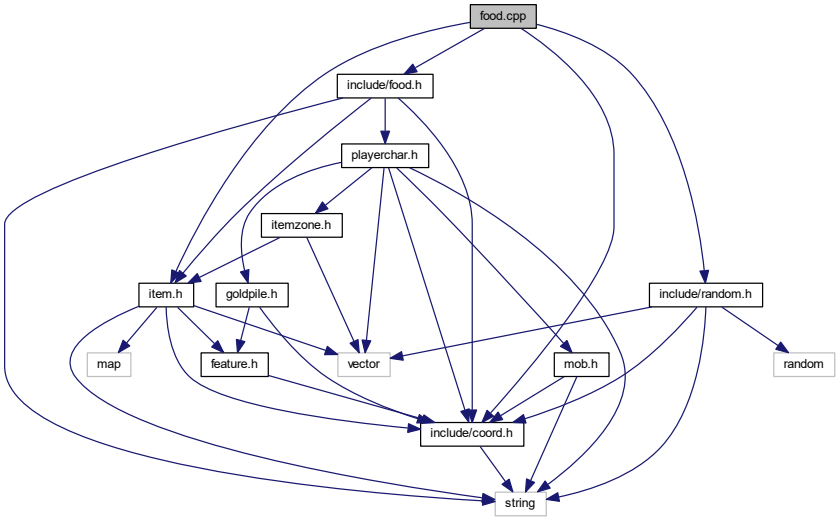
5.5 food.cpp File Reference

Member definitions for the Food class.

```
#include "include/coord.h"
#include "include/food.h"
#include "include/item.h"
```

```
#include "include/random.h"
```

Include dependency graph for food.cpp:



5.5.1 Detailed Description

Member definitions for the Food class.

Author

Team Rogue++

Date

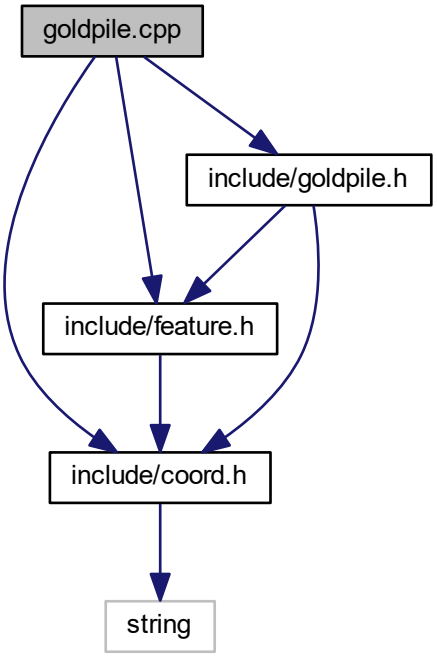
November 13, 2016

5.6 goldpile.cpp File Reference

Member definitions for the GoldPile class.

```
#include "include/coord.h"
#include "include/feature.h"
```

```
#include "include/goldpile.h"
```
Include dependency graph for goldpile.cpp:



5.6.1 Detailed Description

Member definitions for the GoldPile class.

Author

Team Rogue++

Date

November 13, 2016

5.7 helpscreen.cpp File Reference

Member definitions for the HelpScreen class.

```
#include "include/helpscreen.h"
#include "include/playstate.h"
```
Include dependency graph for helpscreen.cpp:

5.7.1 Detailed Description

Member definitions for the HelpScreen class.

Author

Team Rogue++

Date

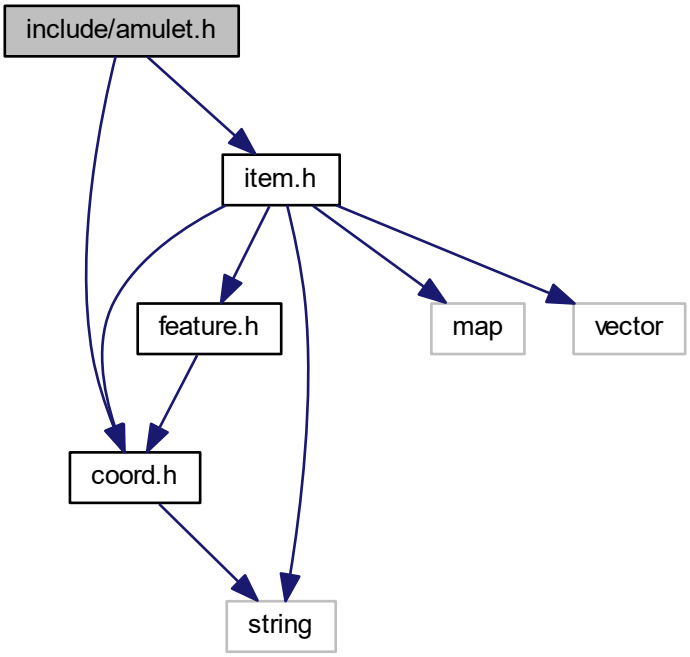
November 13, 2016

5.8 include/amulet.h File Reference

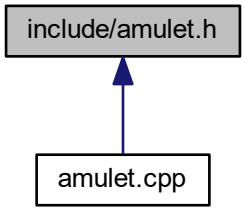
Member declarations for the Amulet class.

```
#include "coord.h"
#include "item.h"
```

Include dependency graph for amulet.h:



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



Classes

- class Amulet

  Represents the Amulet of Yendor.

5.8.1 Detailed Description

Member declarations for the Amulet class.

Author

Team Rogue++

Date

November 13, 2016

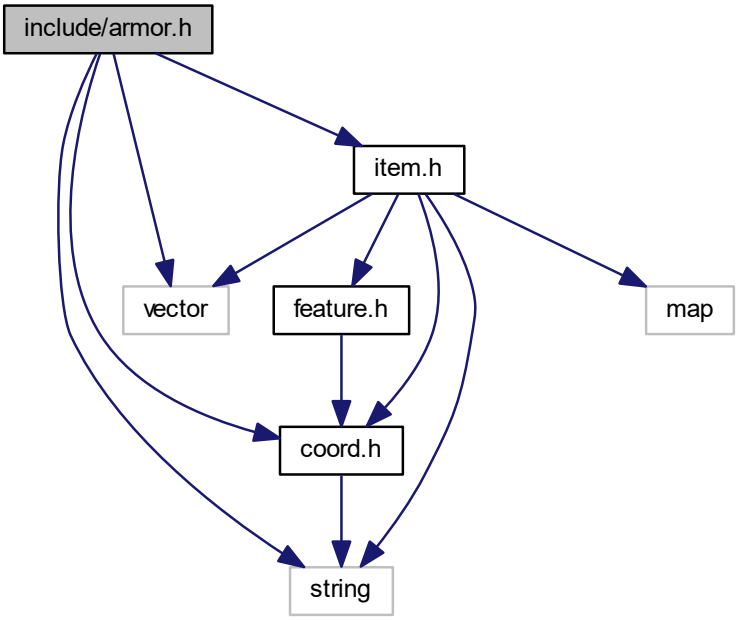
5.9 include/armor.h File Reference

Member declarations for the Armor class.

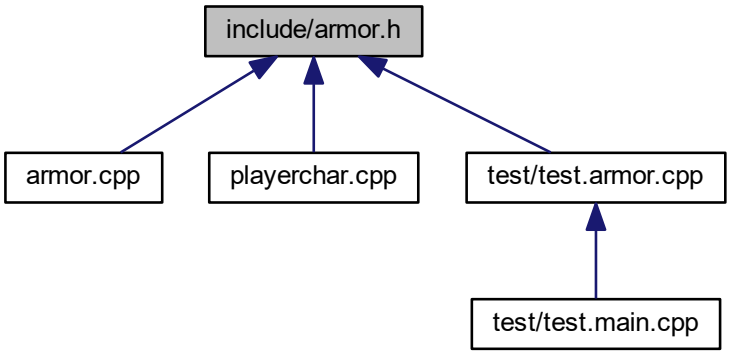
```
#include <string>
#include <vector>
#include "coord.h"
```

```
#include "item.h"
```

Include dependency graph for armor.h:



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



Classes

- class Armor

  Represents armor.

Typedefs

- using ARMOR_TUPLE_TYPE = std::tuple< std::string, int >

  Tuple representing Armor information (<Name, Rating>)

5.9.1 Detailed Description

Member declarations for the Armor class.

Author

Team Rogue++

Date

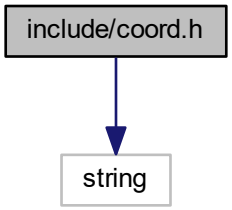
November 13, 2016

5.10 include/coord.h File Reference

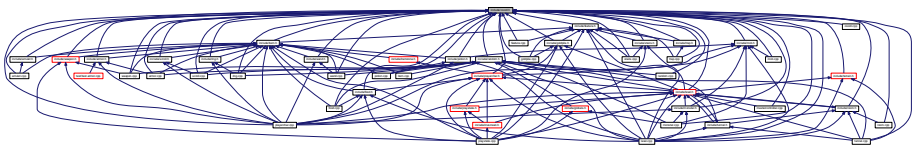
Member declarations for the Coord class.

```
#include <string>
```

Include dependency graph for coord.h:



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



Classes

- class Coord

  Represents a location within the dungeon or on the screen.

5.10.1 Detailed Description

Member declarations for the Coord class.

Author

Team Rogue++

Date

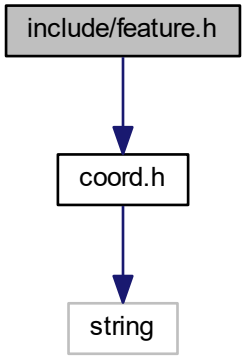
November 13, 2016

5.11 include/feature.h File Reference

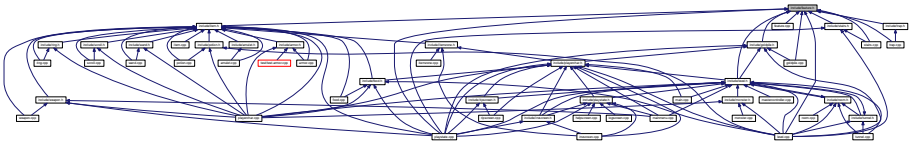
Member declarations for the Feature class.

```
#include "coord.h"
```

Include dependency graph for feature.h:



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



Classes

- class Feature

  Models a 'thing' in the dungeon that has position and may be visible.

5.11.1 Detailed Description

Member declarations for the Feature class.

Author

Team Rogue++

Date

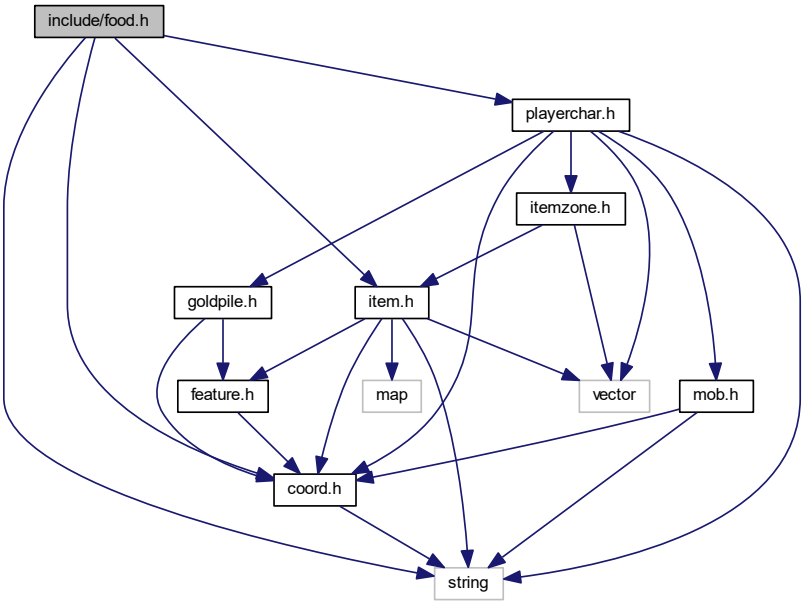
November 13, 2016

5.12 include/food.h File Reference

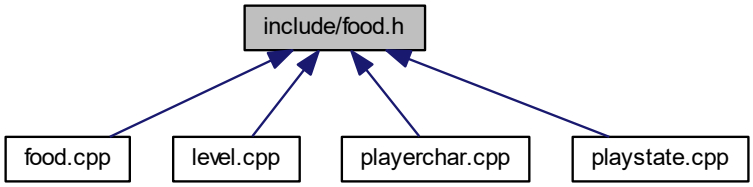
Member declarations for the Food class.

```
#include <string>
#include "coord.h"
#include "item.h"
#include "playerchar.h"
```

Include dependency graph for food.h:



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



Classes

- class Food

  Represents food.

5.12.1 Detailed Description

Member declarations for the Food class.

Author

Team Rogue++

Date

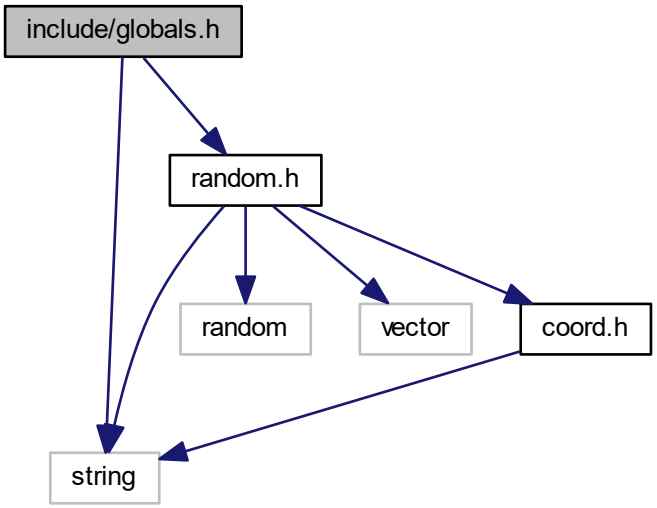
November 13, 2016

5.13 include/globals.h File Reference

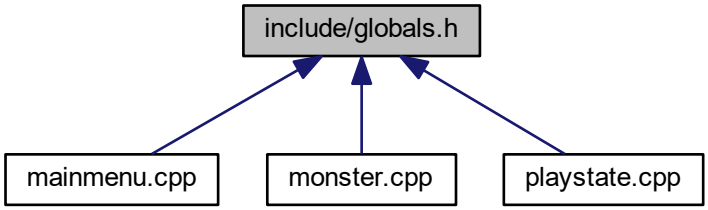
Global members.

```
#include <string>
#include "random.h"
```

Include dependency graph for globals.h:



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



Variables

- const int **NUM_LEVELS** = 26
- const int **NAME_LENGTH** = 10
- const std::string **VALID_NAME** = "abcdefghijklmnopqrstuvwxyz _ABCDEFGHIJKLMNOPQRSTUVWXYZ"
- const int **TURN_TIME** = 50

5.13.1 Detailed Description

Global members.

