My Project

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Chapter 1

Namespace Index

1.1 Namespace List

Here is a list of all namespaces with brief descriptions:

Chapter 2

Hierarchical Index

2.1 Class Hierarchy

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

Chapter 3

Class Index

3.1 Class List

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

Chapter 4

File Index

4.1 File List

Here is a list of all files with brief descriptions:

Chapter 5

Namespace Documentation

5.1 Ui Namespace Reference

Chapter 6

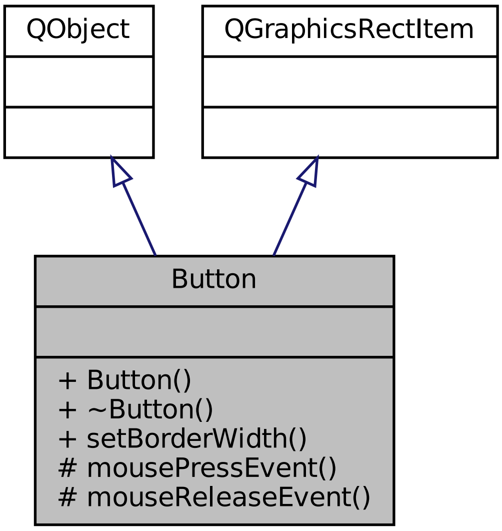
Class Documentation

6.1 Button Class Reference

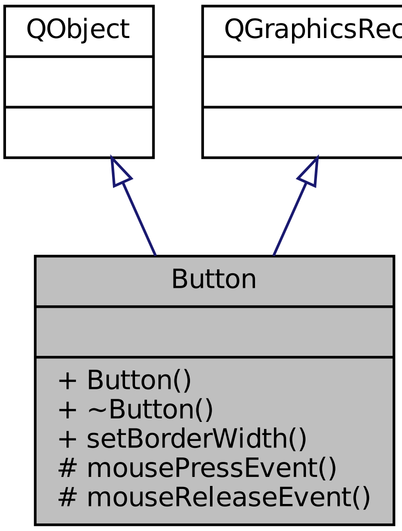
Button class, inherits from QObject and QGraphicsRectItem.

```
#include <button.h>
```

Inheritance diagram for Button:



Collaboration diagram for Button:



Public Slots

- void setBorderWidth (int width)

  Set the border width of the button.

Signals

- void pressed ()

  Signal emitted when the button is pressed.
- void released ()

  Signal emitted when the button is released.
- void autoPilot ()

  Signal emitted when the button is released and the autopilot rectangle contains the mouse position.

Public Member Functions

- Button (const QPixmap &pixmap, std::string name, QGraphicsItem ∗parent=0, qreal x=0, qreal y=0)

  Button constructor.
- ∼Button ()=default

  Button destructor.

Protected Member Functions

- void mousePressEvent (QGraphicsSceneMouseEvent ∗event) override

  Mouse press event.
- void mouseReleaseEvent (QGraphicsSceneMouseEvent ∗event) override

  Mouse release event.

6.1.1 Detailed Description

Button class, inherits from QObject and QGraphicsRectItem.

6.1.2 Constructor & Destructor Documentation

6.1.2.1 Button()

```
Button::Button (
            const QPixmap & pixmap,
            std::string name,
            QGraphicsItem * parent = 0,
            qreal x = 0,
            qreal y = 0 )  [explicit]
```

Button constructor.

Parameters

pixmap	QPixmap object
name	Name of the button
parent	Parent QGraphicsItem
x	X coordinate
y	Y coordinate

6.1.2.2 ∼Button()

```
Button::∼Button ( )  [default]
```

Button destructor.

6.1.3 Member Function Documentation

6.1.3.1 autoPilot

```
void Button::autoPilot ( )  [signal]
```

Signal emitted when the button is released and the autopilot rectangle contains the mouse position.

6.1.3.2 mousePressEvent()

```
void Button::mousePressEvent (
            QGraphicsSceneMouseEvent * event )  [override], [protected]
```

Mouse press event.

Parameters

event	QGraphicsSceneMouseEvent object

6.1.3.3 mouseReleaseEvent()

```
void Button::mouseReleaseEvent (
            QGraphicsSceneMouseEvent * event )  [override], [protected]
```

Mouse release event.

Parameters

event	QGraphicsSceneMouseEvent object

6.1.3.4 pressed

```
void Button::pressed ( )  [signal]
```

Signal emitted when the button is pressed.

6.1.3.5 released

```
void Button::released ( )  [signal]
```

Signal emitted when the button is released.

6.1.3.6 setBorderWidth

```
void Button::setBorderWidth (
            int width )  [slot]
```

Set the border width of the button.

Parameters

width	Width of the border

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

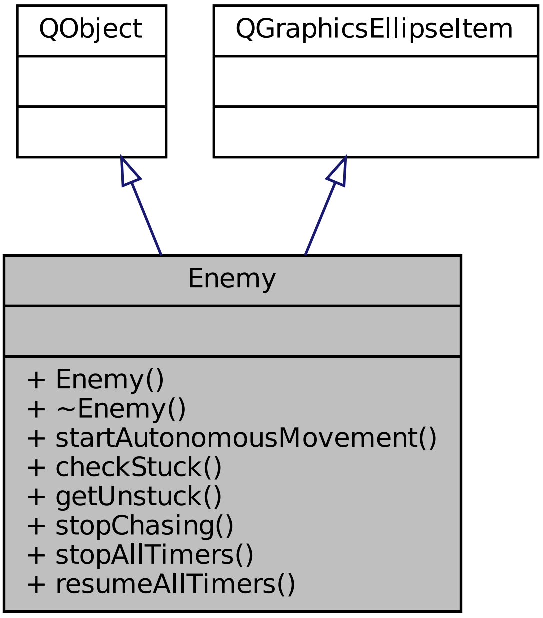
- button.h
- button.cpp

6.2 Enemy Class Reference

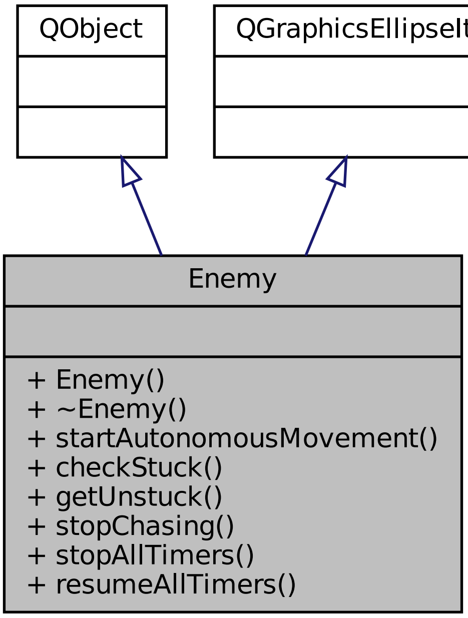
Enemy class, inherits from QObject and QGraphicsEllipseItem.

```
#include <enemy.h>
```

Inheritance diagram for Enemy:



Collaboration diagram for Enemy:



Public Slots

- void startAutonomousMovement ()

    Start the autonomous movement of the enemy.
- void checkStuck ()

    After 5s check whether the last position equals (in a set range) the current position.
- void getUnstuck ()

    Get the enemy unstuck (rotation and moving out of map boundaries)
- void stopChasing ()

    Stop chasing the user.
- void stopAllTimers ()

    Stop all the timers of the enemy, used for pausing the game.
- void resumeAllTimers ()

    Resume all the timers of the enemy, used for resuming the game.

Signals

- void hit ()

    Signal emitted when the enemy collides with the user.

Public Member Functions

- Enemy (QGraphicsItem ∗parent=0, User ∗user=nullptr, int distance=3, int orientation=0, int velocity=3, int rotationAngle=30)

  Enemy constructor.
- ∼Enemy ()

  Enemy destructor.

6.2.1 Detailed Description

Enemy class, inherits from QObject and QGraphicsEllipseItem.

6.2.2 Constructor & Destructor Documentation

6.2.2.1 Enemy()

```
Enemy::Enemy (
            QGraphicsItem ∗ parent = 0,
            User ∗ user = nullptr,
            int distance = 3,
            int orientation = 0,
            int velocity = 3,
            int rotationAngle = 30 )
```

Enemy constructor.

Parameters

parent	Parent QGraphicsItem
user	User object
distance	Distance from the obstacles to turn
orientation	Orientation of the enemy
velocity	Velocity of the enemy
rotationAngle	Rotation angle of the enemy (default values shall never be needed)

6.2.2.2 ∼Enemy()

```
Enemy::∼Enemy ( )
```

Enemy destructor.

6.2.3 Member Function Documentation

6.2.3.1 checkStuck

```
void Enemy::checkStuck ( )  [slot]
```

After 5s check whether the last position equals (in a set range) the current position.

6.2.3.2 getUnstuck

```
void Enemy::getUnstuck ( )  [slot]
```

Get the enemy unstuck (rotation and moving out of map boundaries)

6.2.3.3 hit

```
void Enemy::hit ( )  [signal]
```

Signal emitted when the enemy collides with the user.

6.2.3.4 resumeAllTimers

```
void Enemy::resumeAllTimers ( )  [slot]
```

Resume all the timers of the enemy, used for resuming the game.

6.2.3.5 startAutonomousMovement

```
void Enemy::startAutonomousMovement ( )  [slot]
```

Start the autonomous movement of the enemy.

6.2.3.6 stopAllTimers

```
void Enemy::stopAllTimers ( )  [slot]
```

Stop all the timers of the enemy, used for pausing the game.

6.2.3.7 stopChasing

```
void Enemy::stopChasing ( )  [slot]
```

Stop chasing the user.

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

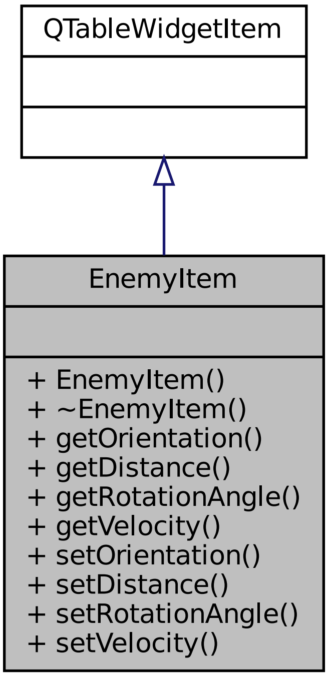
- enemy.h
- enemy.cpp

6.3 EnemyItem Class Reference

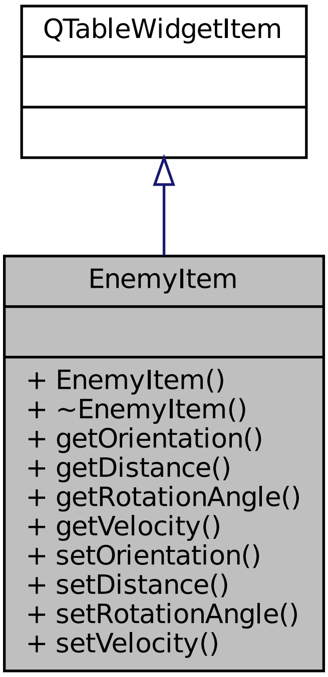
The EnemyItem class.

```
#include <enemyitem.h>
```

Inheritance diagram for EnemyItem:



Collaboration diagram for EnemyItem:



Public Member Functions

- EnemyItem (int orientation=0, int distance=0, int rotationAngle=0, int velocity=0)
- ∼EnemyItem ()
- int getOrientation ()

  Gets the orientation of the enemy robot.
- int getDistance ()

  Gets the distance of the enemy robot.
- int getRotationAngle ()

  Gets the rotation angle of the enemy robot.
- int getVelocity ()

  Gets the velocity of the enemy robot.
- void setOrientation (int orientation)

  Sets the orientation of the enemy robot.
- void setDistance (int distance)

  Sets the distance of the enemy robot.
- void setRotationAngle (int rotationAngle)

  Sets the rotation angle of the enemy robot.
- void setVelocity (int velocity)

  Sets the velocity of the enemy robot.

6.3.1 Detailed Description

The EnemyItem class.

This class is used to store the data of the enemy robot in the QWidgetTable

6.3.2 Constructor & Destructor Documentation

6.3.2.1 EnemyItem()

```
EnemyItem::EnemyItem (
              int orientation = 0,
              int distance = 0,
              int rotationAngle = 0,
              int velocity = 0 )  [inline]
```

6.3.2.2 ∼EnemyItem()

```
EnemyItem::∼EnemyItem ( )
```

6.3.3 Member Function Documentation

6.3.3.1 getDistance()

```
int EnemyItem::getDistance ( )
```

Gets the distance of the enemy robot.

Returns

int distance

6.3.3.2 getOrientation()

```
int EnemyItem::getOrientation ( )
```

Gets the orientation of the enemy robot.

Returns

int orientation

6.3.3.3 getRotationAngle()

```
int EnemyItem::getRotationAngle ( )
```

Gets the rotation angle of the enemy robot.