Author

Team Rogue++

Date

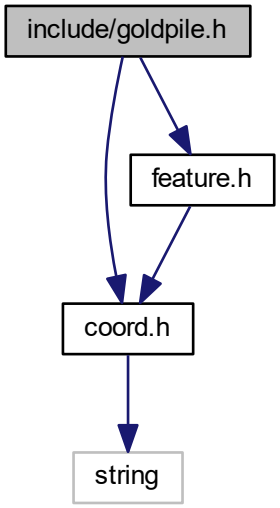
November 13, 2016

5.14 include/goldpile.h File Reference

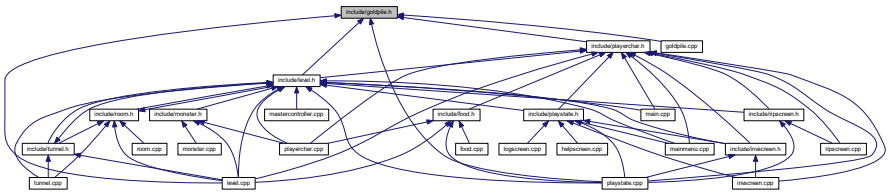
Member declarations for the GoldPile class.

```
#include "coord.h"
#include "feature.h"
```

Include dependency graph for goldpile.h:



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



Classes

- class GoldPile

  Represents a pile of gold on the ground, which can be picked up by the player to enhance their score.

5.14.1 Detailed Description

Member declarations for the GoldPile class.

Author

Team Rogue++

Date

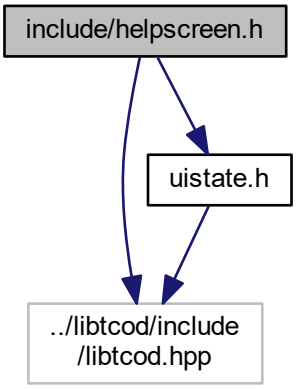
November 13, 2016

5.15 include/helpscreen.h File Reference

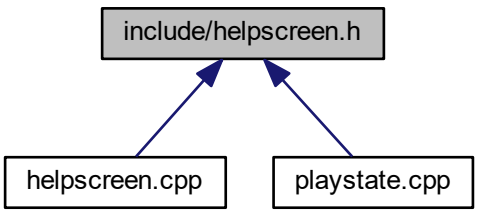
Member declarations for the HelpScreen class.

```
#include "../libtcod/include/libtcod.hpp"
#include "uistate.h"
```

Include dependency graph for helpscreen.h:



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



Classes

- class HelpScreen

  Interface state that shows the various game controls.

5.15.1 Detailed Description

Member declarations for the HelpScreen class.

Author

Team Rogue++

Date

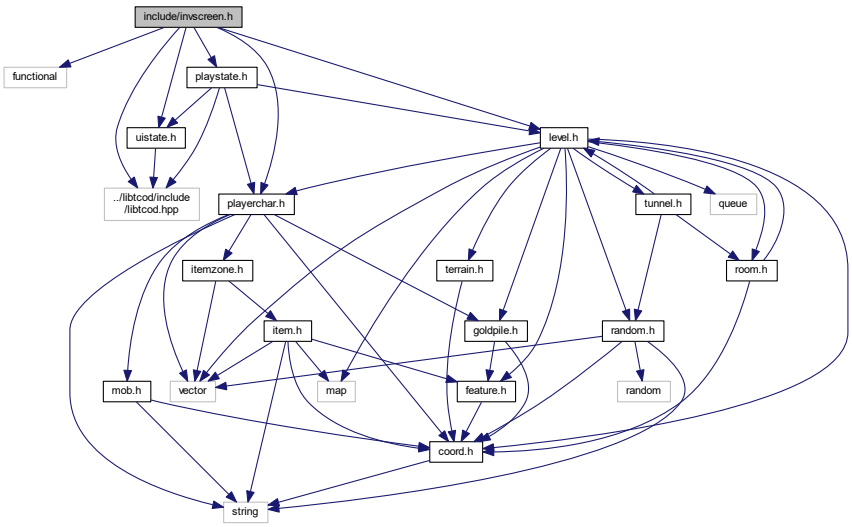
November 13, 2016

5.16 include/invscreen.h File Reference

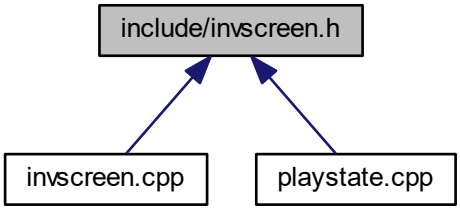
Member declarations for the InvScreen class.

```
#include <functional>
#include "../libtcod/include/libtcod.hpp"
#include "level.h"
#include "playerchar.h"
#include "playstate.h"
#include "uistate.h"
```

Include dependency graph for invscreen.h:



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



Classes

- class InvScreen

  Interface state for viewing the contents of the player inventory.

5.16.1 Detailed Description

Member declarations for the InvScreen class.

Author

Team Rogue++

Date

November 13, 2016

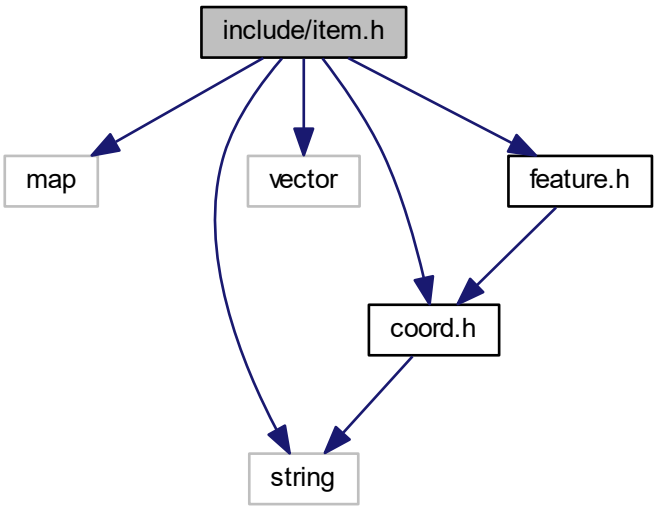
5.17 include/item.h File Reference

Member declarations for the Item class.

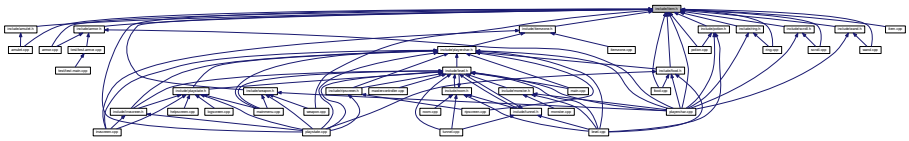
```
#include <map>
#include <string>
#include <vector>
#include "coord.h"
```

```
#include "feature.h"
```

Include dependency graph for item.h:



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



Classes

- class Item

  Represents a generic item.

5.17.1 Detailed Description

Member declarations for the Item class.

Author

Team Rogue++

Date

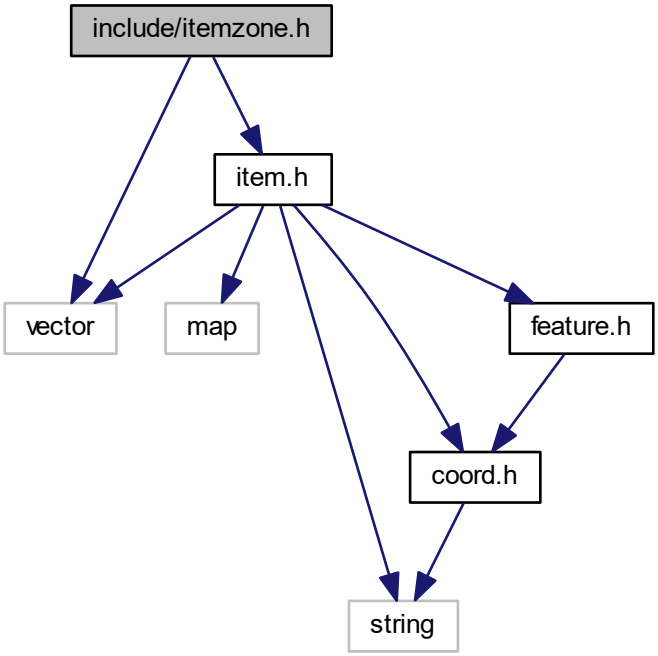
November 13, 2016

5.18 include/itemzone.h File Reference

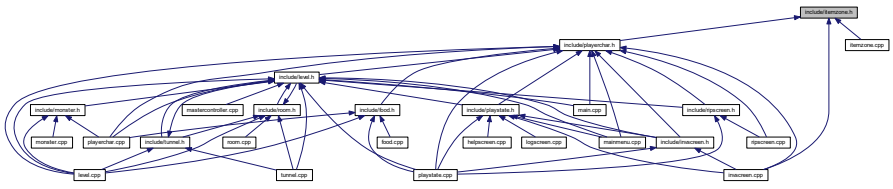
Member declarations for the ItemZone class.

```
#include <vector>
#include "item.h"
```

Include dependency graph for itemzone.h:



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



Classes

- class ItemZone

  Container for items.

5.18.1 Detailed Description

Member declarations for the ItemZone class.

Author

Team Rogue++

Date

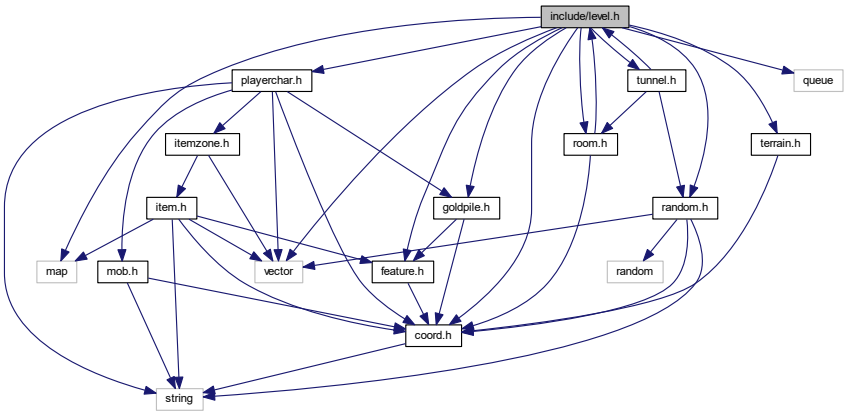
November 13, 2016

5.19 include/level.h File Reference

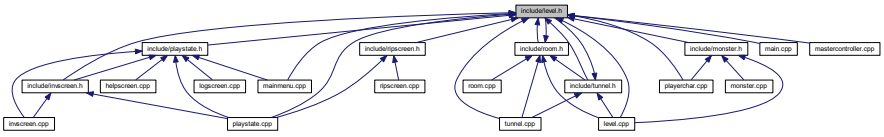
Member declarations for the Level class.

```
#include <map>
#include <queue>
#include <vector>
#include "coord.h"
#include "feature.h"
#include "goldpile.h"
#include "playerchar.h"
#include "random.h"
#include "room.h"
#include "terrain.h"
#include "tunnel.h"
```

Include dependency graph for level.h:



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



Classes

- class Level

Macros

- #define **MAX_ROOMS_DEF** (9)

5.19.1 Detailed Description

Member declarations for the Level class.

Author

Team Rogue++

Date

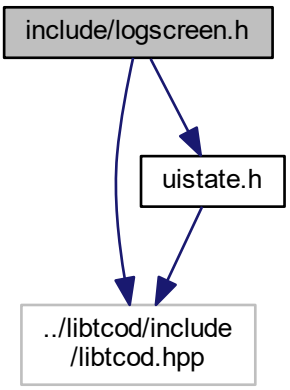
November 13, 2016

5.20 include/logscreen.h File Reference

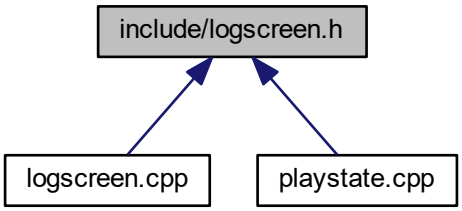
Member declarations for the LogScreen class.

```
#include "../libtcod/include/libtcod.hpp"
#include "uistate.h"
```

Include dependency graph for logscreen.h:



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



Classes

- class LogScreen

  Controls the display of the event log.

5.20.1 Detailed Description

Member declarations for the LogScreen class.

Author

Team Rogue++

Date

November 13, 2016

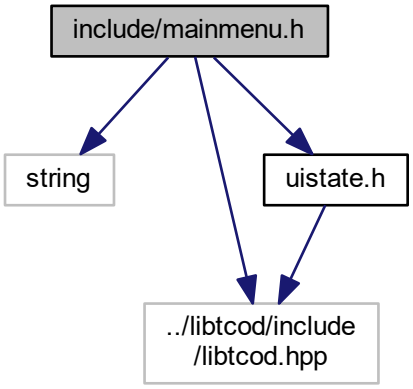
5.21 include/mainmenu.h File Reference

Member declarations for the MainMenu class.