Returns

int angle

6.3.3.4 getVelocity()

```
int EnemyItem::getVelocity ( )
```

Gets the velocity of the enemy robot.

Returns

int velocity

6.3.3.5 setDistance()

```
void EnemyItem::setDistance (
             int distance )
```

Sets the distance of the enemy robot.

Parameters

distance	distance of the enemy robot

6.3.3.6 setOrientation()

```
void EnemyItem::setOrientation (
             int orientation )
```

Sets the orientation of the enemy robot.

Parameters

orientation	orientation of the enemy robot

6.3.3.7 setRotationAngle()

```
void EnemyItem::setRotationAngle (
             int rotationAngle )
```

Sets the rotation angle of the enemy robot.

Parameters

rotationAngle	rotation angle of the enemy robot

6.3.3.8 setVelocity()

```
void EnemyItem::setVelocity (
             int velocity )
```

Sets the velocity of the enemy robot.

Parameters

velocity	velocity of the enemy robot

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

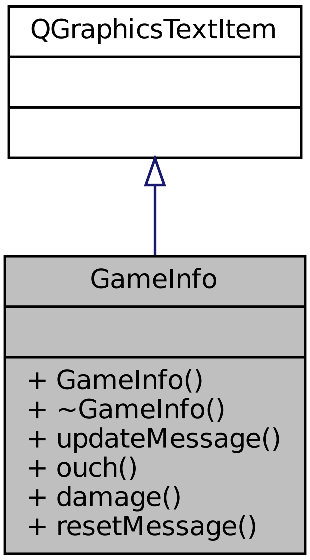
- enemyitem.h
- enemyitem.cpp

6.4 GameInfo Class Reference

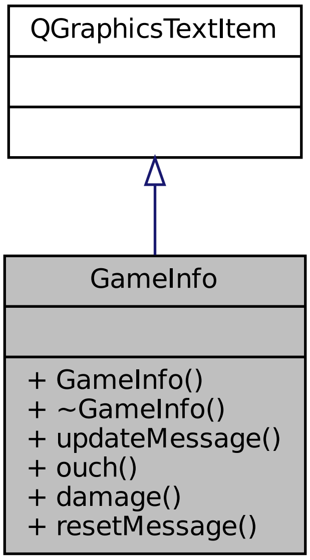
GameInfo class, inherits from QObject and QGraphicsTextItem.

```
#include <gameinfo.h>
```

Inheritance diagram for GameInfo:



Collaboration diagram for GameInfo:



Public Slots

- void ouch ()

  Display the "OUCH!" message.
- void damage ()

  Display the "SH∗T!" message.
- void resetMessage ()

  Reset the message to the default text.

Public Member Functions

- GameInfo (QGraphicsItem ∗parent=0)

  GameInfo constructor.
- ∼GameInfo ()

  GameInfo destructor.
- void updateMessage (const QString &message, const QColor &color, int duration)

  Update the message in the text box.

6.4.1 Detailed Description

GameInfo class, inherits from QObject and QGraphicsTextItem.

6.4.2 Constructor & Destructor Documentation

6.4.2.1 GameInfo()

```
GameInfo::GameInfo (
            QGraphicsItem ∗ parent = 0 )
```

GameInfo constructor.

Parameters

parent	Parent QGraphicsItem

6.4.2.2 ∼GameInfo()

```
GameInfo::∼GameInfo ( )
```

GameInfo destructor.

6.4.3 Member Function Documentation

6.4.3.1 damage

```
void GameInfo::damage ( ) [slot]
```

Display the "SH∗T!" message.

6.4.3.2 ouch

```
void GameInfo::ouch ( ) [slot]
```

Display the "OUCH!" message.

6.4.3.3 resetMessage

```
void GameInfo::resetMessage ( ) [slot]
```

Reset the message to the default text.

6.4.3.4 updateMessage()

```
void GameInfo::updateMessage (
             const QString & message,
             const QColor & color,
             int duration )
```

Update the message in the text box.

Parameters

message	Message to be displayed
color	Color of the message
duration	Duration of the message

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

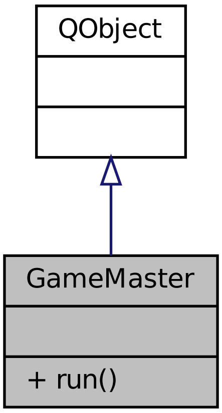
- gameinfo.h
- gameinfo.cpp

6.5 GameMaster Class Reference

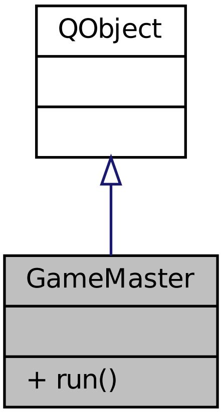
GameMaster class, inherits from QObject.

```
#include <gamemaster.h>
```

Inheritance diagram for GameMaster:



Collaboration diagram for GameMaster:



Public Member Functions

- void run ()

  Run the game - initialize the main window.

6.5.1 Detailed Description

GameMaster class, inherits from QObject.

6.5.2 Member Function Documentation

6.5.2.1 run()

```
void GameMaster::run ( )
```

Run the game - initialize the main window.

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

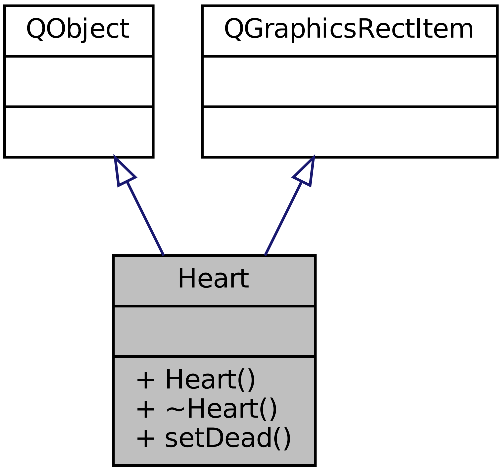
- gamemaster.h
- gamemaster.cpp

6.6 Heart Class Reference

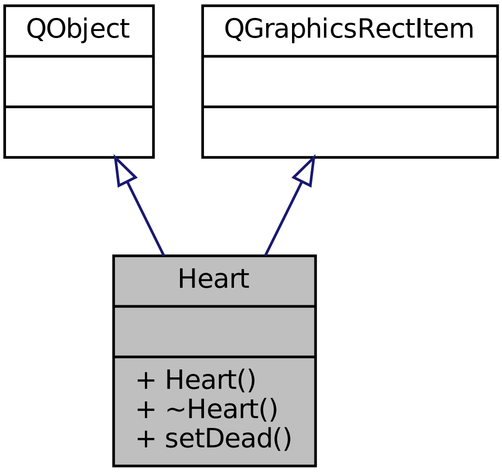
Heart class, inherits from QObject and QGraphicsRectItem.

```
#include <heart.h>
```

Inheritance diagram for Heart:



Collaboration diagram for Heart:



Public Slots

- void setDead ()

  Sets Heart as dead - turns it gray.

Public Member Functions

- Heart (QGraphicsItem ∗parent=0)

  Heart constructor.
- ∼Heart ()=default

  Heart destructor.

6.6.1 Detailed Description

Heart class, inherits from QObject and QGraphicsRectItem.

6.6.2 Constructor & Destructor Documentation

6.6.2.1 Heart()

```
Heart::Heart (
            QGraphicsItem ∗ parent = 0 )  [explicit]
```

Heart constructor.

Parameters

parent	Parent QGraphicsItem

6.6.2.2 ∼Heart()

```
Heart::∼Heart ( )  [default]
```

Heart destructor.

6.6.3 Member Function Documentation

6.6.3.1 setDead

```
void Heart::setDead ( )  [slot]
```

Sets Heart as dead - turns it gray.

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

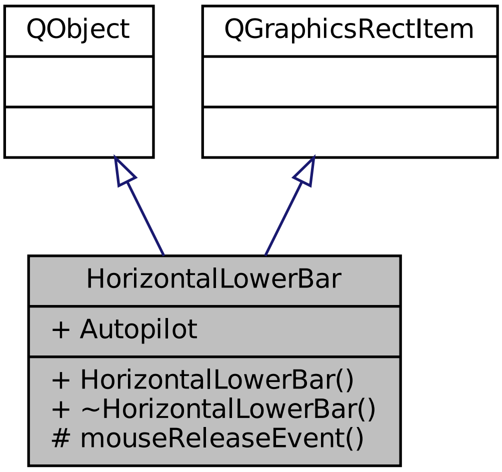
- heart.h
- heart.cpp

6.7 HorizontalLowerBar Class Reference

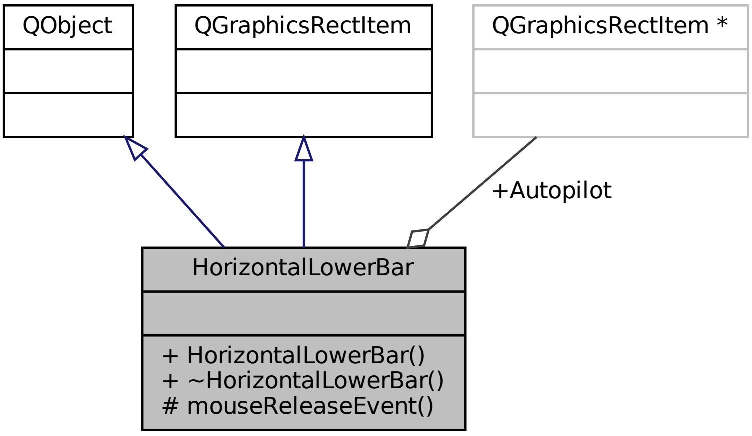
HorizontalLowerBar class, inherits from QObject and QGraphicsRectItem.

```
#include <horizontalbar.h>
```

Inheritance diagram for HorizontalLowerBar:



Collaboration diagram for HorizontalLowerBar:



Public Member Functions

- HorizontalLowerBar (User ∗user)

  HorizontalLowerBar constructor.
- ∼HorizontalLowerBar ()

  HorizontalLowerBar destructor.

Public Attributes

- QGraphicsRectItem ∗ Autopilot

Protected Member Functions

- void mouseReleaseEvent (QGraphicsSceneMouseEvent ∗event) override

  Mouse release event.

6.7.1 Detailed Description

HorizontalLowerBar class, inherits from QObject and QGraphicsRectItem.

6.7.2 Constructor & Destructor Documentation

6.7.2.1 HorizontalLowerBar()

```
HorizontalLowerBar::HorizontalLowerBar (
             User ∗ user )
```

HorizontalLowerBar constructor.

Parameters

user	User object

6.7.2.2 ∼HorizontalLowerBar()

```
HorizontalLowerBar::∼HorizontalLowerBar ( )
```

HorizontalLowerBar destructor.

6.7.3 Member Function Documentation

6.7.3.1 mouseReleaseEvent()

```
void HorizontalLowerBar::mouseReleaseEvent (
            QGraphicsSceneMouseEvent ∗ event )  [override], [protected]
```

Mouse release event.

Parameters

event	QGraphicsSceneMouseEvent

6.7.4 Member Data Documentation

6.7.4.1 Autopilot

```
QGraphicsRectItem∗ HorizontalLowerBar::Autopilot
```

Autopilot rectangle

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

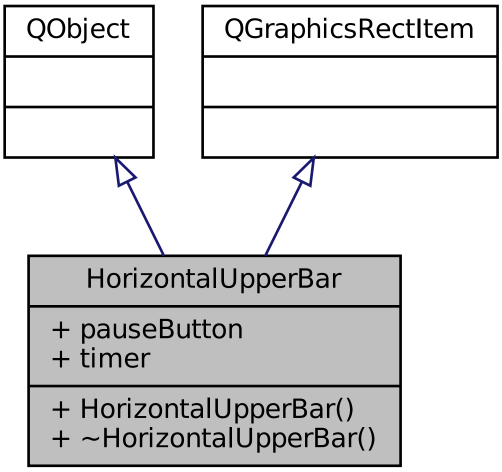
- horizontalbar.h
- horizontalbar.cpp

6.8 HorizontalUpperBar Class Reference

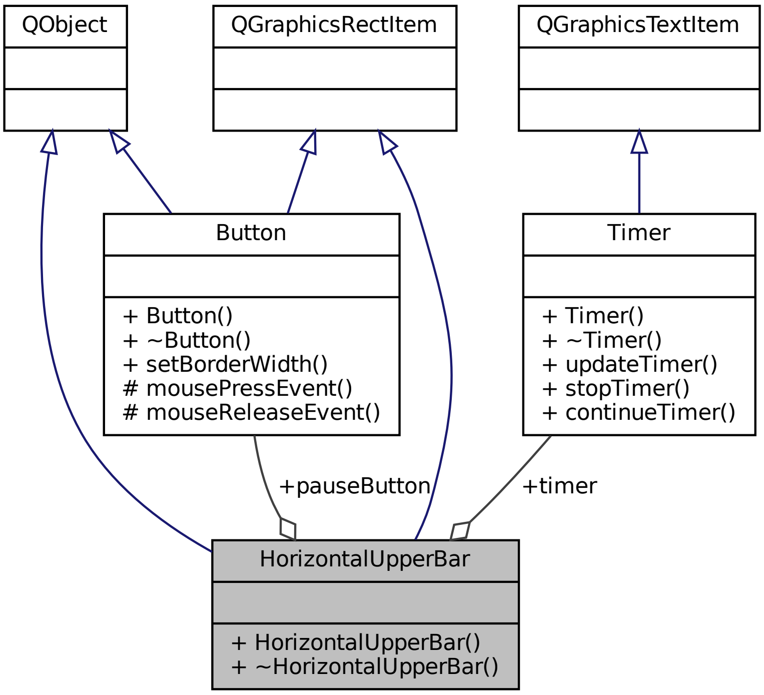
HorizontalUpperBar class, inherits from QObject and QGraphicsRectItem.

```
#include <horizontalbar.h>
```

Inheritance diagram for HorizontalUpperBar:



Collaboration diagram for HorizontalUpperBar:



Public Member Functions

- HorizontalUpperBar (User ∗user, int timeLimit)

  HorizontalUpperBar constructor.
- ∼HorizontalUpperBar ()

  HorizontalUpperBar destructor.

Public Attributes

- Button ∗ pauseButton
- Timer ∗ timer

6.8.1 Detailed Description

HorizontalUpperBar class, inherits from QObject and QGraphicsRectItem.

6.8.2 Constructor & Destructor Documentation

6.8.2.1 HorizontalUpperBar()

```
HorizontalUpperBar::HorizontalUpperBar (
            User * user,
            int timeLimit )
```

HorizontalUpperBar constructor.

Parameters

user	User object
timeLimit	Time limit for the game

6.8.2.2 ∼HorizontalUpperBar()

```
HorizontalUpperBar::∼HorizontalUpperBar ( )
```

HorizontalUpperBar destructor.

6.8.3 Member Data Documentation

6.8.3.1 pauseButton

```
Button* HorizontalUpperBar::pauseButton
```

Pause button

6.8.3.2 timer

```
Timer* HorizontalUpperBar::timer
```

Timer

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

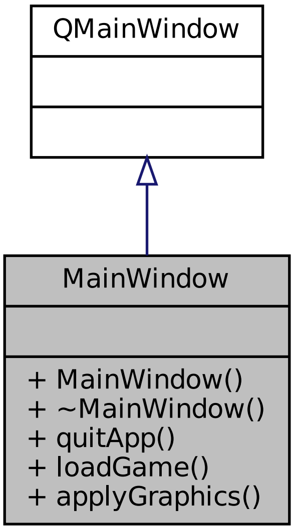
- horizontalbar.h
- horizontalbar.cpp

6.9 MainWindow Class Reference

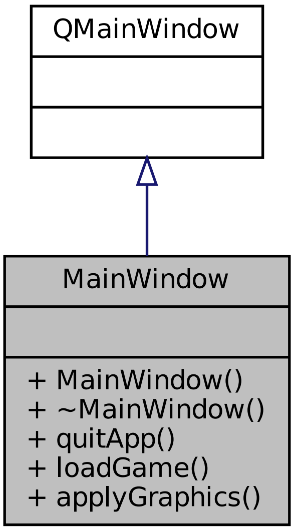
The MainWindow class.

`#include <mainwindow.h>`

Inheritance diagram for MainWindow:



Collaboration diagram for MainWindow:



Signals

- void createNewMapWindow ()

  Signal to create a new map window.
- void loadFile ()

  Signal to start loading a JSON file.

Public Member Functions

- MainWindow (QWidget ∗parent=nullptr)
- ∼MainWindow ()
- void quitApp ()

  Quits the app when the exit button is pressed.
- void loadGame ()

  Starts loading game from JSON file when the load button is pressed.
- void applyGraphics ()

  Applies background and font to the main window.

6.9.1 Detailed Description

The MainWindow class.

This class is used to hold the main window of the application

6.9.2 Constructor & Destructor Documentation

6.9.2.1 MainWindow()

```
MainWindow::MainWindow (
            QWidget * parent = nullptr )
```

6.9.2.2 ∼MainWindow()

```
MainWindow::∼MainWindow ( )
```

6.9.3 Member Function Documentation

6.9.3.1 applyGraphics()

```
void MainWindow::applyGraphics ( )
```

Applies background and font to the main window.

6.9.3.2 createNewMapWindow

```
void MainWindow::createNewMapWindow ( )  [signal]
```

Signal to create a new map window.

6.9.3.3 loadFile

```
void MainWindow::loadFile ( )  [signal]
```

Signal to start loading a JSON file.

6.9.3.4 loadGame()

```
void MainWindow::loadGame ( )
```

Starts loading game from JSON file when the load button is pressed.

6.9.3.5 quitApp()

```
void MainWindow::quitApp ( )
```

Quits the app when the exit button is pressed.

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

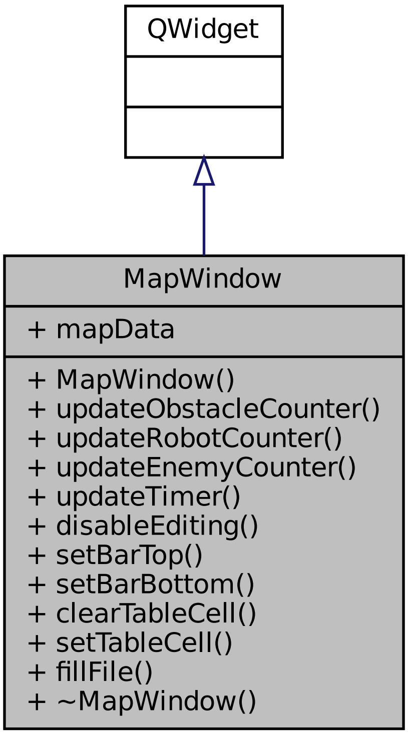
- mainwindow.h
- mainwindow.cpp

6.10 MapWindow Class Reference

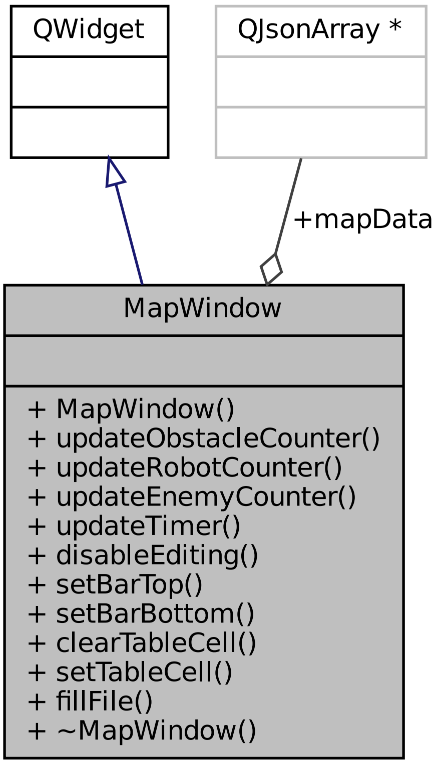
Class for the Map Window.

```
#include <mapwindow.h>
```

Inheritance diagram for MapWindow:



Collaboration diagram for MapWindow:



Signals

- void startSession ()

  Signal to start the game.

Public Member Functions

- MapWindow (QWidget ∗parent=nullptr)
- void updateObstacleCounter ()

  Updates the number of obstacles to be placed.
- void updateRobotCounter ()

  Updates the number of robots to be placed.
- void updateEnemyCounter ()

  Updates the number of enemy robots to be placed.
- void updateTimer ()

  Updates the time limit for the game.
- void disableEditing ()

  Disables editing of the map cells.
- void setBarTop ()

Sets up top bar of the map editor.
- void setBarBottom ()

  Sets up bottom bar of the map editor.
- void clearTableCell (QTableWidgetItem ∗item, int row, int column)

  Clears the table cell.
- void setTableCell (QTableWidgetItem ∗item, int row, int column, int orientationAngle)

  Sets the table cell.
- QJsonArray ∗ fillFile (bool ∗robotFound)

  Fills the JSON array with the map data.
- ∼MapWindow ()

Public Attributes

- QJsonArray ∗ mapData

6.10.1 Detailed Description

Class for the Map Window.

6.10.2 Constructor & Destructor Documentation

6.10.2.1 MapWindow()

```
MapWindow::MapWindow (
            QWidget ∗ parent = nullptr )  [explicit]
```

6.10.2.2 ∼MapWindow()

```
MapWindow::∼MapWindow ( )
```

6.10.3 Member Function Documentation

6.10.3.1 clearTableCell()

```
void MapWindow::clearTableCell (
            QTableWidgetItem ∗ item,
            int row,
            int column )
```

Clears the table cell.

Parameters

item	pointer to the QTableWidgetItem to be cleared
row	number of the row
column	number of the column

6.10.3.2 disableEditing()

```
void MapWindow::disableEditing ( )
```

Disables editing of the map cells.

6.10.3.3 fillFile()

```
QJsonArray * MapWindow::fillFile (
             bool * robotFound )
```

Fills the JSON array with the map data.

Parameters

robotFound	pointer to the boolean variable to check if robot is found

Returns

QJsonArray∗ pointer to the array with map data

6.10.3.4 setBarBottom()

```
void MapWindow::setBarBottom ( )
```

Sets up bottom bar of the map editor.

6.10.3.5 setBarTop()

```
void MapWindow::setBarTop ( )
```

Sets up top bar of the map editor.

6.10.3.6 setTableCell()

```
void MapWindow::setTableCell (
            QTableWidgetItem * item,
            int row,
            int column,
            int orientationAngle )
```

Sets the table cell.

Parameters

item	pointer to the QTableWidgetItem to be set
row	number of the row
column	number of the column
orientationAngle	angle of orientation in case of robots

6.10.3.7 startSession

```
void MapWindow::startSession ( ) [signal]
```

Signal to start the game.

6.10.3.8 updateEnemyCounter()

```
void MapWindow::updateEnemyCounter ( )
```

Updates the number of enemy robots to be placed.

6.10.3.9 updateObstacleCounter()

```
void MapWindow::updateObstacleCounter ( )
```

Updates the number of obstacles to be placed.

6.10.3.10 updateRobotCounter()

```
void MapWindow::updateRobotCounter ( )
```

Updates the number of robots to be placed.

6.10.3.11 updateTimer()

```
void MapWindow::updateTimer ( )
```

Updates the time limit for the game.

6.10.4 Member Data Documentation

6.10.4.1 mapData

```
QJsonArray* MapWindow::mapData
```

Json array for storing mapa of the map

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

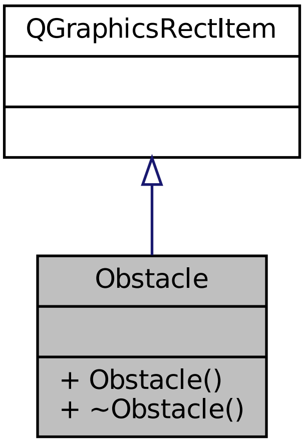
- mapwindow.h
- mapwindow.cpp

6.11 Obstacle Class Reference

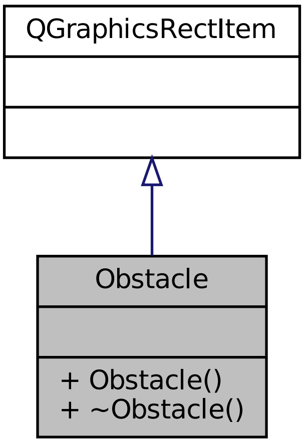
Obstacle class, inherits from QGraphicsRectItem.

```
#include <obstacle.h>
```

Inheritance diagram for Obstacle:



Collaboration diagram for Obstacle:



Public Member Functions

- Obstacle (QGraphicsItem ∗parent=0)

  Obstacle constructor.
- ∼Obstacle ()=default

  Obstacle destructor.

6.11.1 Detailed Description

Obstacle class, inherits from QGraphicsRectItem.

6.11.2 Constructor & Destructor Documentation

6.11.2.1 Obstacle()

```
Obstacle::Obstacle (
             QGraphicsItem ∗ parent = 0 )
```

Obstacle constructor.

Parameters

parent	Parent QGraphicsItem

6.11.2.2 ∼Obstacle()

```
Obstacle::∼Obstacle ( )  [default]
```

Obstacle destructor.

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

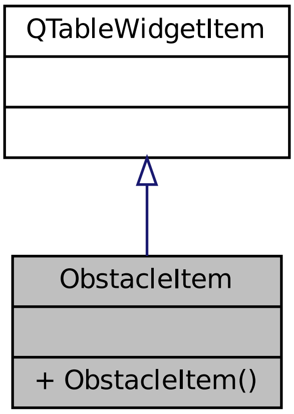
- obstacle.h
- obstacle.cpp

6.12 ObstacleItem Class Reference

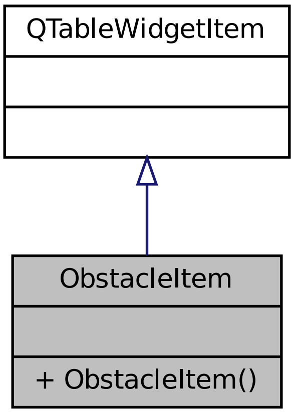
The ObstacleItem class.

```
#include <obstacleitem.h>
```

Inheritance diagram for ObstacleItem:



Collaboration diagram for ObstacleItem:



Public Member Functions

- ObstacleItem ()

6.12.1 Detailed Description

The ObstacleItem class.