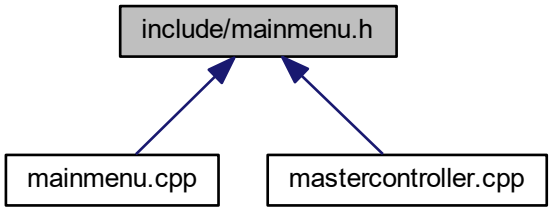
```
#include <string>
#include "../libtcod/include/libtcod.hpp"
```

```
#include "uistate.h"
```

Include dependency graph for mainmenu.h:



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



Classes

- class MainMenu

  Start screen of the game.

5.21.1 Detailed Description

Member declarations for the MainMenu class.

Author

Team Rogue++

Date

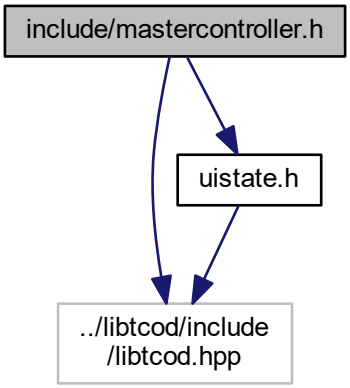
November 13, 2016

5.22 include/mastercontroller.h File Reference

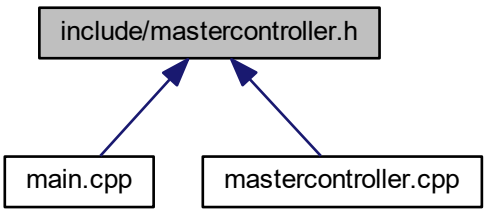
Member declarations for the MasterController class.

```
#include "../libtcod/include/libtcod.hpp"
#include "uistate.h"
```

Include dependency graph for mastercontroller.h:



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



Classes

- class MasterController

  Controls the top level flow flow of the application and main game loop.

5.22.1 Detailed Description

Member declarations for the MasterController class.

Author

Team Rogue++

Date

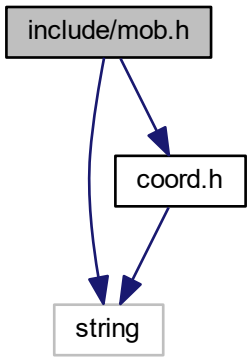
November 13, 2016

5.23 include/mob.h File Reference

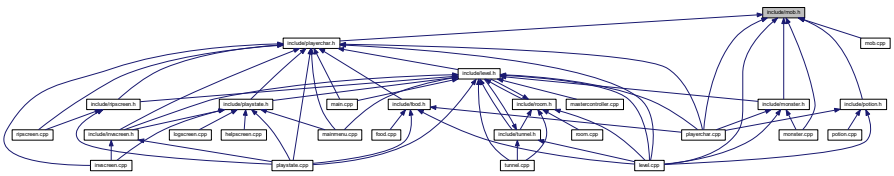
Member declarations for the Mob class.

```
#include <string>
#include "coord.h"
```

Include dependency graph for mob.h:



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



Classes

- class Mob

  Models a creature in the dungeon, could be the player or a monster.

5.23.1 Detailed Description

Member declarations for the Mob class.

Author

Team Rogue++

Date

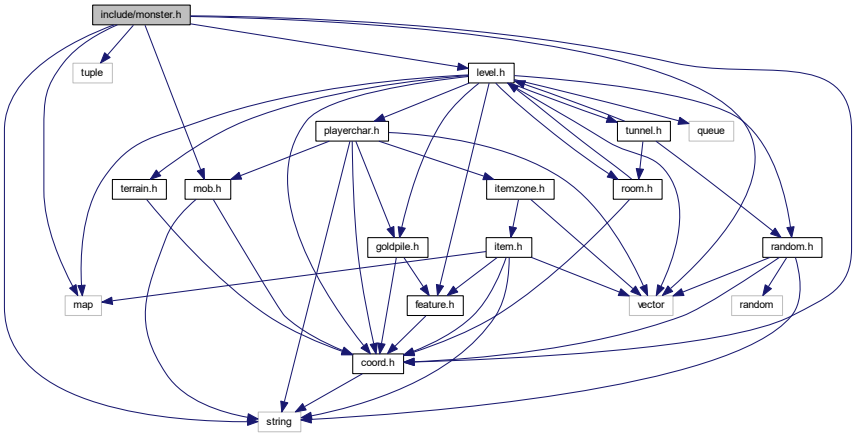
November 13, 2016

5.24 include/monster.h File Reference

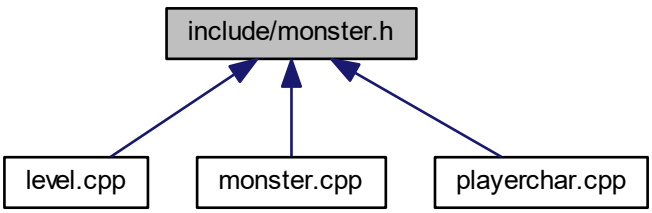
Member declarations for the Monster class.

```
#include <map>
#include <string>
#include <tuple>
#include <vector>
#include "coord.h"
#include "level.h"
#include "mob.h"
```

Include dependency graph for monster.h:



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



Classes

- class Monster

  Models a monster in the dungeon.

Typedefs

- using MONSTER_TUPLE_TYPE = std::tuple< int, int, std::vector< std::pair< int, int > >, int, const char *, int, std::pair< int, int >, std::string, std::pair< int, int > >

  Tuple representing various Monster types (<Armor, Carry Chance, Attacks, XP, Flags, Monster Level, HP, Name, Dungeon Level Range>)

5.24.1 Detailed Description

Member declarations for the Monster class.

Author

Team Rogue++

Date

November 13, 2016

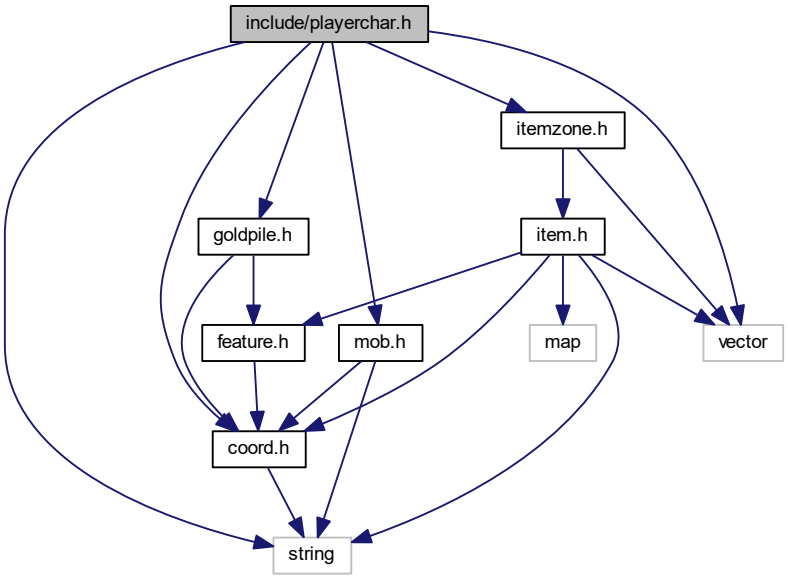
5.25 include/playerchar.h File Reference

Member declarations for the PlayerChar class.

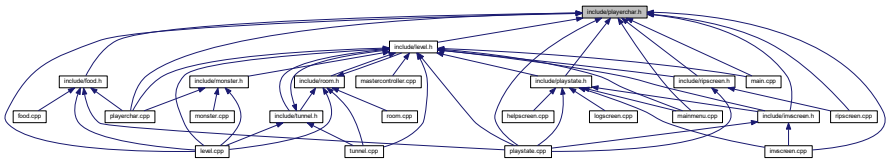
```
#include <string>
#include <vector>
#include "coord.h"
#include "goldpile.h"
#include "itemzone.h"
```

```
#include "mob.h"
```

Include dependency graph for playerchar.h:



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



Classes

- class PlayerChar

  Models the user-controlled player character.

5.25.1 Detailed Description

Member declarations for the PlayerChar class.

Author

Team Rogue++

Date

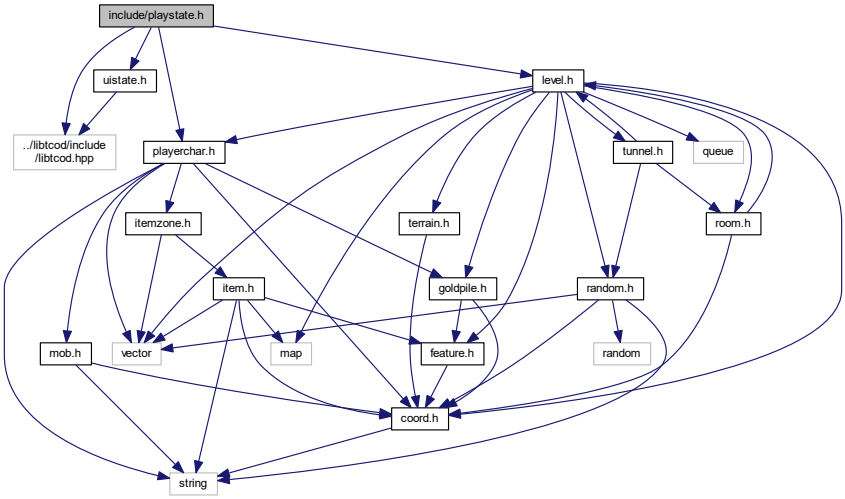
November 13, 2016

5.26 include/playstate.h File Reference

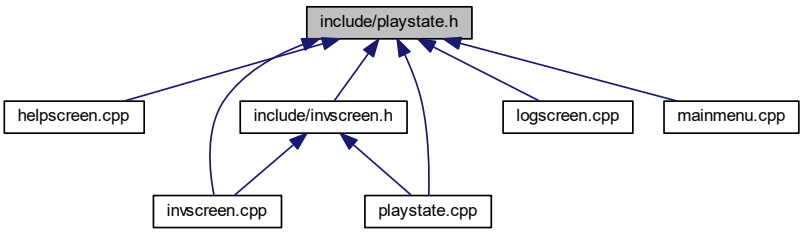
Member declarations for the PlayState class.

```
#include "../libtcod/include/libtcod.hpp"
#include "level.h"
#include "playerchar.h"
#include "uistate.h"
```

Include dependency graph for playstate.h:



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



Classes

- class PlayState

  Primary interface state, showing level, player, monsters, etc.

5.26.1 Detailed Description

Member declarations for the PlayState class.

Author

Team Rogue++

Date

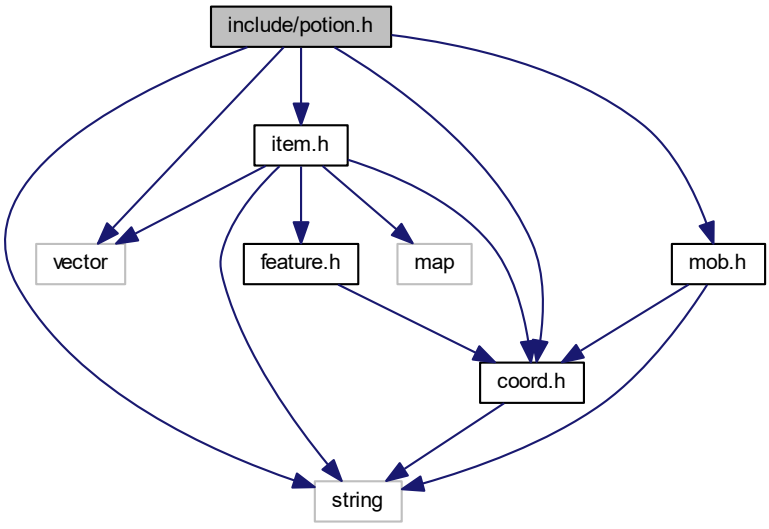
November 13, 2016

5.27 include/potion.h File Reference

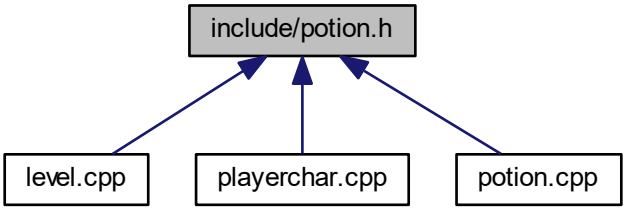
Member declarations for the Potion class.

```
#include <string>
#include <vector>
#include "coord.h"
#include "item.h"
#include "mob.h"
```

Include dependency graph for potion.h:



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



Classes

- class Potion

  Represents potions.

Typedefs

- using POTION_TUPLE_TYPE = std::tuple< std::string >

  Tuple representing Potion information (<Name>)

5.27.1 Detailed Description

Member declarations for the Potion class.

Author

Team Rogue++

Date

November 13, 2016

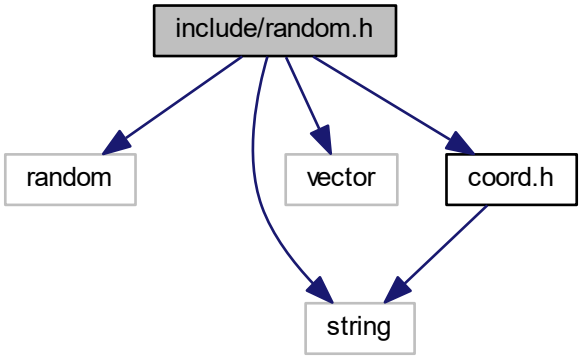
5.28 include/random.h File Reference

Member declarations for the Generator class.

```
#include <random>
#include <string>
#include <vector>
```

```
#include "coord.h"
```

Include dependency graph for random.h:



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

Classes

- class Generator

  Light wrapper around the std library which provides various random generation utilities.

5.28.1 Detailed Description

Member declarations for the Generator class.

Author

Team Rogue++

Date

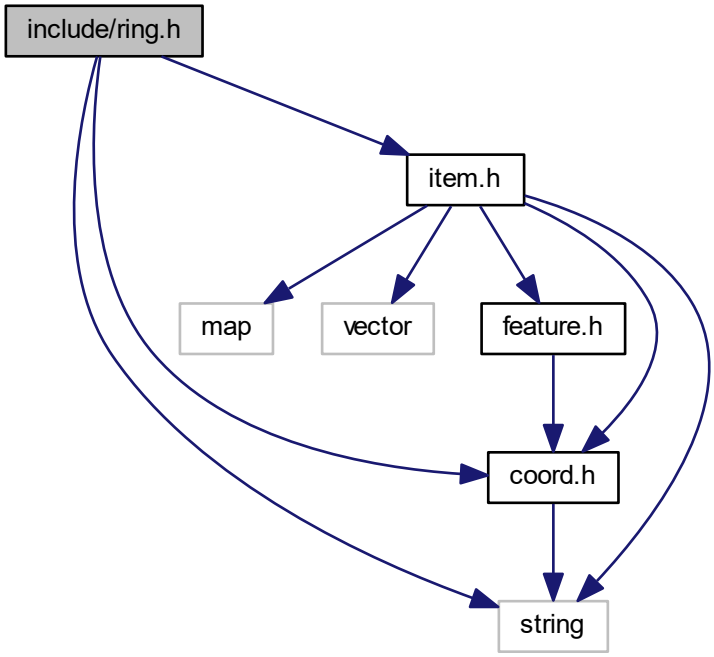
November 13, 2016

5.29 include/ring.h File Reference

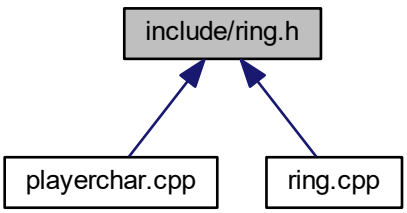
Member declarations for the Ring class.

```
#include <string>
#include "coord.h"
#include "item.h"
```

Include dependency graph for ring.h:



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



Classes

- class Ring

  Represents rings.

Typedefs

- using RING_TUPLE_TYPE = std::tuple< std::string >

  Tuple representing Ring information (<Name>)

5.29.1 Detailed Description

Member declarations for the Ring class.

Author

Team Rogue++

Date

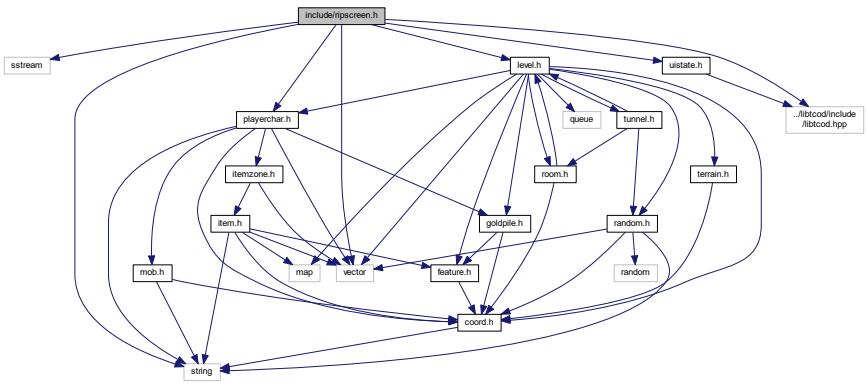
November 13, 2016

5.30 include/ripscreen.h File Reference

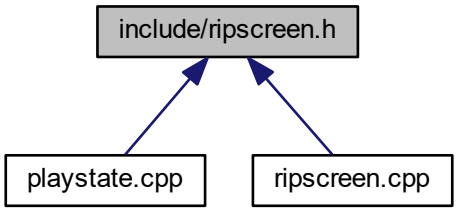
Member declarations for the RIPScreen class.

```
#include <sstream>
#include <string>
#include <vector>
#include "../libtcod/include/libtcod.hpp"
#include "level.h"
#include "playerchar.h"
#include "uistate.h"
```

Include dependency graph for ripscreen.h:



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



Classes

- class RIPScreen

  Interface state for post-death/retirement, looking at the high-score table.

5.30.1 Detailed Description

Member declarations for the RIPScreen class.

Author

Team Rogue++

Date

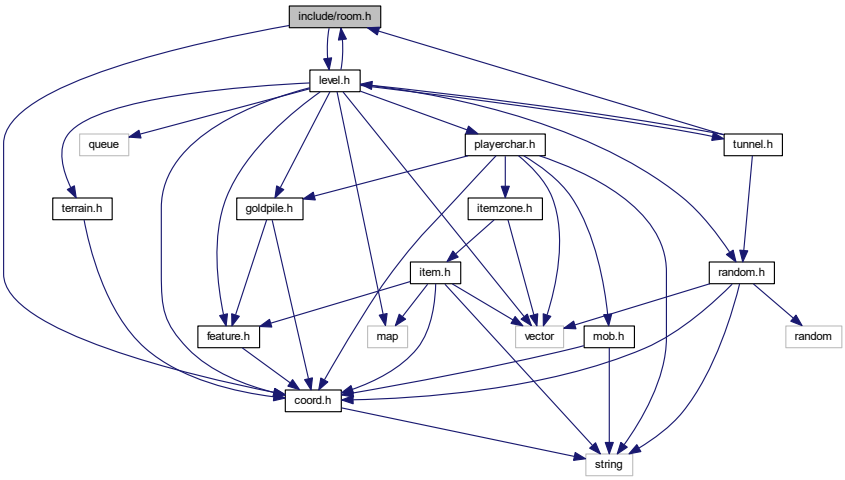
November 13, 2016

5.31 include/room.h File Reference

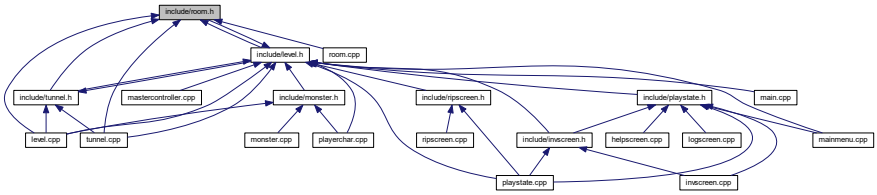
Member declarations for the Room class.

```
#include "coord.h"
#include "level.h"
```

Include dependency graph for room.h:



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



Classes

- class Room

  Models a room - a rectangular region of which there are (usually) 9 in any given dungeon level.

5.31.1 Detailed Description

Member declarations for the Room class.

Author

Team Rogue++

Date

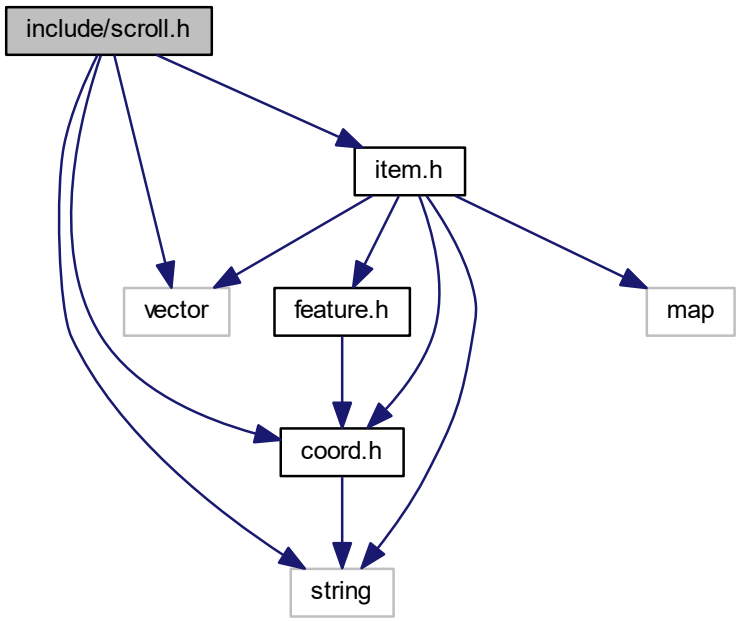
November 13, 2016

5.32 include/scroll.h File Reference

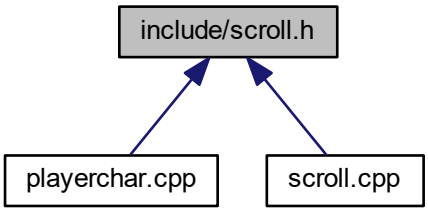
Member declarations for the Scroll class.

```
#include <string>
#include <vector>
#include "coord.h"
#include "item.h"
```

Include dependency graph for scroll.h:



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



Classes

- class Scroll

  Represents scrolls.

Typedefs

- using SCROLL_TUPLE_TYPE = std::tuple< std::string >

  Tuple representing Scroll information (<Name>)

5.32.1 Detailed Description

Member declarations for the Scroll class.

Author

Team Rogue++

Date

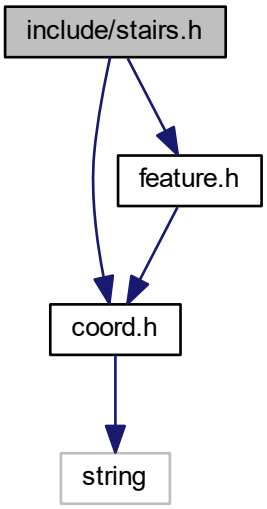
November 13, 2016

5.33 include/stairs.h File Reference

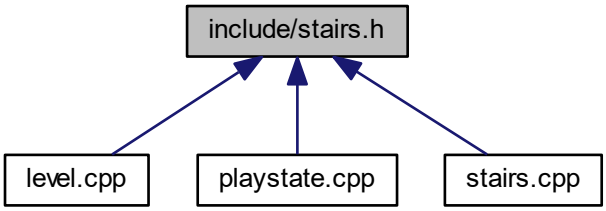
Member declarations for the Stairs class.

```
#include "coord.h"
#include "feature.h"
```

Include dependency graph for stairs.h:



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



Classes

- class Stairs

5.33.1 Detailed Description

Member declarations for the Stairs class.

Author

Team Rogue++

Date

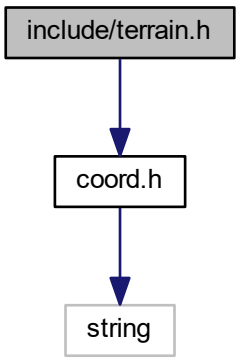
November 13, 2016

5.34 include/terrain.h File Reference

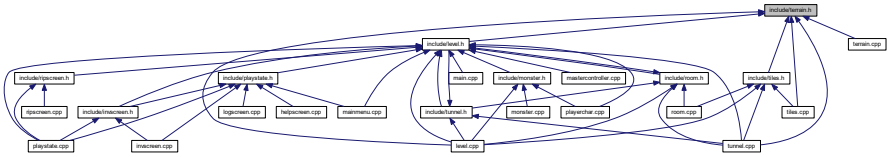
Member declarations for the Terrain class.

```
#include "coord.h"
```

Include dependency graph for terrain.h:



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



Classes

- class Terrain

  Represents a tile in the dungeon.

5.34.1 Detailed Description

Member declarations for the Terrain class.

Author

Team Rogue++

Date

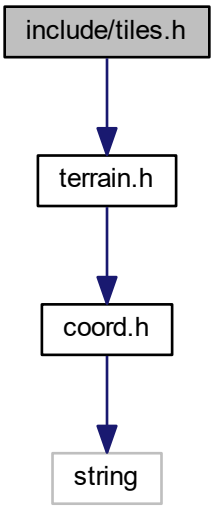
November 13, 2016

5.35 include/tiles.h File Reference

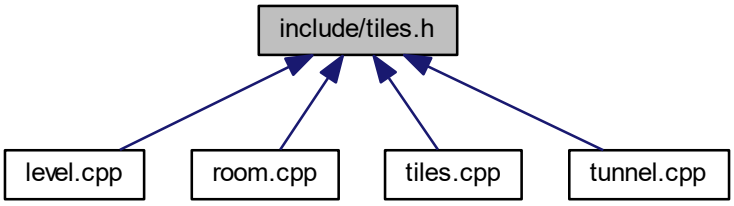
Member declarations for the Corridor, Door, Floor, Wall classes.

```
#include "terrain.h"
```

Include dependency graph for tiles.h:



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



Classes

- class Floor

  Regular dungeon floor.
- class Wall

  Regular dungeon wall.
- class Corridor

  Regular corridor tile.
- class Door

  Door tile.

5.35.1 Detailed Description

Member declarations for the Corridor, Door, Floor, Wall classes.

Author

Team Rogue++

Date

November 13, 2016

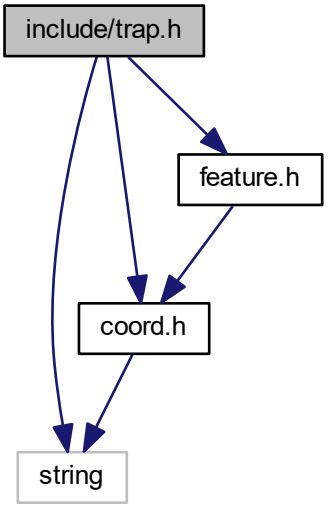
5.36 include/trap.h File Reference

Member declarations for the Trap class.

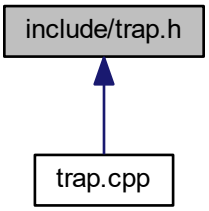
```
#include <string>
#include "coord.h"
```

```
#include "feature.h"
```

Include dependency graph for trap.h:



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



Classes

- class Trap

  Various hidden traps throughout the dungeon can trigger and endanger the player.

5.36.1 Detailed Description

Member declarations for the Trap class.