This class is used to store the obstacle in the QWidgetTable

6.12.2 Constructor & Destructor Documentation

6.12.2.1 ObstacleItem()

```
ObstacleItem::ObstacleItem ( )  [inline]
```

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

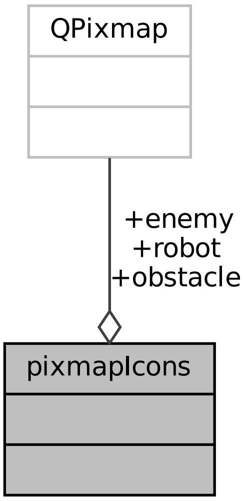
- obstacleitem.h

6.13 pixmapIcons Struct Reference

Struct to store the icons for the pixmap.

```
#include <mapwindow.h>
```

Collaboration diagram for pixmapIcons:



Public Attributes

- QPixmap obstacle
- QPixmap robot
- QPixmap enemy

6.13.1 Detailed Description

Struct to store the icons for the pixmap.

6.13.2 Member Data Documentation

6.13.2.1 enemy

```
QPixmap pixmapIcons::enemy
```

Icon of the enemy

6.13.2.2 obstacle

```
QPixmap pixmapIcons::obstacle
```

Icon of the obstacle

6.13.2.3 robot

```
QPixmap pixmapIcons::robot
```

Icon of the robot

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

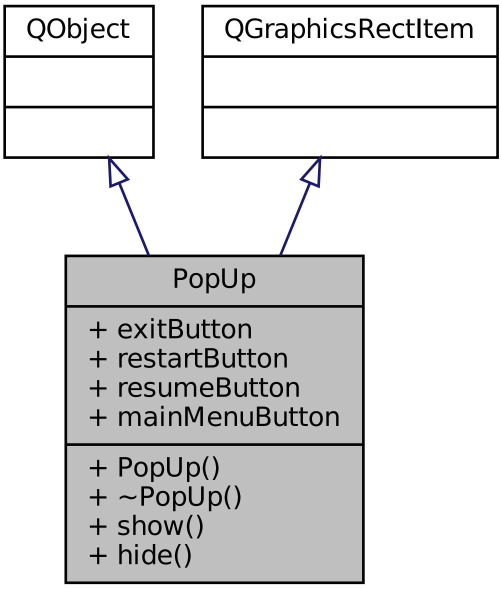
- mapwindow.h

6.14 PopUp Class Reference

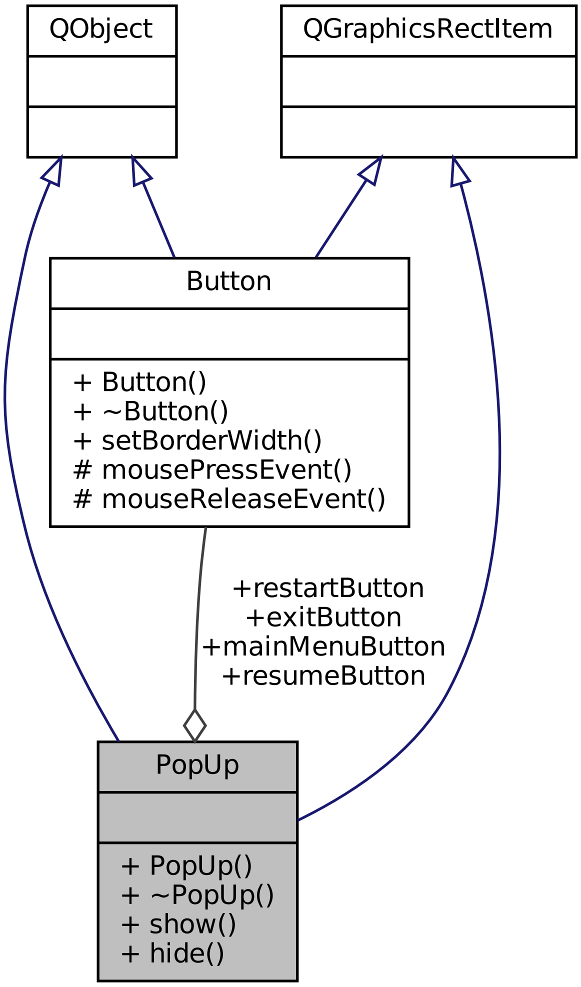
Popup class, inherits from QObject and QGraphicsRectItem.

```
#include <popup.h>
```

Inheritance diagram for PopUp:



Collaboration diagram for PopUp:



Public Slots

- void show ()

  Show the popup.
- void hide ()

  Hide the popup.

Signals

- void pauseTimers ()

  Pause the timers.

Public Member Functions

- PopUp (QGraphicsItem ∗parent=0, std::string name="")

    Popup constructor.
- ∼PopUp ()

    Popup destructor.

Public Attributes

- Button ∗ exitButton
- Button ∗ restartButton
- Button ∗ resumeButton
- Button ∗ mainMenuButton

6.14.1 Detailed Description

Popup class, inherits from QObject and QGraphicsRectItem.

6.14.2 Constructor & Destructor Documentation

6.14.2.1 PopUp()

```
PopUp::PopUp (
            QGraphicsItem ∗ parent = 0,
            std::string name = "" )
```

Popup constructor.

Parameters

parent	Parent QGraphicsItem
name	Name of the popup

6.14.2.2 ∼PopUp()

```
PopUp::∼PopUp ( )
```

Popup destructor.

6.14.3 Member Function Documentation

6.14.3.1 hide

```
void PopUp::hide ( ) [slot]
```

Hide the popup.

6.14.3.2 pauseTimers

```
void PopUp::pauseTimers ( ) [signal]
```

Pause the timers.

6.14.3.3 show

```
void PopUp::show ( ) [slot]
```

Show the popup.

6.14.4 Member Data Documentation

6.14.4.1 exitButton

```
Button* PopUp::exitButton
```

Exit button

6.14.4.2 mainMenuButton

```
Button* PopUp::mainMenuButton
```

Main menu button

6.14.4.3 restartButton

```
Button* PopUp::restartButton
```

Restart button

6.14.4.4 resumeButton

```
Button* PopUp::resumeButton
```

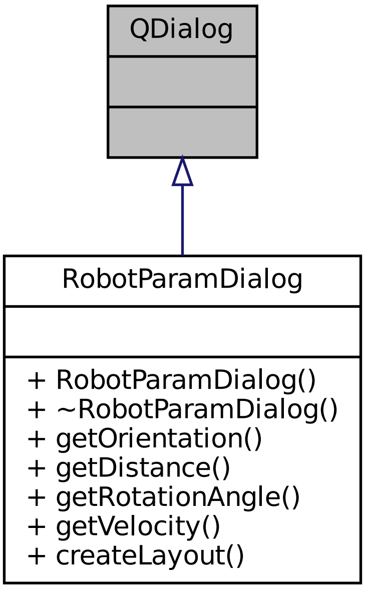
Resume button (in victory/ gameover screen does nothing)

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

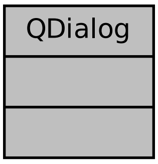
- popup.h
- popup.cpp

6.15 QDialog Class Reference

Inheritance diagram for QDialog:



Collaboration diagram for QDialog:

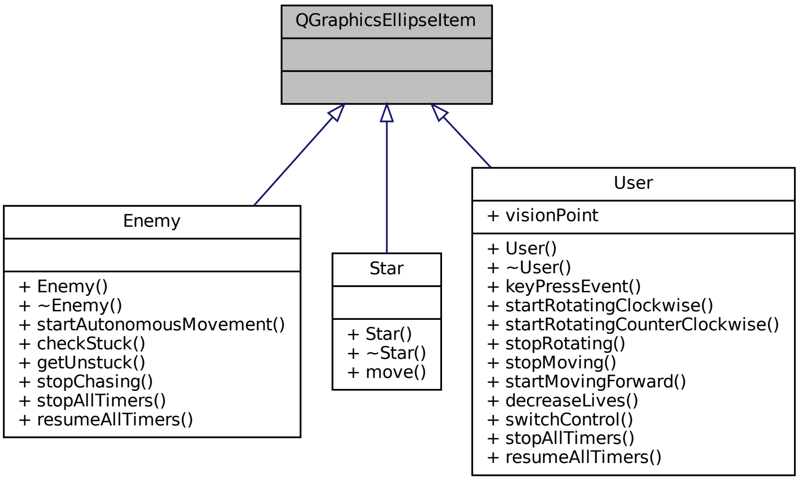


The documentation for this class was generated from the following file:

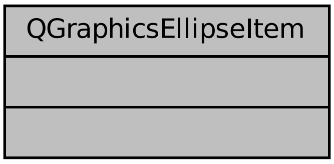
- robotdialog.h

6.16 QGraphicsEllipseItem Class Reference

Inheritance diagram for QGraphicsEllipseItem:



Collaboration diagram for QGraphicsEllipseItem:

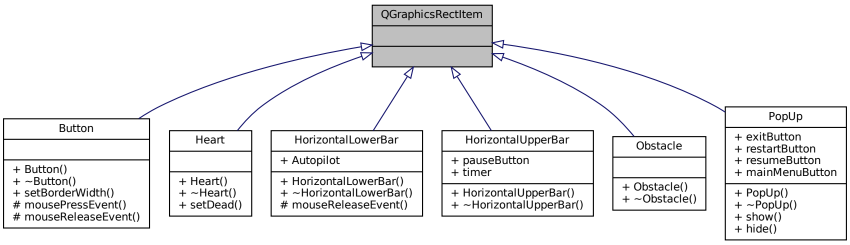


The documentation for this class was generated from the following file:

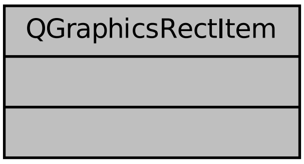
- user.h

6.17 QGraphicsRectItem Class Reference

Inheritance diagram for QGraphicsRectItem:



Collaboration diagram for QGraphicsRectItem:

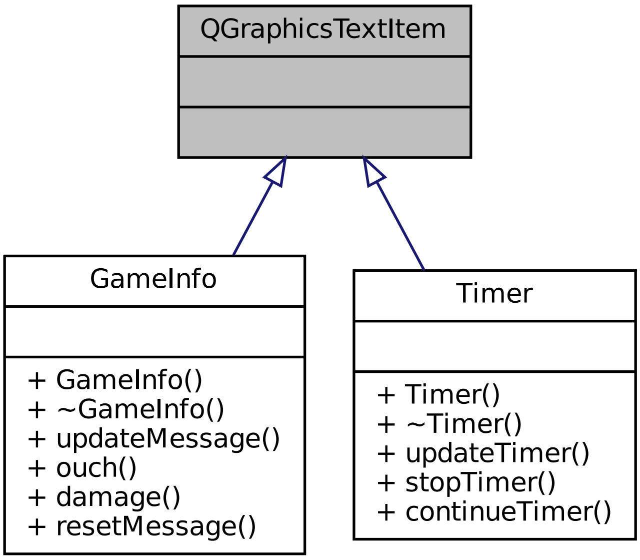


The documentation for this class was generated from the following file:

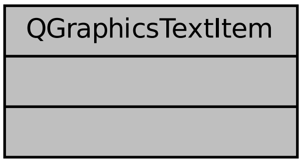
- popup.h

6.18 QGraphicsTextItem Class Reference

Inheritance diagram for QGraphicsTextItem:



Collaboration diagram for QGraphicsTextItem:

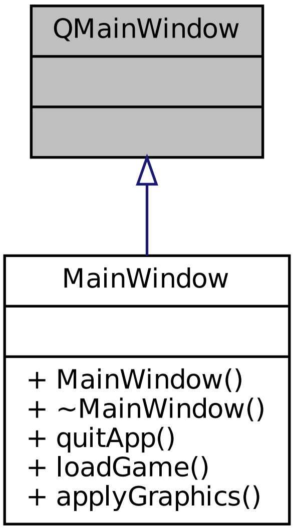


The documentation for this class was generated from the following file:

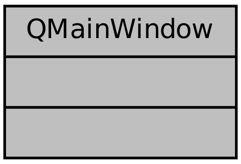
- timer.h

6.19 QMainWindow Class Reference

Inheritance diagram for QMainWindow:



Collaboration diagram for QMainWindow:

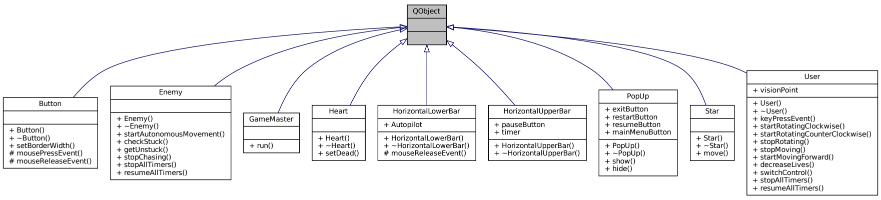


The documentation for this class was generated from the following file:

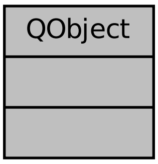
- mainwindow.h

6.20 QObject Class Reference

Inheritance diagram for QObject:



Collaboration diagram for QObject:

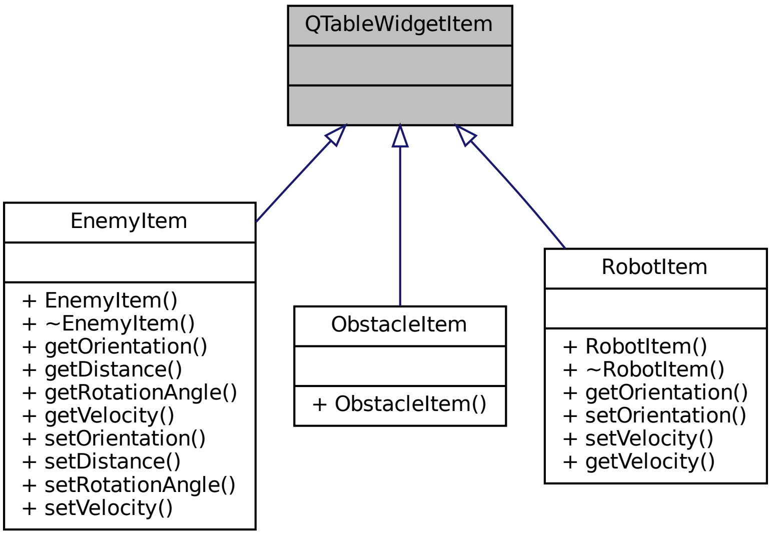


The documentation for this class was generated from the following file:

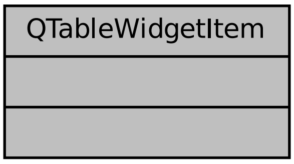
- user.h

6.21 QTableWidgetItem Class Reference

Inheritance diagram for QTableWidgetItem:



Collaboration diagram for QTableWidgetItem:

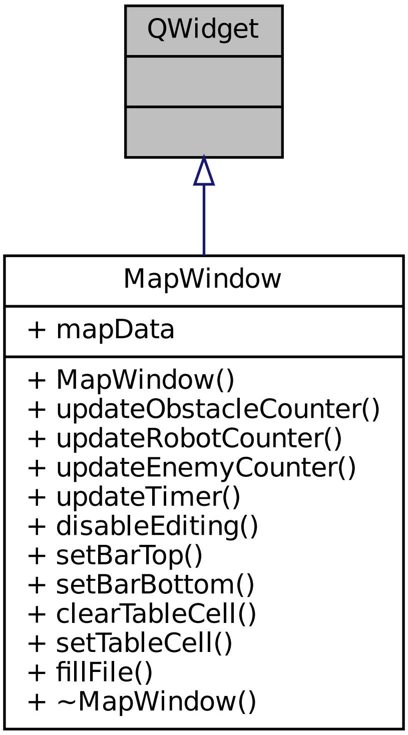


The documentation for this class was generated from the following file:

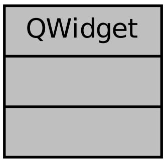
- robotitem.h

6.22 QWidget Class Reference

Inheritance diagram for QWidget:



Collaboration diagram for QWidget:



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

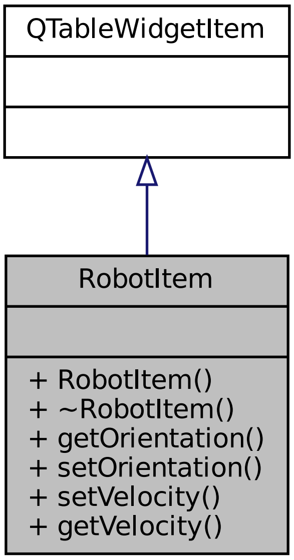
- mapwindow.h

6.23 RobotItem Class Reference

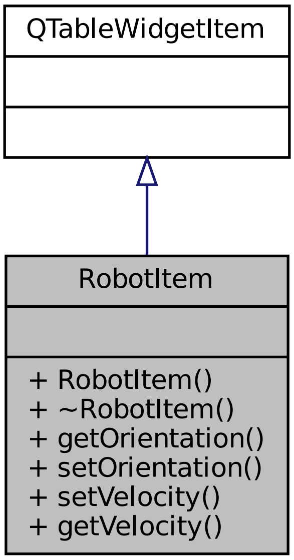
The RobotItem class.

```
#include <robotitem.h>
```

Inheritance diagram for RobotItem:



Collaboration diagram for RobotItem:



Public Member Functions

- RobotItem (int orientation=0, int velocity=0)
- ∼RobotItem ()
- int getOrientation ()

  Gets the orientation of the robot.
- void setOrientation (int orientation)

  Sets the orientation of the robot.
- void setVelocity (int velocity)

  Sets the velocity of the robot.
- int getVelocity ()

  Gets the velocity of the robot.

6.23.1 Detailed Description

The RobotItem class.

This class is used to store the data of the robot in the QWidgetTable

6.23.2 Constructor & Destructor Documentation

6.23.2.1 RobotItem()

```
RobotItem::RobotItem (
             int orientation = 0,
             int velocity = 0 )  [inline]
```

6.23.2.2 ∼RobotItem()

```
RobotItem::∼RobotItem ( )
```

6.23.3 Member Function Documentation

6.23.3.1 getOrientation()

```
int RobotItem::getOrientation ( )
```

Gets the orientation of the robot.

Returns

int orientation

6.23.3.2 getVelocity()

```
int RobotItem::getVelocity ( )
```

Gets the velocity of the robot.

Returns

int velocity

6.23.3.3 setOrientation()

```
void RobotItem::setOrientation (
             int orientation )
```

Sets the orientation of the robot.

Parameters

orientation	orientation of the robot

6.23.3.4 setVelocity()

```
void RobotItem::setVelocity (
             int velocity )
```

Sets the velocity of the robot.

Parameters

velocity	velocity of the robot

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

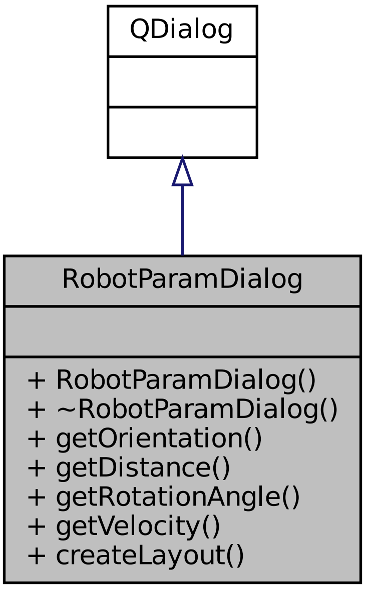
- robotitem.h
- robotitem.cpp

6.24 RobotParamDialog Class Reference

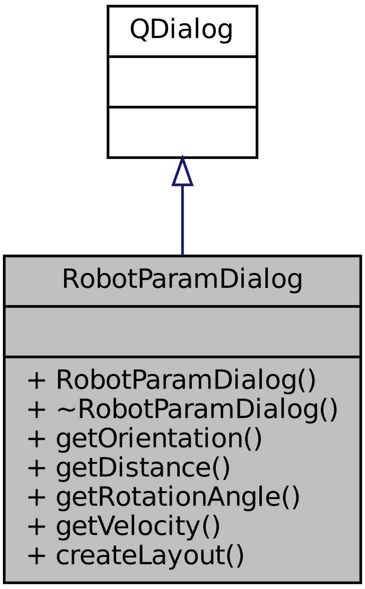
The RobotParamDialog class.

```
#include <robotdialog.h>
```

Inheritance diagram for RobotParamDialog:



Collaboration diagram for RobotParamDialog:



Public Member Functions

- RobotParamDialog (QWidget ∗parent=nullptr, bool robotExists=false)
- ∼RobotParamDialog ()=default
- int getOrientation ()

  Gets the orientation of the controlled or enemy robot.
- int getDistance ()

  Gets the distance of the controlled or enemy robot.
- int getRotationAngle ()

  Gets the rotation angle of the controlled or enemy robot.
- int getVelocity ()

  Gets the velocity of the controlled or enemy robot.
- void createLayout (bool robotExists)

  Creates the layout of the dialog @bool robotExists if robot exists direction button is disabled.

6.24.1 Detailed Description

The RobotParamDialog class.

This class is used to create a dialog where the user can input the parameters of the robot

6.24.2 Constructor & Destructor Documentation

6.24.2.1 RobotParamDialog()

```
RobotParamDialog::RobotParamDialog (
            QWidget * parent = nullptr,
            bool robotExists = false )  [explicit]
```

6.24.2.2 ∼RobotParamDialog()

```
RobotParamDialog::∼RobotParamDialog ( )  [default]
```

6.24.3 Member Function Documentation

6.24.3.1 createLayout()

```
void RobotParamDialog::createLayout (
            bool robotExists )
```

Creates the layout of the dialog @bool robotExists if robot exists direction button is disabled.

6.24.3.2 getDistance()

```
int RobotParamDialog::getDistance ( )
```

Gets the distance of the controlled or enemy robot.

Returns

int distance

6.24.3.3 getOrientation()

```
int RobotParamDialog::getOrientation ( )
```

Gets the orientation of the controlled or enemy robot.

Returns

int orientation

6.24.3.4 getRotationAngle()

```
int RobotParamDialog::getRotationAngle ( )
```

Gets the rotation angle of the controlled or enemy robot.

Returns

int angle

6.24.3.5 getVelocity()

```
int RobotParamDialog::getVelocity ( )
```

Gets the velocity of the controlled or enemy robot.

Returns

int velocity

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

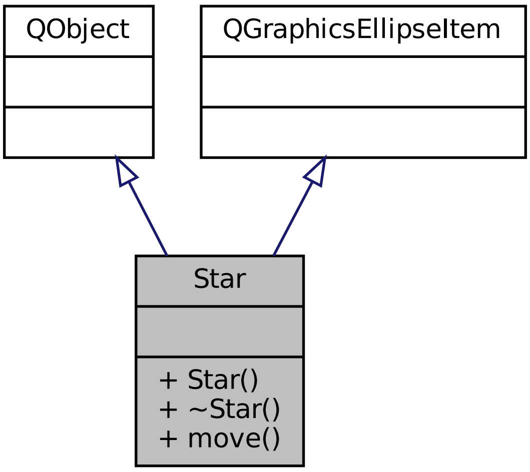
- robotdialog.h
- robotdialog.cpp

6.25 Star Class Reference

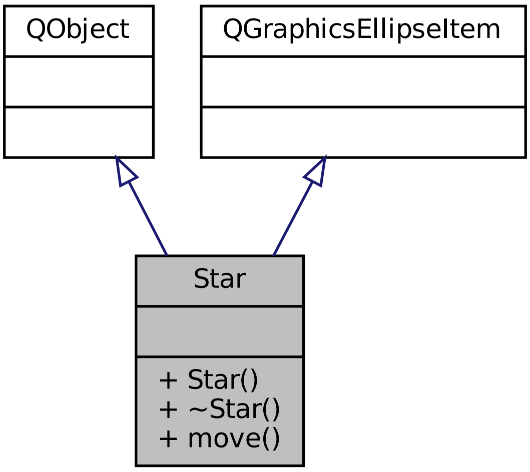
Star class, inherits from QObject and QGraphicsEllipseItem.

```
#include <star.h>
```

Inheritance diagram for Star:



Collaboration diagram for Star:



Public Slots

- void move ()

  Move the star.

Public Member Functions

- Star (QGraphicsItem ∗parent=0)

  Star constructor.
- ∼Star ()=default

  Star destructor.

6.25.1 Detailed Description

Star class, inherits from QObject and QGraphicsEllipseItem.

6.25.2 Constructor & Destructor Documentation

6.25.2.1 Star()

```
Star::Star (
            QGraphicsItem ∗ parent = 0 )
```

Star constructor.

Parameters

parent	Parent QGraphicsItem

6.25.2.2 ∼Star()

```
Star::∼Star ( )  [default]
```

Star destructor.

6.25.3 Member Function Documentation

6.25.3.1 move

```
void Star::move ( )  [slot]
```

Move the star.