Author

Team Rogue++

Date

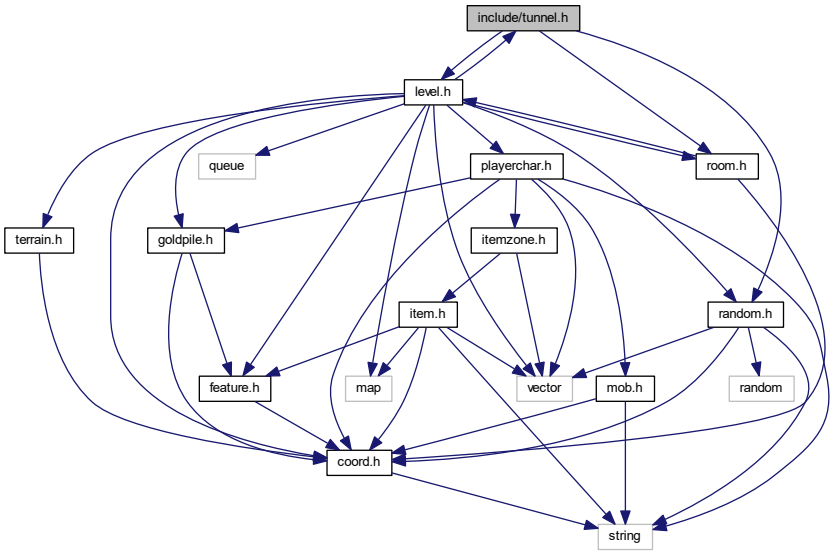
November 13, 2016

5.37 include/tunnel.h File Reference

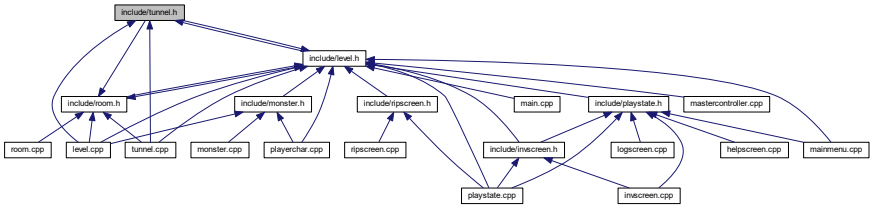
Member declarations for the Tunnel class.

```
#include "level.h"
#include "random.h"
#include "room.h"
```

Include dependency graph for tunnel.h:



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



Classes

- class Tunnel

  Tunnels are step-orthogonal paths connecting rooms.

5.37.1 Detailed Description

Member declarations for the Tunnel class.

Author

Team Rogue++

Date

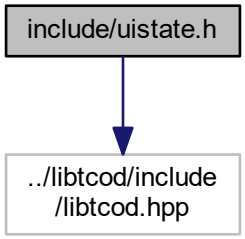
November 13, 2016

5.38 include/uistate.h File Reference

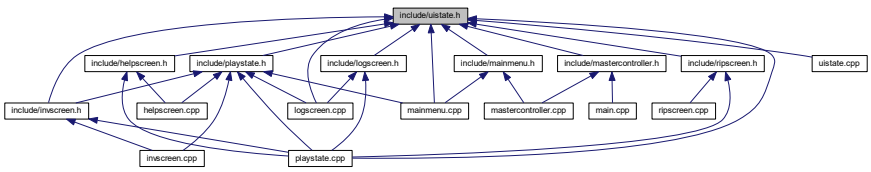
Member declarations for the UIState class.

```
#include "../libtcod/include/libtcod.hpp"
```

Include dependency graph for uistate.h:



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



Classes

- class UIState

  Class modeling a state of the game interface.

5.38.1 Detailed Description

Member declarations for the UIState class.

Author

Team Rogue++

Date

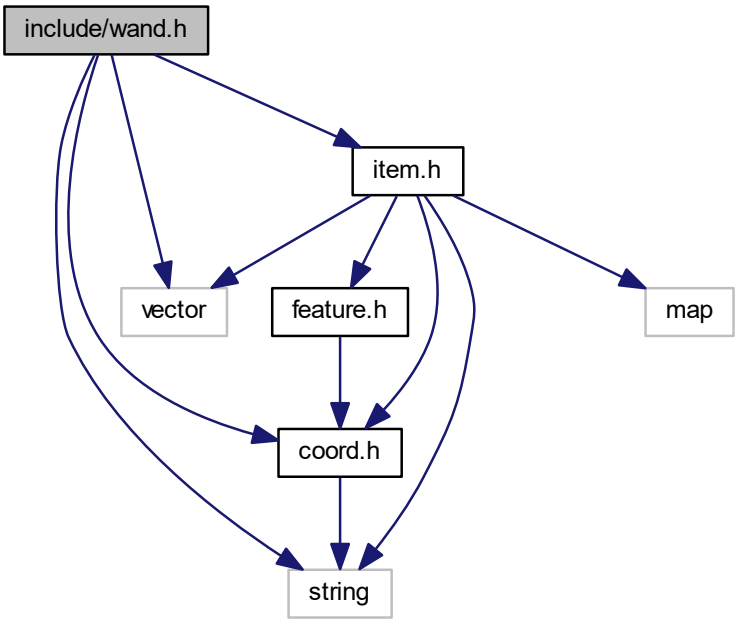
November 13, 2016

5.39 include/wand.h File Reference

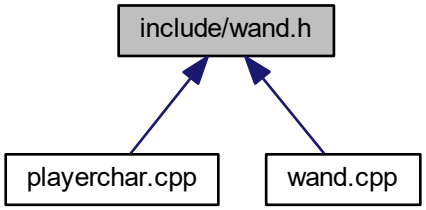
Member declarations for the Wand class.

```
#include <string>
#include <vector>
#include "coord.h"
#include "item.h"
```

Include dependency graph for wand.h:



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



Classes

- class Wand

  Represents a wand item.

Typedefs

- using WAND_TUPLE_TYPE = std::tuple< std::string >

  Tuple representing Wand information (<Name>)

5.39.1 Detailed Description

Member declarations for the Wand class.

Author

Team Rogue++

Date

November 13, 2016

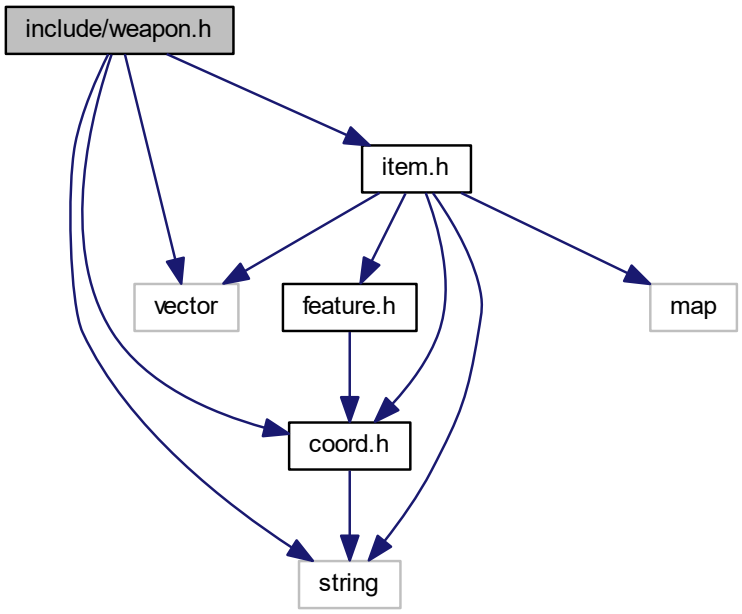
5.40 include/weapon.h File Reference

Member declarations for the Weapon class.

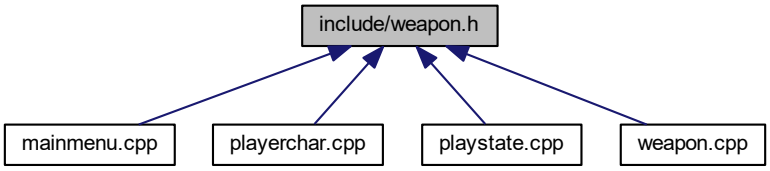
```
#include <string>
#include <vector>
#include "coord.h"
```

```
#include "item.h"
```

Include dependency graph for weapon.h:



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



Classes

- class Weapon

  Represents weapons.

Typedefs

- using WEAPON_TUPLE_TYPE = std::tuple< std::string, std::pair< int, int >, bool, bool >

  Tuple representing Weapon information (<Name, Damage, Melee, Stackable>)

5.40.1 Detailed Description

Member declarations for the Weapon class.

Author

Team Rogue++

Date

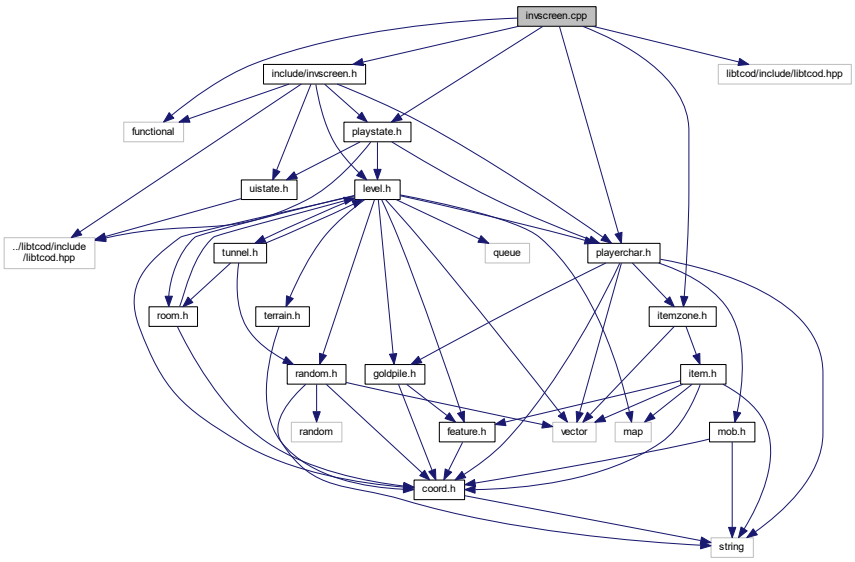
November 13, 2016

5.41 invscreen.cpp File Reference

Member definitions for the InvScreen class.

```
#include <functional>
#include "include/invscreen.h"
#include "include/itemzone.h"
#include "include/playerchar.h"
#include "include/playstate.h"
#include "libtcod/include/libtcod.hpp"
```

Include dependency graph for invscreen.cpp:



5.41.1 Detailed Description

Member definitions for the InvScreen class.

Author

Team Rogue++

Date

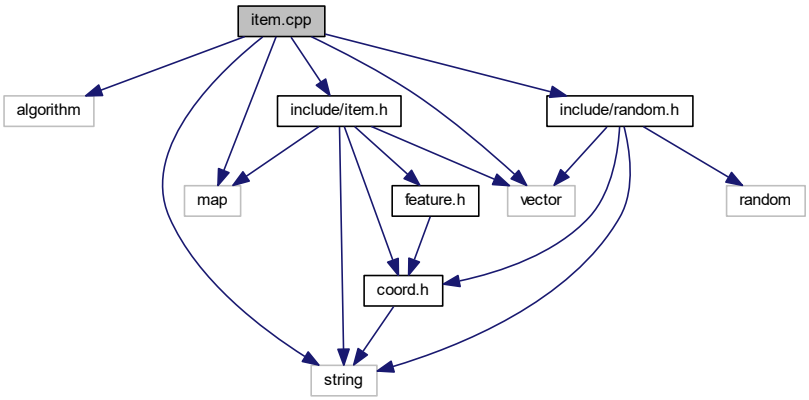
November 13, 2016

5.42 item.cpp File Reference

Member definitions for the Item class.

```
#include <algorithm>
#include <map>
#include <string>
#include <vector>
#include "include/item.h"
#include "include/random.h"
```

Include dependency graph for item.cpp:



5.42.1 Detailed Description

Member definitions for the Item class.

Author

Team Rogue++

Date

November 13, 2016

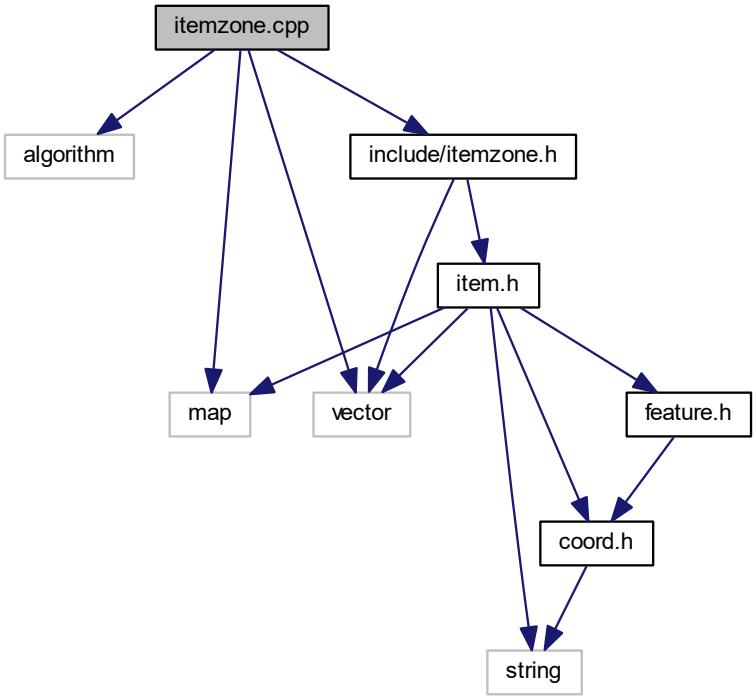
5.43 itemzone.cpp File Reference

Member definitions for the ItemZone class.

```
#include <algorithm>
#include <map>
#include <vector>
```

```
#include "include/itemzone.h"
```

Include dependency graph for itemzone.cpp:



5.43.1 Detailed Description

Member definitions for the ItemZone class.

Author

Team Rogue++

Date

November 13, 2016

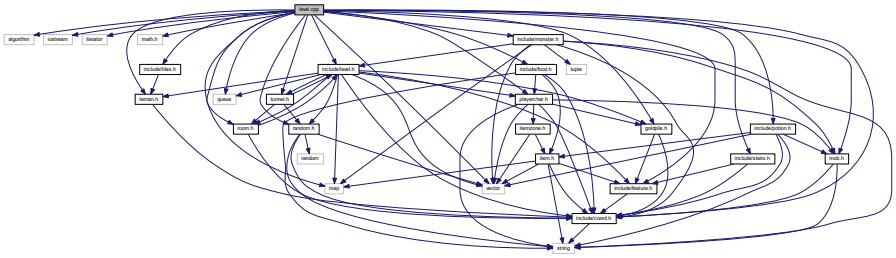
5.44 level.cpp File Reference

Member definitions for the Level class.

```
#include <algorithm>
#include <iostream>
#include <iterator>
#include <map>
#include <math.h>
```

```
#include <queue>
#include <vector>
#include "include/coord.h"
#include "include/feature.h"
#include "include/food.h"
#include "include/goldpile.h"
#include "include/level.h"
#include "include/mob.h"
#include "include/monster.h"
#include "include/playerchar.h"
#include "include/potion.h"
#include "include/random.h"
#include "include/room.h"
#include "include/stairs.h"
#include "include/terrain.h"
#include "include/tiles.h"
#include "include/tunnel.h"
```

Include dependency graph for level.cpp:



5.44.1 Detailed Description

Member definitions for the Level class.

Author

Team Rogue++

Date

November 13, 2016

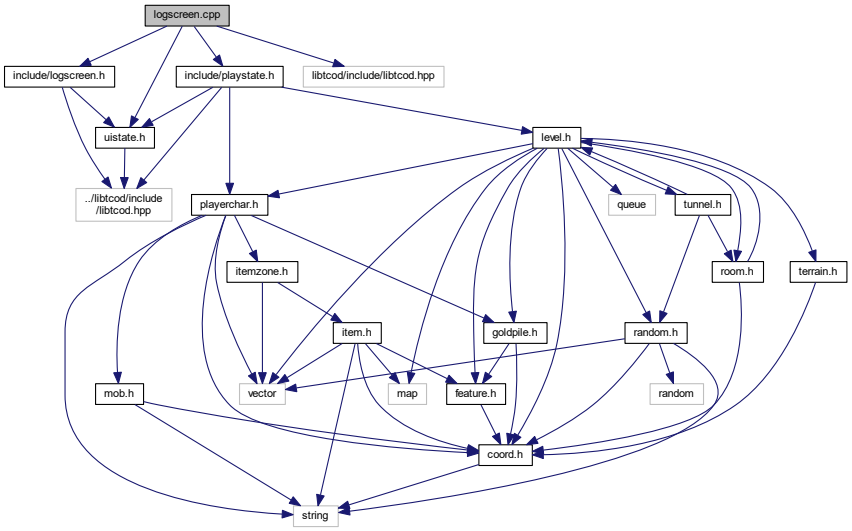
5.45 logscreen.cpp File Reference

Member definitions for the LogScreen class.

```
#include "include/logscreen.h"
#include "include/playstate.h"
#include "include/uistate.h"
```

```
#include "libtcod/include/libtcod.hpp"
```

Include dependency graph for logscreen.cpp:



5.45.1 Detailed Description

Member definitions for the LogScreen class.

Author

Team Rogue++

Date

November 13, 2016

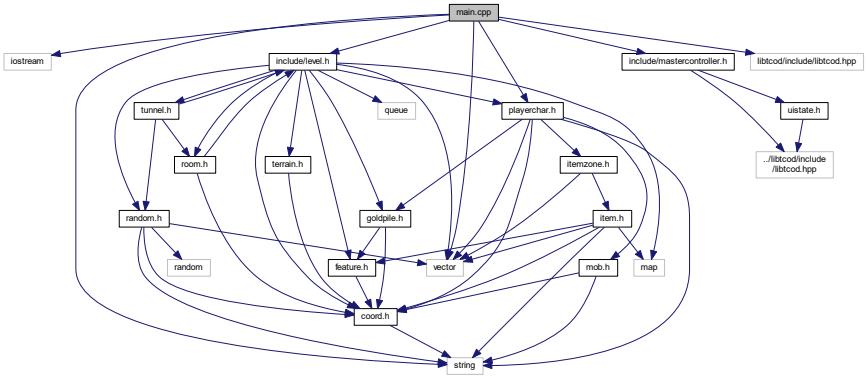
5.46 main.cpp File Reference

Global members.

```
#include <iostream>
#include <string>
#include <vector>
#include "include/level.h"
#include "include/mastercontroller.h"
#include "include/playerchar.h"
```

```
#include "libtcod/include/libtcod.hpp"
```

Include dependency graph for main.cpp:



Typedefs

- using **uint** = unsigned int

Functions

- void **putString** (int x, int y, std::string text)
- int main (int argv, char **args)

  Execution starts here.

5.46.1 Detailed Description

Global members.

Author

Team Rogue++

Date

November 13, 2016

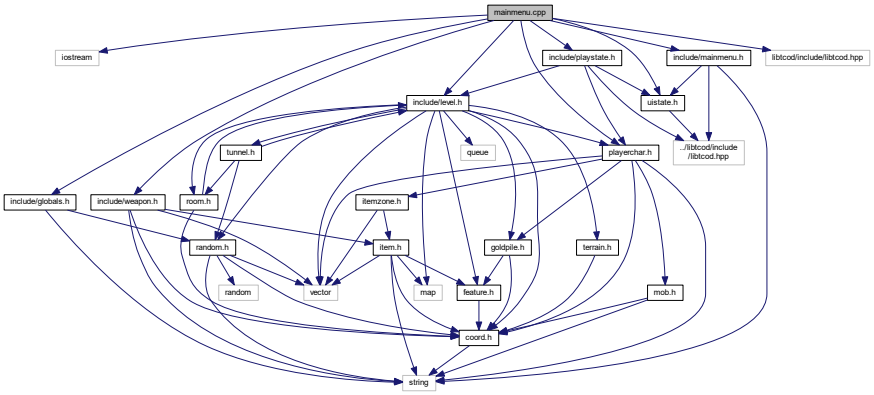
5.47 mainmenu.cpp File Reference

Member definitions for the MainMenu class.

```
#include <iostream>
#include "include/globals.h"
#include "include/level.h"
#include "include/mainmenu.h"
#include "include/playerchar.h"
```

```
#include "include/playstate.h"
#include "include/uistate.h"
#include "include/weapon.h"
#include "libtcod/include/libtcod.hpp"
```

Include dependency graph for mainmenu.cpp:



5.47.1 Detailed Description

Member definitions for the MainMenu class.

Author

Team Rogue++

Date

November 13, 2016

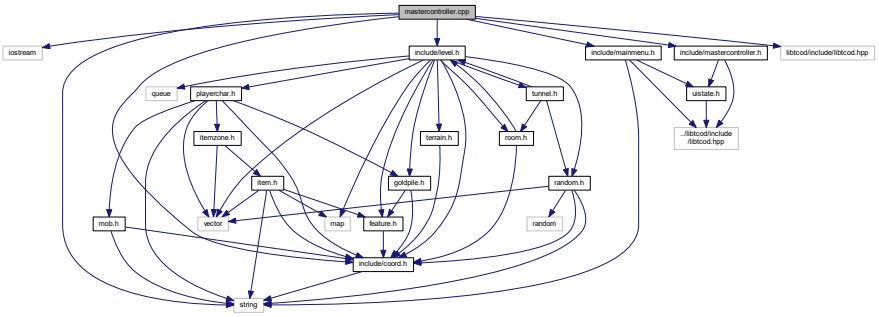
5.48 mastercontroller.cpp File Reference

Member definitions for the MasterController class.

```
#include <iostream>
#include <string>
#include "include/coord.h"
#include "include/level.h"
#include "include/mainmenu.h"
#include "include/mastercontroller.h"
```

```
#include "libtcod/include/libtcod.hpp"
```

Include dependency graph for mastercontroller.cpp:



5.48.1 Detailed Description

Member definitions for the MasterController class.

Author

Team Rogue++

Date

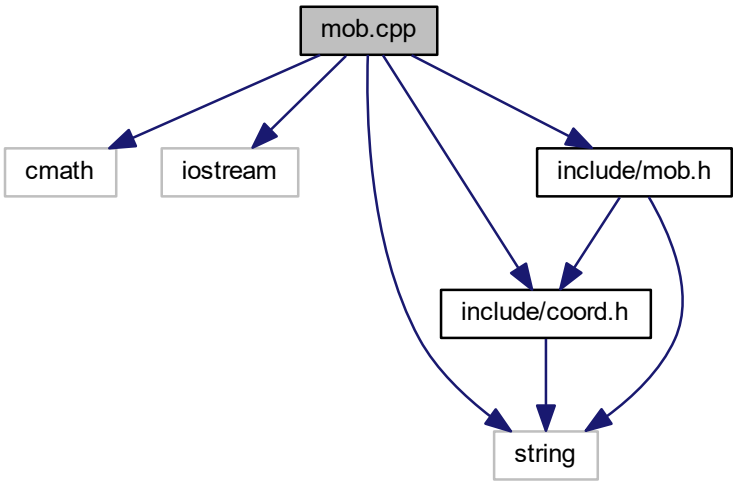
November 13, 2016

5.49 mob.cpp File Reference

Member definitions for the Mob class.

```
#include <cmath>
#include <iostream>
#include <string>
#include "include/coord.h"
#include "include/mob.h"
```

Include dependency graph for mob.cpp:



5.49.1 Detailed Description

Member definitions for the Mob class.

Author

Team Rogue++

Date

November 13, 2016

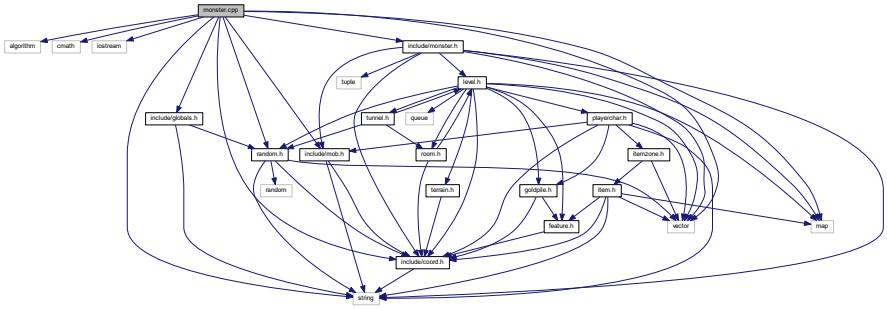
5.50 monster.cpp File Reference

Member definitions for the Monster class.

```
#include <algorithm>
#include <cmath>
#include <iostream>
#include <map>
#include <string>
#include <vector>
#include "include/coord.h"
#include "include/globals.h"
#include "include/mob.h"
#include "include/monster.h"
```

```
#include "include/random.h"
```

Include dependency graph for monster.cpp:



5.50.1 Detailed Description

Member definitions for the Monster class.

Author

Team Rogue++

Date

November 13, 2016

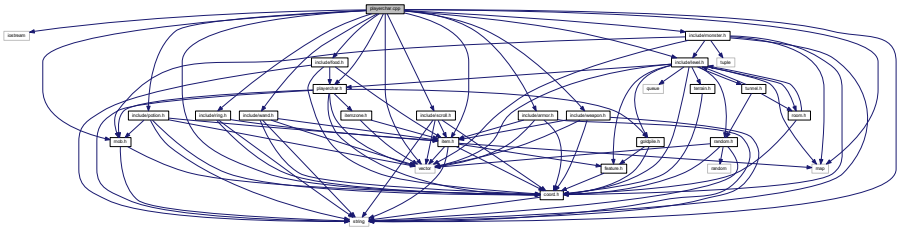
5.51 playerchar.cpp File Reference

Member definitions for the PlayerChar class.

```
#include <iostream>
#include <map>
#include <string>
#include <vector>
#include "include/armor.h"
#include "include/coord.h"
#include "include/food.h"
#include "include/item.h"
#include "include/level.h"
#include "include/mob.h"
#include "include/monster.h"
#include "include/playerchar.h"
#include "include/potion.h"
#include "include/ring.h"
#include "include/scroll.h"
#include "include/wand.h"
```

```
#include "include/weapon.h"
```

Include dependency graph for playerchar.cpp:



5.51.1 Detailed Description

Member definitions for the PlayerChar class.

Author

Team Rogue++

Date

November 13, 2016

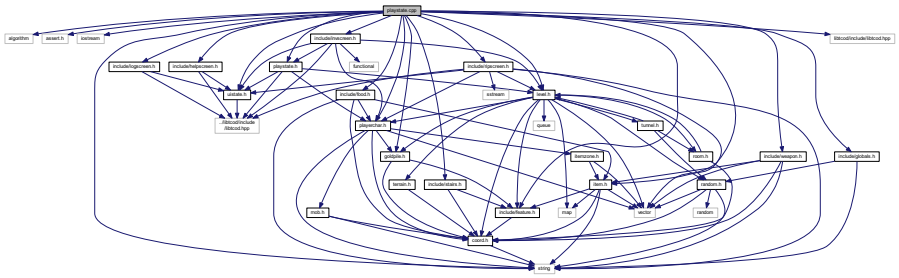
5.52 playstate.cpp File Reference

Member definitions for the PlayState class.

```
#include <algorithm>
#include <assert.h>
#include <iostream>
#include <string>
#include "include/feature.h"
#include "include/food.h"
#include "include/globals.h"
#include "include/goldpile.h"
#include "include/helpscreen.h"
#include "include/invscreen.h"
#include "include/item.h"
#include "include/level.h"
#include "include/logscreen.h"
#include "include/playerchar.h"
#include "include/playstate.h"
#include "include/ripscreen.h"
#include "include/stairs.h"
#include "include/uistate.h"
#include "include/weapon.h"
```

```
#include "libtcod/include/libtcod.hpp"
```

Include dependency graph for playstate.cpp:



Classes

- class QuitPrompt2
- class QuickDrop
- class QuickThrow
- class QuickEat
- class ThrowDirectionState

5.52.1 Detailed Description

Member definitions for the PlayState class.