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

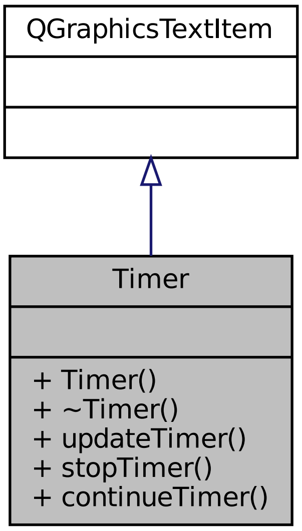
- star.h
- star.cpp

6.26 Timer Class Reference

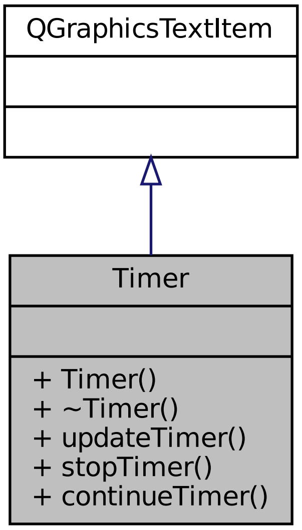
Timer class, inherits from QGraphicsTextItem.

```
#include <timer.h>
```

Inheritance diagram for Timer:



Collaboration diagram for Timer:



Public Slots

- void updateTimer ()

  Update the timer.
- void stopTimer ()

  Stop the timer.
- void continueTimer ()

  Continue the timer.

Signals

- void timeIsUp ()

  Signal emitted when the time is up, victory popup is shown.

Public Member Functions

- Timer (QGraphicsItem ∗parent=0, int timeL=60)

  Timer constructor.
- ∼Timer ()

  Timer destructor.

6.26.1 Detailed Description

Timer class, inherits from QGraphicsTextItem.

6.26.2 Constructor & Destructor Documentation

6.26.2.1 Timer()

```
Timer::Timer (
             QGraphicsItem * parent = 0,
             int timeL = 60 )
```

Timer constructor.

Parameters

parent	Parent QGraphicsItem
timeL	Time limit of the timer

6.26.2.2 ∼Timer()

```
Timer::∼Timer ( )
```

Timer destructor.

6.26.3 Member Function Documentation

6.26.3.1 continueTimer

```
void Timer::continueTimer ( ) [slot]
```

Continue the timer.

6.26.3.2 stopTimer

```
void Timer::stopTimer ( ) [slot]
```

Stop the timer.

6.26.3.3 timeIsUp

```
void Timer::timeIsUp ( )  [signal]
```

Signal emitted when the time is up, victory popup is shown.

6.26.3.4 updateTimer

```
void Timer::updateTimer ( )  [slot]
```

Update the timer.

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

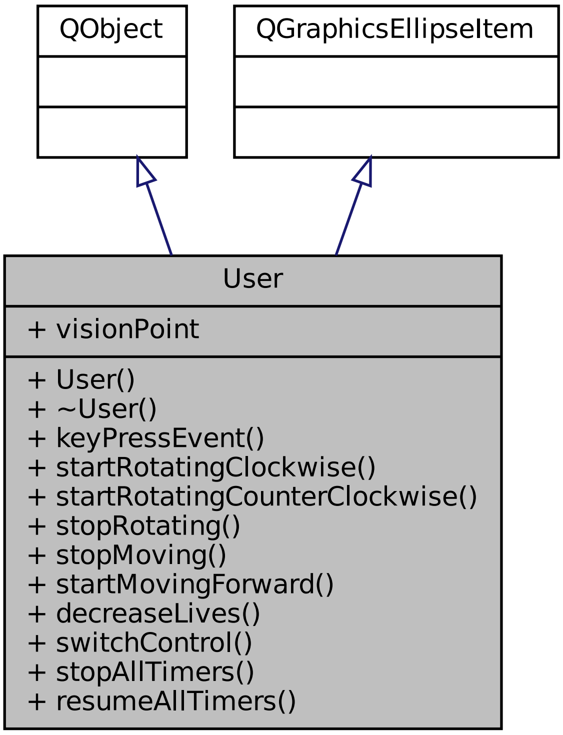
- timer.h
- timer.cpp

6.27 User Class Reference

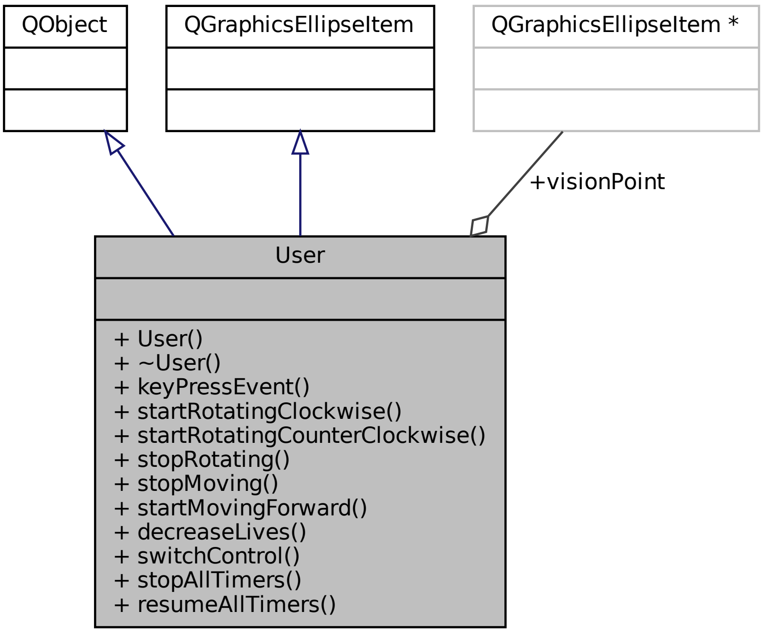
User class, inherits from QObject and QGraphicsEllipseItem.

```
#include <user.h>
```

Inheritance diagram for User:



Collaboration diagram for User:



Public Slots

- void startRotatingClockwise ()

  Start the clockwise rotation.
- void startRotatingCounterClockwise ()

  Start the counter clockwise rotation.
- void stopRotating ()

  Stop the rotation.
- void stopMoving ()

  Stop the movement.
- void startMovingForward ()

  Start the movement.
- void decreaseLives ()

  Decrease the number of lives (3 default)
- void switchControl ()

  Set the User as focusable (keyboard control)
- void stopAllTimers ()

  Stop all timers.
- void resumeAllTimers ()

  Resume all timers.

Signals

- void stunned ()

  Signal emitted when the User is stunned.
- void deleteLife3 ()

  Signal emitted when the User is hit mapped to life3.
- void deleteLife2 ()

  Signal emitted when the User is hit mapped to life2.
- void deleteLife1 ()

  Signal emitted when the User is hit mapped to life1.

Public Member Functions

- User (QGraphicsItem ∗parent=0, int orientation=0, int velocity=5)

  User constructor.
- ∼User ()

  User destructor.
- void keyPressEvent (QKeyEvent ∗event)

  Move the user using keyboard.

Public Attributes

- QGraphicsEllipseItem ∗ visionPoint

6.27.1 Detailed Description

User class, inherits from QObject and QGraphicsEllipseItem.

6.27.2 Constructor & Destructor Documentation

6.27.2.1 User()

```
User::User (
            QGraphicsItem * parent = 0,
            int orientation = 0,
            int velocity = 5 )
```

User constructor.

Parameters

parent	Parent QGraphicsItem
orientation	Orientation of the user
velocity	Velocity of the user

6.27.2.2 ∼User()

```
User::∼User ( )
```

User destructor.

6.27.3 Member Function Documentation

6.27.3.1 decreaseLives

```
void User::decreaseLives ( )  [slot]
```

Decrease the number of lives (3 default)

6.27.3.2 deleteLife1

```
void User::deleteLife1 ( )  [signal]
```

Signal emitted when the User is hit mapped to life1.

6.27.3.3 deleteLife2

```
void User::deleteLife2 ( )  [signal]
```

Signal emitted when the User is hit mapped to life2.

6.27.3.4 deleteLife3

```
void User::deleteLife3 ( )  [signal]
```

Signal emitted when the User is hit mapped to life3.

6.27.3.5 keyPressEvent()

```
void User::keyPressEvent (
             QKeyEvent * event )
```

Move the user using keyboard.

Parameters

event	

6.27.3.6 resumeAllTimers

```
void User::resumeAllTimers ( )  [slot]
```

Resume all timers.

6.27.3.7 startMovingForward

```
void User::startMovingForward ( )  [slot]
```

Start the movement.

6.27.3.8 startRotatingClockwise

```
void User::startRotatingClockwise ( )  [slot]
```

Start the clockwise rotation.

6.27.3.9 startRotatingCounterClockwise

```
void User::startRotatingCounterClockwise ( )  [slot]
```

Start the counter clockwise rotation.

6.27.3.10 stopAllTimers

```
void User::stopAllTimers ( )  [slot]
```

Stop all timers.

6.27.3.11 stopMoving

```
void User::stopMoving ( )  [slot]
```

Stop the movement.

6.27.3.12 stopRotating

```
void User::stopRotating ( )  [slot]
```

Stop the rotation.

6.27.3.13 stunned

```
void User::stunned ( )  [signal]
```

Signal emitted when the User is stunned.

6.27.3.14 switchControl

```
void User::switchControl ( )  [slot]
```

Set the User as focusable (keyboard control)

6.27.4 Member Data Documentation

6.27.4.1 visionPoint

```
QGraphicsEllipseItem* User::visionPoint
```

A little dot representing the vision point

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

- user.h
- user.cpp

Chapter 7

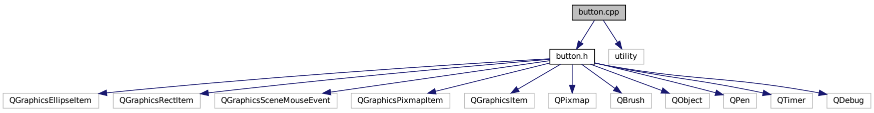
File Documentation

7.1 button.cpp File Reference

Button class implementation file.

```
#include "button.h"
#include <utility>
```

Include dependency graph for button.cpp:



7.1.1 Detailed Description

Button class implementation file.

Version

1.0

This class is responsible for creating buttons in the game @project ICP Project - Epic Robot Survival

Author

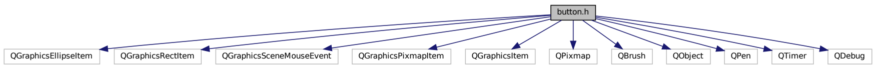
Marek Effenberger

7.2 button.h File Reference

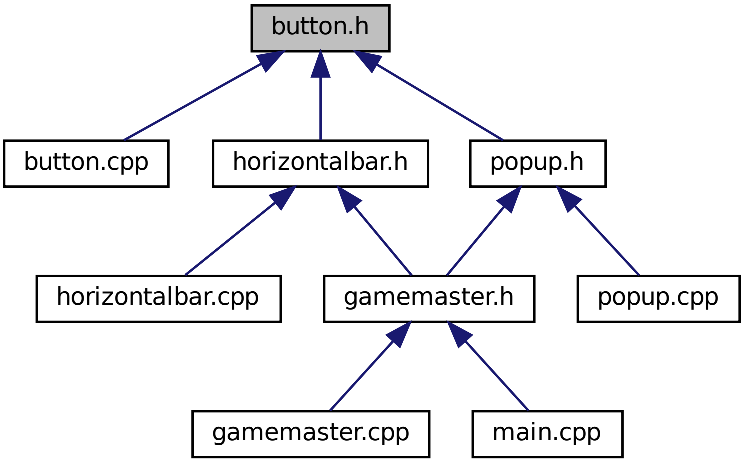
Button class header file.

```
#include <QGraphicsEllipseItem>
#include <QGraphicsRectItem>
#include <QGraphicsSceneMouseEvent>
#include <QGraphicsPixmapItem>
#include <QGraphicsItem>
#include <QPixmap>
#include <QBrush>
#include <QObject>
#include <QPen>
#include <QTimer>
#include <QDebug>
```

Include dependency graph for button.h:



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



Classes

- class Button

  Button class, inherits from QObject and QGraphicsRectItem.

7.2.1 Detailed Description

Button class header file.

Version

1.0

This class is responsible for creating buttons in the game @project ICP Project - Epic Robot Survival

Author

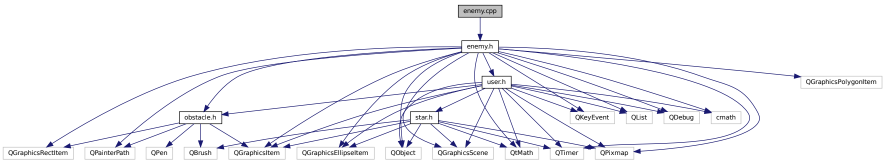
Marek Effenberger

7.3 enemy.cpp File Reference

Enemy class implementation file.

```
#include "enemy.h"
```

Include dependency graph for enemy.cpp:



7.3.1 Detailed Description

Enemy class implementation file.