Author

Team Rogue++

Date

November 13, 2016

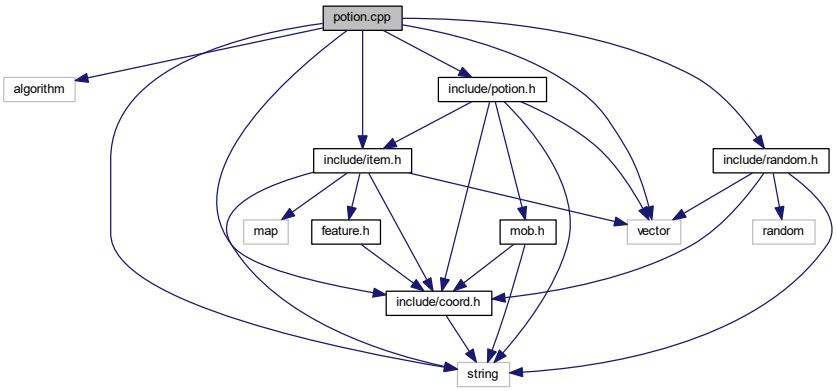
5.53 potion.cpp File Reference

Member definitions for the Potion class.

```
#include <algorithm>
#include <string>
#include <vector>
#include "include/coord.h"
#include "include/item.h"
#include "include/potion.h"
```

```
#include "include/random.h"
```

Include dependency graph for potion.cpp:



5.53.1 Detailed Description

Member definitions for the Potion class.

Author

Team Rogue++

Date

November 13, 2016

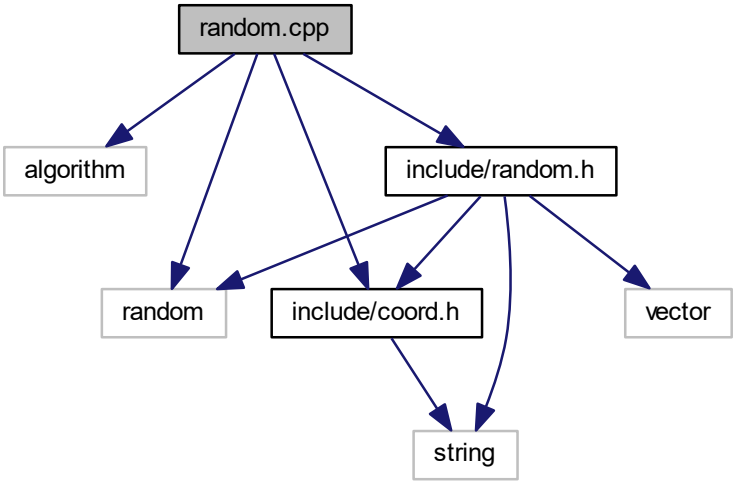
5.54 random.cpp File Reference

Global members.

```
#include <algorithm>
#include <random>
#include "include/coord.h"
```

```
#include "include/random.h"
```

Include dependency graph for random.cpp:



5.54.1 Detailed Description

Global members.

Author

Team Rogue++

Date

November 13, 2016

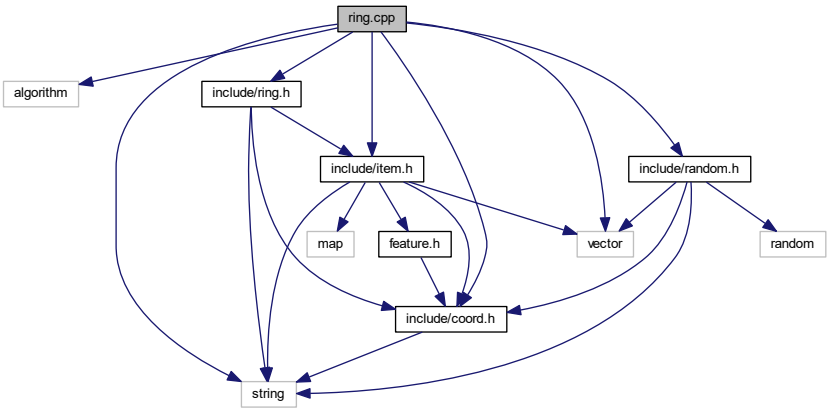
5.55 ring.cpp File Reference

Member definitions for the Ring class.

```
#include <algorithm>
#include <string>
#include <vector>
#include "include/coord.h"
#include "include/item.h"
#include "include/random.h"
```

```
#include "include/ring.h"
```

Include dependency graph for ring.cpp:



5.55.1 Detailed Description

Member definitions for the Ring class.

Author

Team Rogue++

Date

November 13, 2016

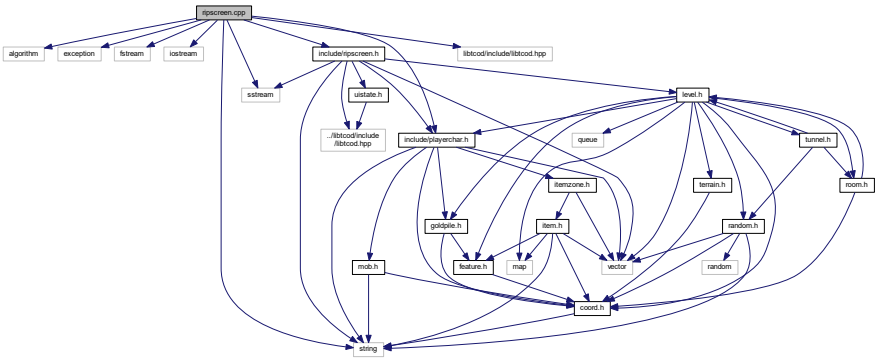
5.56 ripscreen.cpp File Reference

Member definitions for the RIPScreen class.

```
#include <algorithm>
#include <exception>
#include <fstream>
#include <iostream>
#include <sstream>
#include <string>
#include "include/playerchar.h"
#include "include/ripscreen.h"
```

```
#include "libtcod/include/libtcod.hpp"
```

Include dependency graph for ripscreen.cpp:



Classes

- struct ScoreItem

5.56.1 Detailed Description

Member definitions for the RIPScreen class.

Author

Team Rogue++

Date

November 13, 2016

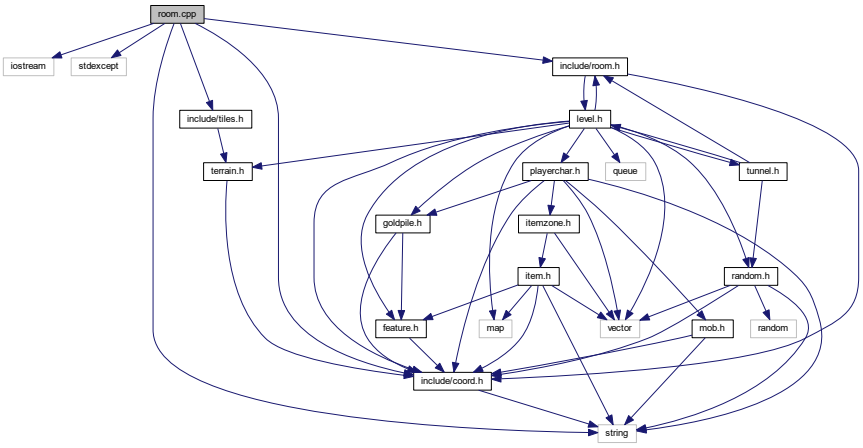
5.57 room.cpp File Reference

Member definitions for the Room class.

```
#include <iostream>
#include <stdexcept>
#include <string>
#include "include/coord.h"
#include "include/room.h"
```

```
#include "include/tiles.h"
```

Include dependency graph for room.cpp:



5.57.1 Detailed Description

Member definitions for the Room class.

Author

Team Rogue++

Date

November 13, 2016

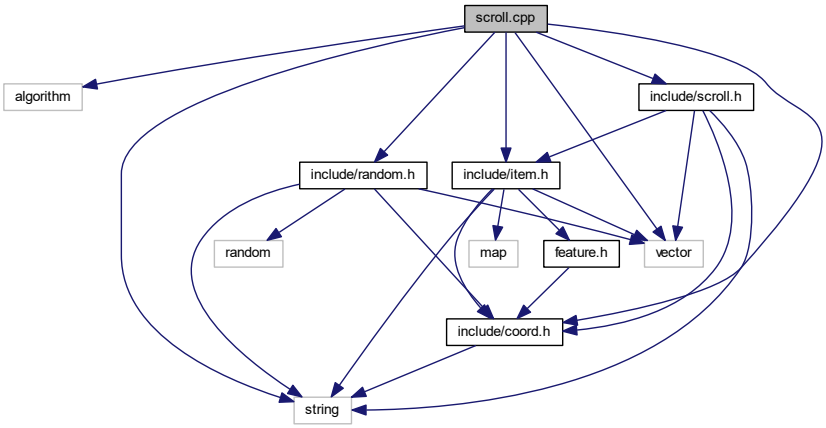
5.58 scroll.cpp File Reference

Member definitions for the Scroll class.

```
#include <algorithm>
#include <string>
#include <vector>
#include "include/coord.h"
#include "include/item.h"
#include "include/random.h"
```

```
#include "include/scroll.h"
```

Include dependency graph for scroll.cpp:



5.58.1 Detailed Description

Member definitions for the Scroll class.

Author

Team Rogue++

Date

November 13, 2016

5.59 Source_Formatter.py File Reference

Performs several formatting operations over the C++ header and source files.

Functions

- def Source_Formatter.cleanPragmas (content)

  Removes all current 'pragma once' lines and define guards of the given C++ file; inserts a 'pragma once' into the file.
- def Source_Formatter.sortIncludes (content)

  Sorts the 'include' statements of the given C++ file.
- def Source_Formatter.trim (content)

  Trims the given C++ file.
- def Source_Formatter.addHeader (cppFile, content)

  Adds a header to the given C++ file.
- def Source_Formatter.formatContent (cppFile, content)

  Formats the content of the given C++ source file.
- def Source_Formatter.formatFiles (cppFiles)

  Formats all of the given C++ source files.
- def Source_Formatter.findFiles ()

  Recursively finds all C++ source files.
- def Source_Formatter.main ()

  Execution entry point.

Variables

- Source_Formatter.RE_PATH_IGNORE = re.compile(r"libtcod|ParseTest|html")

  Ignored paths.
- Source_Formatter.RE_EXTENSION = re.compile(r"\.(cpp|h)")

  C++ file extensions.
- Source_Formatter.RE_HEADER_EXTENSION = re.compile(r"\.h$")

  C++ header file.
- Source_Formatter.RE_HEADER_CLASS = re.compile(r"class\s+(?P<className>[a-zA-Z]+)\s+(:|{)")

  C++ header class declaration.
- Source_Formatter.RE_SRC_CLASS = re.compile(r"^(?P<className>[a-zA-Z]+)::\1")

  C++ source class declaration.

5.59.1 Detailed Description

Performs several formatting operations over the C++ header and source files.

Author

Mikhail Andrenkov

5.59.2 Function Documentation

5.59.2.1 addHeader()

```
def Source_Formatter.addHeader (
              cppFile,
              content )
```

Adds a header to the given C++ file.

Parameters

cppFile	The name of the C++ file
content	The content of the C++ file

Returns

A list denoting the formatted contents of the C++ file

5.59.2.2 cleanPragmas()

```
def Source_Formatter.cleanPragmas (
              content )
```

Removes all current 'pragma once' lines and define guards of the given C++ file; inserts a 'pragma once' into the file.

Parameters

content	The content of the C++ file

Returns

A list denoting the formatted contents of the C++ file

5.59.2.3 formatContent()

```
def Source_Formatter.formatContent (
              cppFile,
              content )
```

Formats the content of the given C++ source file.

Parameters

cppFile	The name of the C++ file
content	The content of the C++ file

Returns

A list denoting the formatted contents of the C++ file

5.59.2.4 formatFiles()

```
def Source_Formatter.formatFiles (
              cppFiles )
```

Formats all of the given C++ source files.

Parameters

cppFiles	The C++ source files

5.59.2.5 sortIncludes()

```
def Source_Formatter.sortIncludes (
              content )
```

Sorts the 'include' statements of the given C++ file.

Parameters

content	The content of the C++ file

Returns

A list denoting the formatted contents of the C++ file

5.59.2.6 trim()

```
def Source_Formatter.trim (
              content )
```

Trims the given C++ file.

Parameters

content	The content of the C++ file

Returns

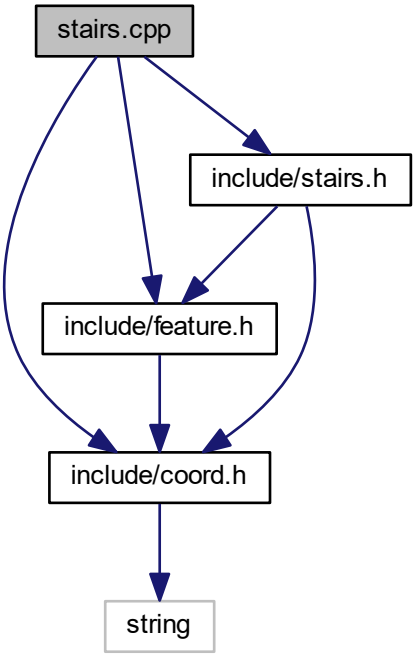
A list denoting the formatted contents of the C++ file

5.60 stairs.cpp File Reference

Member definitions for the Stairs class.

```
#include "include/coord.h"
#include "include/feature.h"
#include "include/stairs.h"
```

Include dependency graph for stairs.cpp:



5.60.1 Detailed Description

Member definitions for the Stairs class.