Version

1.0

This class is responsible for creating autonomous robots (in our implementation - the enemies) in the game @project ICP Project - Epic Robot Survival

Author

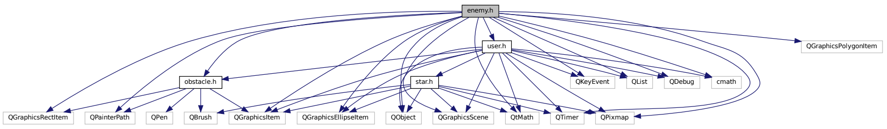
Marek Effenberger

7.4 enemy.h File Reference

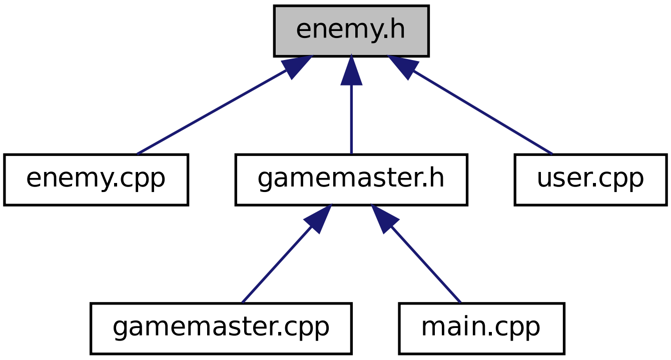
Enemy class header file.

```
#include <QGraphicsEllipseItem>
#include <QGraphicsRectItem>
#include <QObject>
#include <QKeyEvent>
#include <QList>
#include <QDebug>
#include <QGraphicsScene>
#include "obstacle.h"
#include <cmath>
#include <QGraphicsItem>
#include <QtMath>
#include <QTimer>
#include <QPixmap>
#include <QPainterPath>
#include "user.h"
#include <QGraphicsPolygonItem>
```

Include dependency graph for enemy.h:



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



Classes

- class Enemy

  Enemy class, inherits from QObject and QGraphicsEllipseItem.

7.4.1 Detailed Description

Enemy class header file.

Version

1.0

This class is responsible for creating autonomous robots (in our implementation - the enemies) in the game @project ICP Project - Epic Robot Survival

Author

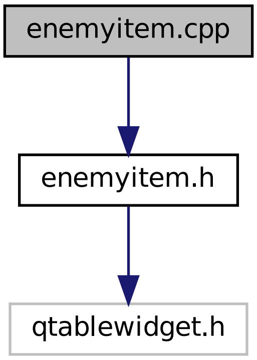
Marek Effenberger

7.5 enemyitem.cpp File Reference

Enemy Item Class Implementation file.

```
#include "enemyitem.h"
```

Include dependency graph for enemyitem.cpp:



7.5.1 Detailed Description

Enemy Item Class Implementation file.

Version

1.0

This class is responsible for holding the enemy item data in the game @project ICP Project - Epic Robot Survival

Author

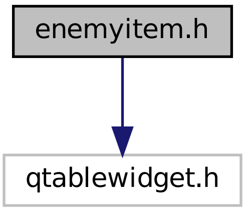
Samuel Hejnicek

7.6 enemyitem.h File Reference

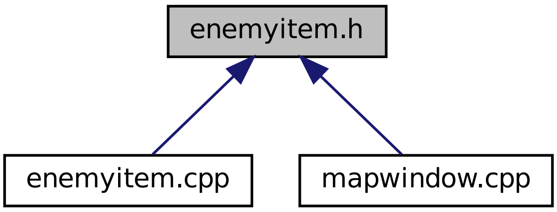
Enemy Item Class header file.

```
#include "qtablewidget.h"
```

Include dependency graph for enemyitem.h:



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



Classes

- class EnemyItem

  The EnemyItem class.

7.6.1 Detailed Description

Enemy Item Class header file.

Version

1.0

This class is responsible for holding the enemy cell item data in the game @project ICP Project - Epic Robot Survival

Author

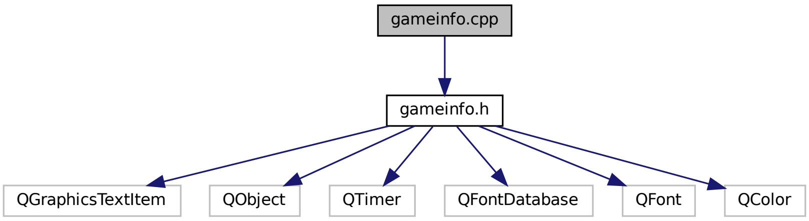
Samuel Hejnicek

7.7 gameinfo.cpp File Reference

GameInfo class implementation file.

```
#include "gameinfo.h"
```

Include dependency graph for gameinfo.cpp:



7.7.1 Detailed Description

GameInfo class implementation file.

Version

1.0

This class is responsible for creating a little text box in the game @project ICP Project - Epic Robot Survival

Author

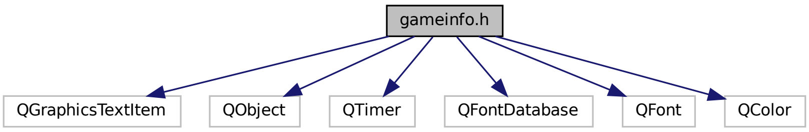
Marek Effenberger

7.8 gameinfo.h File Reference

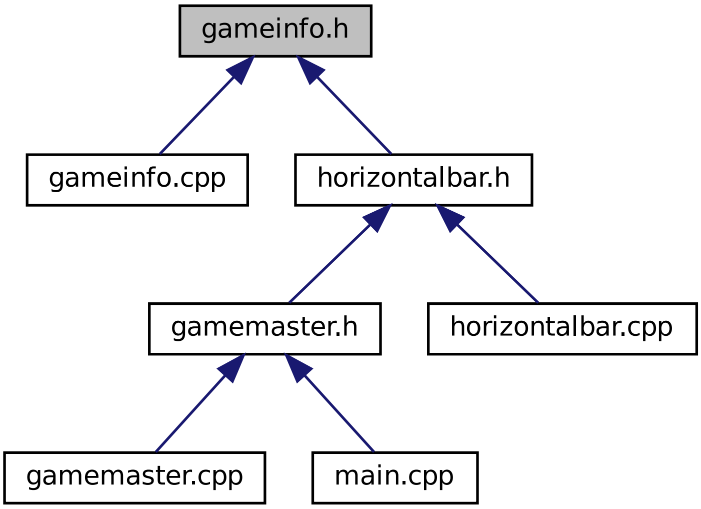
GameInfo class header file.

```
#include <QGraphicsTextItem>
#include <QObject>
#include <QTimer>
#include <QFontDatabase>
#include <QFont>
#include <QColor>
```

Include dependency graph for gameinfo.h:



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



Classes

- class GameInfo

  GameInfo class, inherits from QObject and QGraphicsTextItem.

7.8.1 Detailed Description

GameInfo class header file.

Version

1.0

This class is responsible for creating a little text box in the game @project ICP Project - Epic Robot Survival

Author

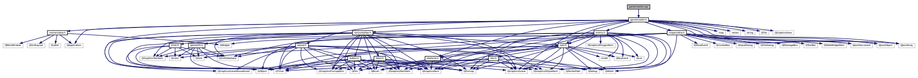
Marek Effenberger

7.9 gamemaster.cpp File Reference

GameMaster class implementation file.

```
#include "gamemaster.h"
```

Include dependency graph for gamemaster.cpp:



7.9.1 Detailed Description

GameMaster class implementation file.

Version

1.0

This class is responsible for correct switching between the game windows pausing the game, setting up the main menu and the game itself based on the parsed JSON file The scene creation and setting up the main game was inspired by `https://www.youtube.com/watch?v=8ntEQpg7gck&list=PLyb40eoxkelOa5xCB9fvGrkoBf8JzEwtV&ab_channel=Abdullah` @project ICP Project - Epic Robot Survival

Authors

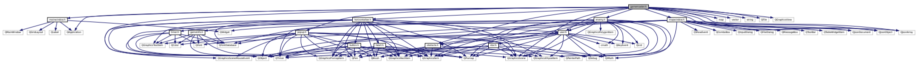
Marek Effenberger, Samuel Hejníček

7.10 gamemaster.h File Reference

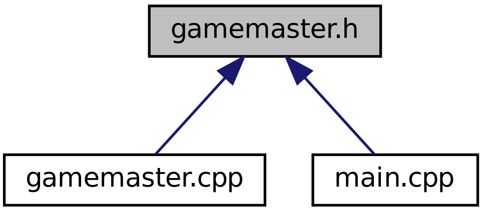
GameMaster class header file.

```
#include <QObject>
#include <map>
#include <vector>
#include <string>
#include "mainwindow.h"
#include "mapwindow.h"
#include <QJsonArray>
#include <QJsonObject>
#include <QJsonDocument>
#include <QFile>
#include "user.h"
#include "obstacle.h"
#include "enemy.h"
#include "horizontalbar.h"
#include "popup.h"
#include <QGraphicsScene>
#include <QGraphicsView>
#include <QApplication>
```

Include dependency graph for gamemaster.h:



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



Classes

- class GameMaster

  GameMaster class, inherits from QObject.

7.10.1 Detailed Description

GameMaster class header file.

Version

1.0

This class is responsible for correct switching between the game windows pausing the game, setting up the main menu and the game itself based on the parsed JSON file @project ICP Project - Epic Robot Survival

Authors

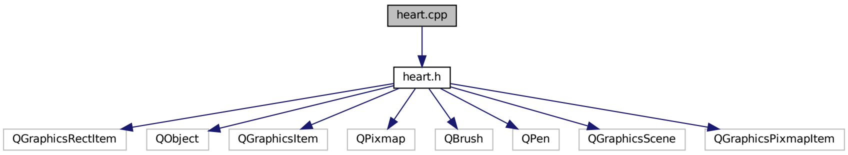
Marek Effenberger, Samuel Hejníček

7.11 heart.cpp File Reference

Hnemy class implementation file.

```
#include "heart.h"
```

Include dependency graph for heart.cpp:



7.11.1 Detailed Description

Hnemy class implementation file.

Version

1.0

This class is responsible for creating Heart Icons in the game @project ICP Project - Epic Robot Survival

Author

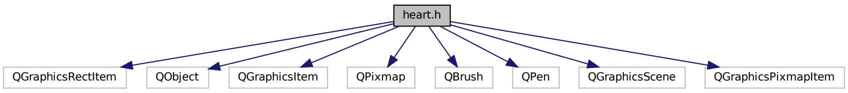
Marek Effenberger

7.12 heart.h File Reference

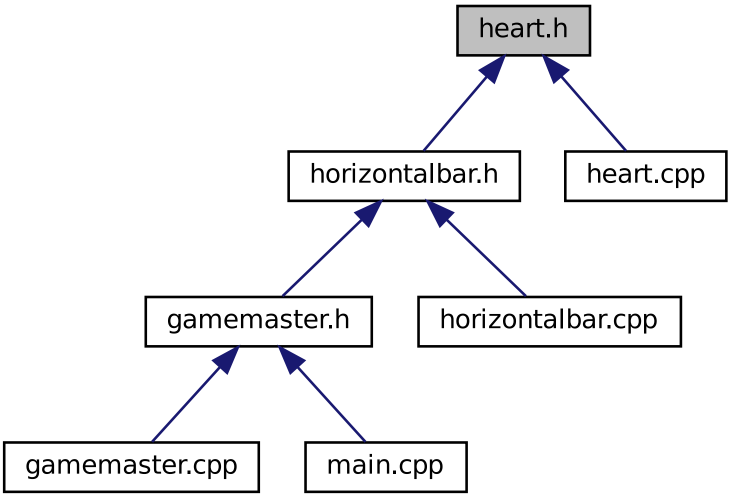
Heart class header file.

```
#include <QGraphicsRectItem>
#include <QObject>
#include <QGraphicsItem>
#include <QPixmap>
#include <QBrush>
#include <QPen>
#include <QGraphicsScene>
#include <QGraphicsPixmapItem>
```

Include dependency graph for heart.h:



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



Classes

- class Heart

  Heart class, inherits from QObject and QGraphicsRectItem.

7.12.1 Detailed Description

Heart class header file.

Version

1.0

This class is responsible for creating Heart Icons in the game @project ICP Project - Epic Robot Survival

Author

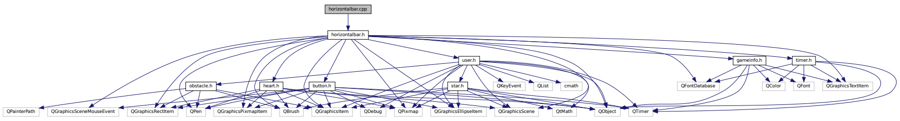
Marek Effenberger

7.13 horizontalbar.cpp File Reference

HorizontalBar classes (upper, lower) implementation file.

```
#include "horizontalbar.h"
```

Include dependency graph for horizontalbar.cpp:



7.13.1 Detailed Description

HorizontalBar classes (upper, lower) implementation file.