Author

Team Rogue++

Date

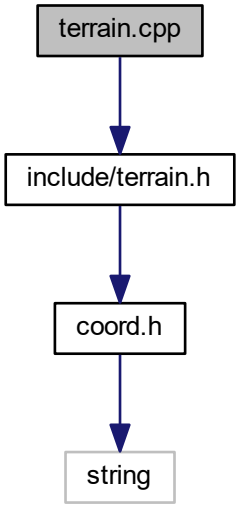
November 13, 2016

5.61 terrain.cpp File Reference

Member definitions for the Terrain class.

```
#include "include/terrain.h"
```

Include dependency graph for terrain.cpp:



5.61.1 Detailed Description

Member definitions for the Terrain class.

Author

Team Rogue++

Date

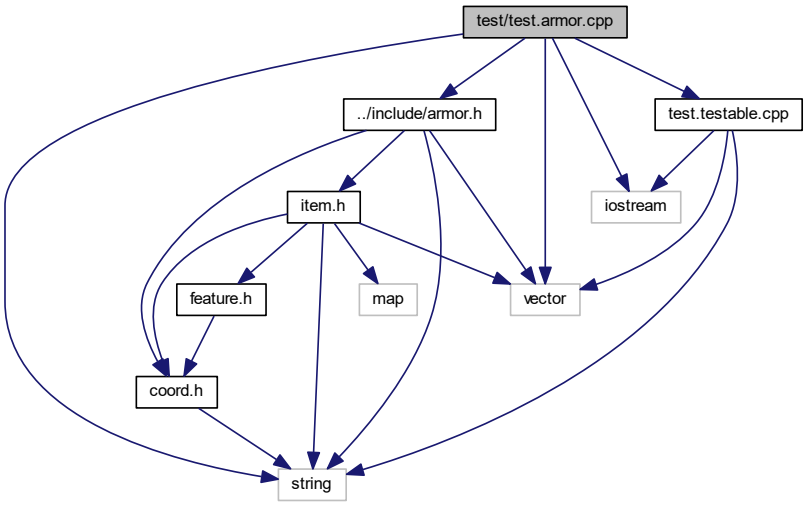
November 13, 2016

5.62 test/test.armor.cpp File Reference

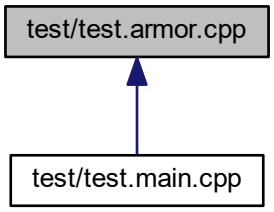
Global members.

```
#include <iostream>
#include <string>
#include <vector>
#include "../include/armor.h"
#include "test.testable.cpp"
```

Include dependency graph for test.armor.cpp:



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



Classes

- class ArmorTest

5.62.1 Detailed Description

Global members.

Author

Team Rogue++

Date

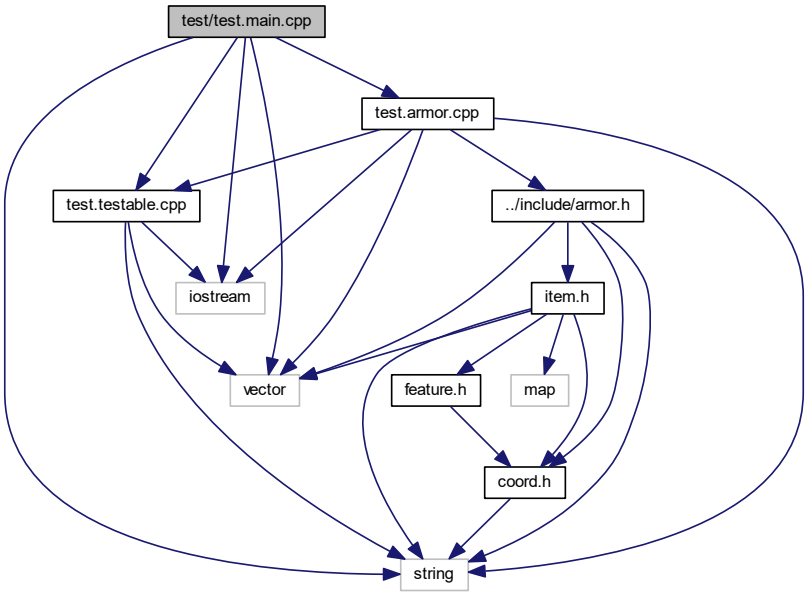
November 13, 2016

5.63 test/test.main.cpp File Reference

Global members.

```
#include <iostream>
#include <string>
#include <vector>
#include "test.armor.cpp"
#include "test.testable.cpp"
```

Include dependency graph for test.main.cpp:



Functions

- int **main** ()

5.63.1 Detailed Description

Global members.

Author

Team Rogue++

Date

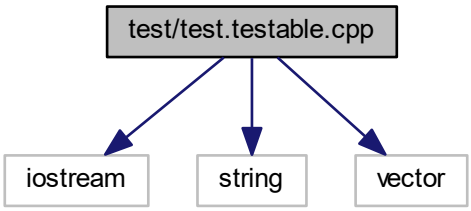
November 13, 2016

5.64 test/test.testable.cpp File Reference

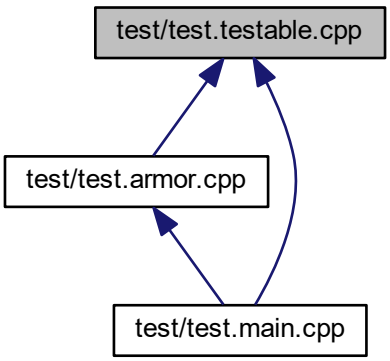
Global members.

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

Include dependency graph for test.testable.cpp:



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



Classes

- class Testable

5.64.1 Detailed Description

Global members.

Author

Team Rogue++

Date

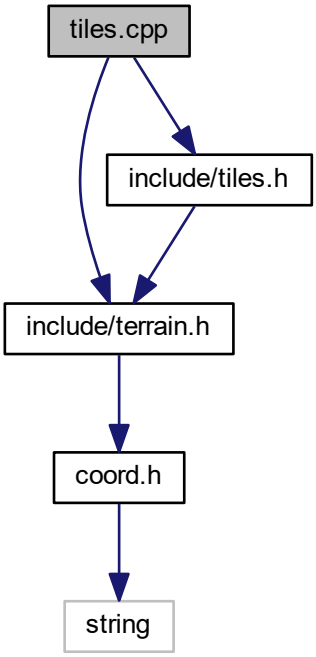
November 13, 2016

5.65 tiles.cpp File Reference

Member definitions for the Corridor, Door, Floor, Wall classes.

```
#include "include/terrain.h"
#include "include/tiles.h"
```

Include dependency graph for tiles.cpp:



5.65.1 Detailed Description

Member definitions for the Corridor, Door, Floor, Wall classes.

Author

Team Rogue++

Date

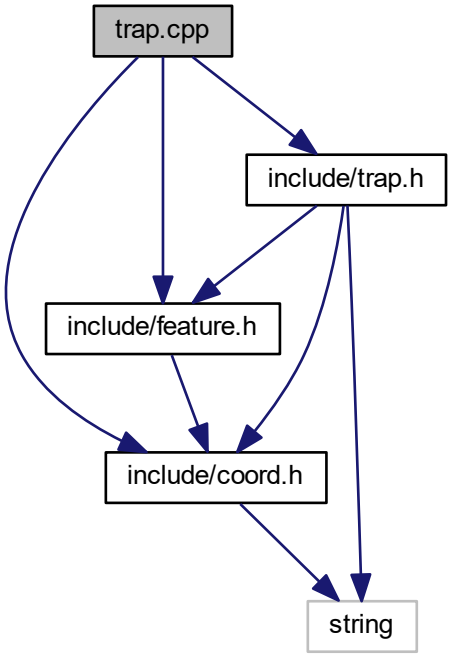
November 13, 2016

5.66 trap.cpp File Reference

Member definitions for the Trap class.

```
#include "include/coord.h"
#include "include/feature.h"
#include "include/trap.h"
```

Include dependency graph for trap.cpp:



5.66.1 Detailed Description

Member definitions for the Trap class.

Author

Team Rogue++

Date

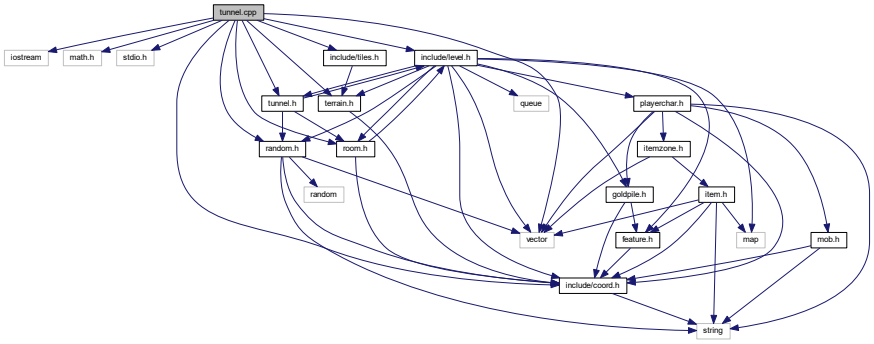
November 13, 2016

5.67 tunnel.cpp File Reference

Member definitions for the Tunnel class.

```
#include <iostream>
#include <math.h>
#include <stdio.h>
#include <vector>
#include "include/coord.h"
#include "include/level.h"
#include "include/random.h"
#include "include/room.h"
#include "include/terrain.h"
#include "include/tiles.h"
#include "include/tunnel.h"
```

Include dependency graph for tunnel.cpp:



5.67.1 Detailed Description

Member definitions for the Tunnel class.

Author

Team Rogue++

Date

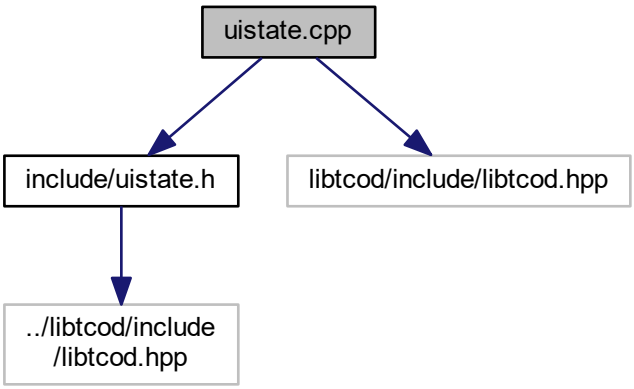
November 13, 2016

5.68 uistate.cpp File Reference

Member definitions for the UIState class.

```
#include "include/uistate.h"
#include "libtcod/include/libtcod.hpp"
```

Include dependency graph for uistate.cpp:



5.68.1 Detailed Description

Member definitions for the UIState class.

Author

Team Rogue++

Date

November 13, 2016

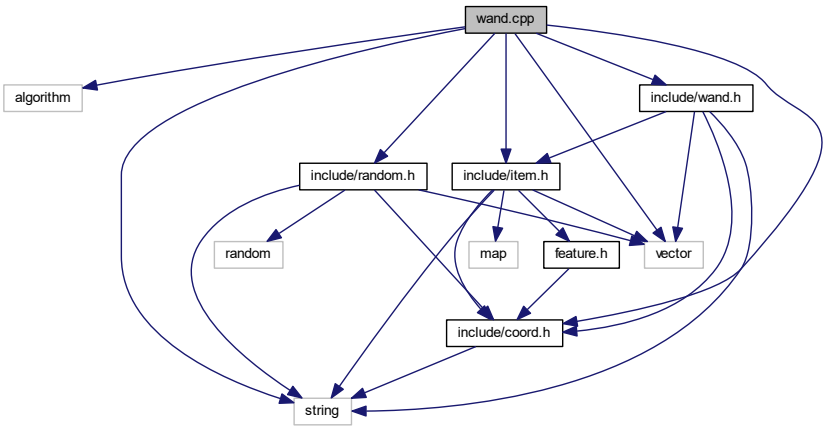
5.69 wand.cpp File Reference

Member definitions for the Wand class.

```
#include <algorithm>
#include <string>
#include <vector>
#include "include/coord.h"
#include "include/item.h"
#include "include/random.h"
```

```
#include "include/wand.h"
```

Include dependency graph for wand.cpp:



5.69.1 Detailed Description

Member definitions for the Wand class.

Author

Team Rogue++

Date

November 13, 2016

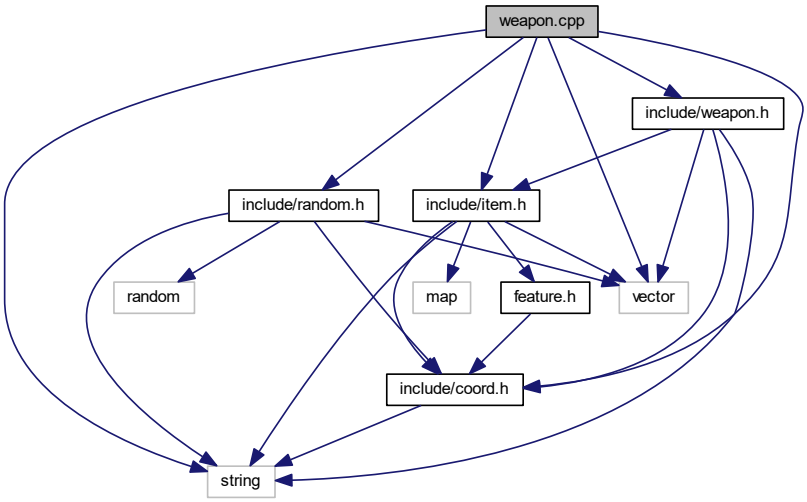
5.70 weapon.cpp File Reference

Member definitions for the Weapon class.

```
#include <string>
#include <vector>
#include "include/coord.h"
#include "include/item.h"
#include "include/random.h"
```

```
#include "include/weapon.h"
```

Include dependency graph for weapon.cpp:



5.70.1 Detailed Description

Member definitions for the Weapon class.

Author

Team Rogue++

Date

November 13, 2016