Version

1.0

This class is responsible for creating the horizontal bars in the game @project ICP Project - Epic Robot Survival

Author

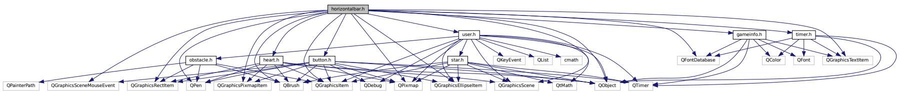
Marek Effenberger

7.14 horizontalbar.h File Reference

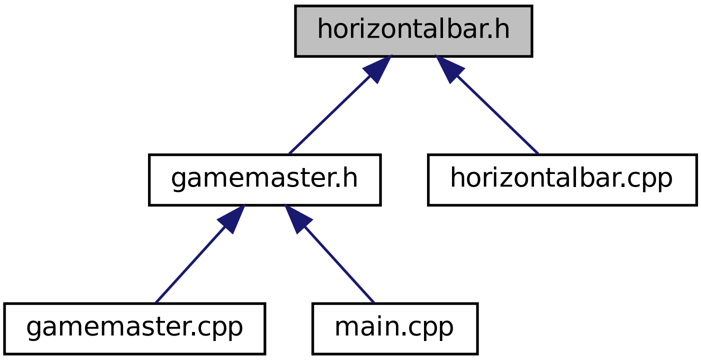
HorizontalBar classes (upper, lower) header file.

```
#include <QGraphicsRectItem>
#include <QGraphicsScene>
#include <QGraphicsEllipseItem>
#include <QGraphicsPixmapItem>
#include <QPixmap>
#include <QBrush>
#include <QGraphicsSceneMouseEvent>
#include "button.h"
#include "user.h"
#include <QGraphicsItem>
#include <QObject>
#include <QPen>
#include <QGraphicsTextItem>
#include <QFontDatabase>
#include "heart.h"
#include "gameinfo.h"
#include "timer.h"
```

Include dependency graph for horizontalbar.h:



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



Classes

- class HorizontalUpperBar

  HorizontalUpperBar class, inherits from QObject and QGraphicsRectItem.
- class HorizontalLowerBar

  HorizontalLowerBar class, inherits from QObject and QGraphicsRectItem.

7.14.1 Detailed Description

HorizontalBar classes (upper, lower) header file.

Version

1.0

This class is responsible for creating the horizontal bars in the game @project ICP Project - Epic Robot Survival

Author

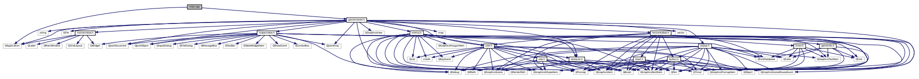
Marek Effenberger

7.15 main.cpp File Reference

Main file of the project.

```
#include "gamemaster.h"
#include <QApplication>
```

Include dependency graph for main.cpp:



Functions

- int main (int argc, char ∗argv[ ])

7.15.1 Detailed Description

Main file of the project.

Version

1.0

Instantiates the GameMaster class and runs the game @project ICP Project - Epic Robot Survival

Authors

Marek Effenberger, Samuel Hejníček

7.15.2 Function Documentation

7.15.2.1 main()

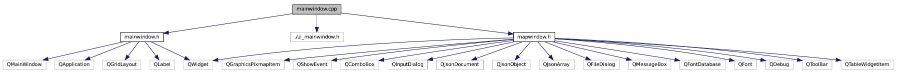
```
int main (
            int argc,
            char * argv[ ] )
```

7.16 mainwindow.cpp File Reference

Main Window Class Implementation file.

```
#include "mainwindow.h"
#include "./ui_mainwindow.h"
#include "mapwindow.h"
```

Include dependency graph for mainwindow.cpp:



7.16.1 Detailed Description

Main Window Class Implementation file.

Version

1.0

This class is responsible for creating the main window of the robot game @project ICP Project - Epic Robot Survival

Author

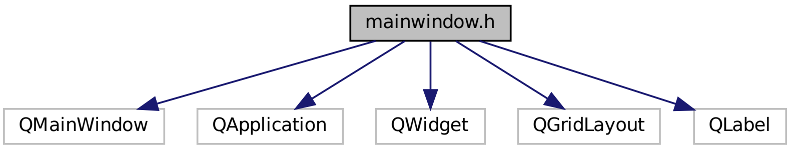
Samuel Hejnicek

7.17 mainwindow.h File Reference

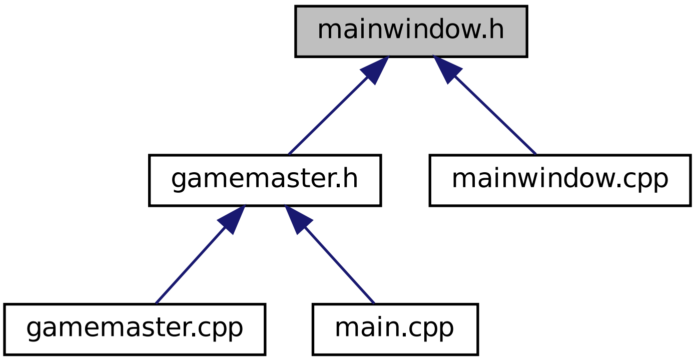
Main Window Class Header file.

```
#include <QMainWindow>
#include <QApplication>
#include <QWidget>
#include <QGridLayout>
#include <QLabel>
```

Include dependency graph for mainwindow.h:



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



Classes

- class MainWindow

  The MainWindow class.

Namespaces

- Ui

7.17.1 Detailed Description

Main Window Class Header file.

Version

1.0

This class is responsible for creating the main window of the robot game @project ICP Project - Epic Robot Survival

Author

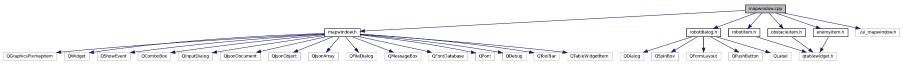
Samuel Hejnicek

7.18 mapwindow.cpp File Reference

Map Window Class Implementation file.

```
#include "mapwindow.h"
#include "robotdialog.h"
#include "robotitem.h"
#include "obstacleitem.h"
#include "enemyitem.h"
#include "./ui_mapwindow.h"
```

Include dependency graph for mapwindow.cpp:



7.18.1 Detailed Description

Map Window Class Implementation file.

Version

1.0

This class is responsible for creating the map editor window of the game @project ICP Project - Epic Robot Survival

Author

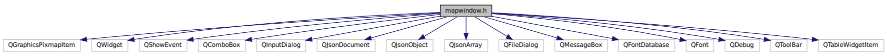
Samuel Hejnicek

7.19 mapwindow.h File Reference

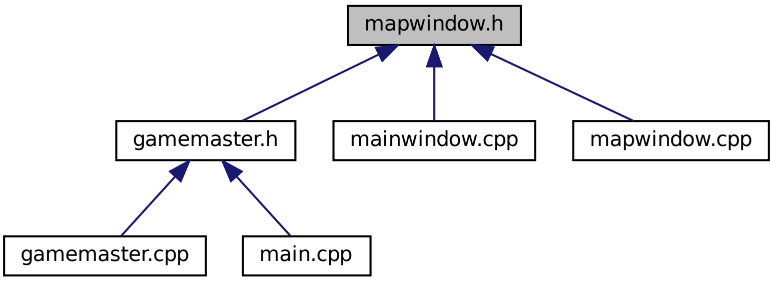
Map Window Class Header file.

```
#include <QGraphicsPixmapItem>
#include <QWidget>
#include <QShowEvent>
#include <QComboBox>
#include <QInputDialog>
#include <QJsonDocument>
#include <QJsonObject>
#include <QJsonArray>
#include <QFileDialog>
#include <QMessageBox>
#include <QFontDatabase>
#include <QFont>
#include <QDebug>
#include <QToolBar>
#include <QTableWidgetItem>
```

Include dependency graph for mapwindow.h:



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



Classes

- struct pixmapIcons

  Struct to store the icons for the pixmap.
- class MapWindow

  Class for the Map Window.

Namespaces

- Ui

Macros

- #define SQUARE_SIZE 75

Typedefs

- typedef struct pixmapIcons pixMapIcons

  Struct to store the icons for the pixmap.

7.19.1 Detailed Description

Map Window Class Header file.

Version

1.0

This class is responsible for creating the map editor window of the game @project ICP Project - Epic Robot Survival

Author

Samuel Hejnicek

7.19.2 Macro Definition Documentation

7.19.2.1 SQUARE_SIZE

```
#define SQUARE_SIZE 75
```

7.19.3 Typedef Documentation

7.19.3.1 pixMapIcons

```
typedef struct pixmapIcons pixMapIcons
```

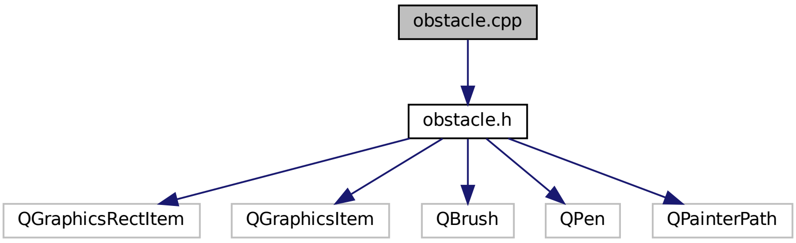
Struct to store the icons for the pixmap.

7.20 obstacle.cpp File Reference

Obstacle class implementation file.

```
#include "obstacle.h"
```

Include dependency graph for obstacle.cpp:



7.20.1 Detailed Description

Obstacle class implementation file.

Version

1.0

This class is responsible for creating the obstacles in the game @project ICP Project - Epic Robot Survival

Author

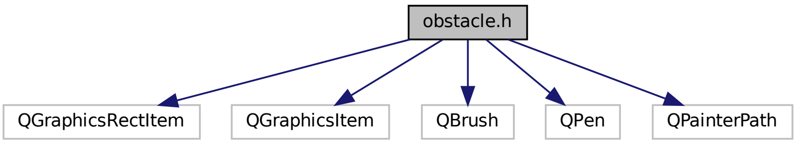
Marek Effenberger

7.21 obstacle.h File Reference

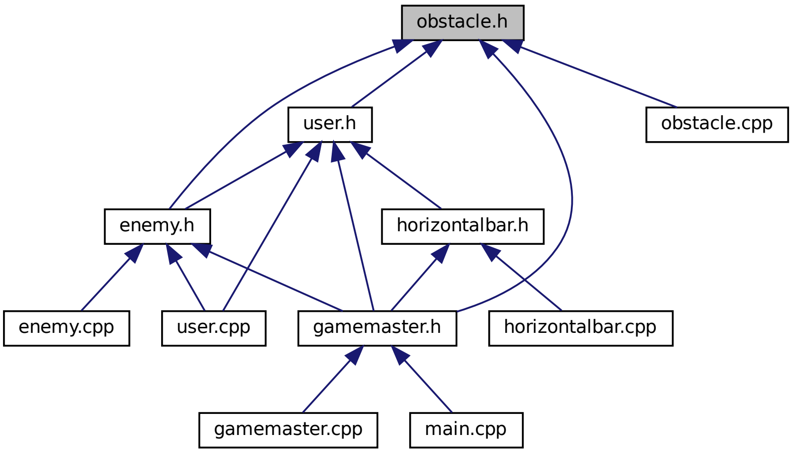
Obstacle class header file.

```
#include <QGraphicsRectItem>
#include <QGraphicsItem>
#include <QBrush>
#include <QPen>
#include <QPainterPath>
```

Include dependency graph for obstacle.h:



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



Classes

- class Obstacle

  Obstacle class, inherits from QGraphicsRectItem.

7.21.1 Detailed Description

Obstacle class header file.

Version

1.0

This class is responsible for creating the obstacles in the game @project ICP Project - Epic Robot Survival

Author

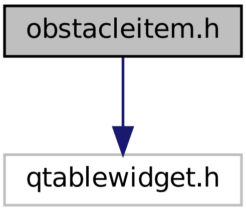
Marek Effenberger

7.22 obstacleitem.h File Reference

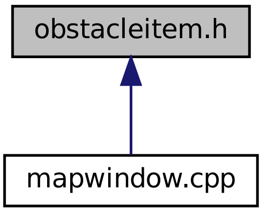
Obstacle Item Class Header file.

```
#include "qtablewidget.h"
```

Include dependency graph for obstacleitem.h:



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



Classes

- class ObstacleItem

  The ObstacleItem class.

7.22.1 Detailed Description

Obstacle Item Class Header file.

Version

1.0

This class is responsible for holding the obstacle cell item data in the game @project ICP Project - Epic Robot Survival

Author

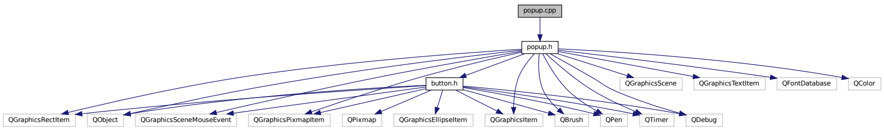
Samuel Hejnicek

7.23 popup.cpp File Reference

Popup class implementation file.

```
#include "popup.h"
```

Include dependency graph for popup.cpp:



7.23.1 Detailed Description

Popup class implementation file.

Version

1.0

This class is responsible for creating the three popups in the game @project ICP Project - Epic Robot Survival

Author

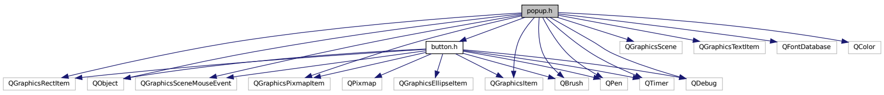
Marek Effenberger

7.24 popup.h File Reference

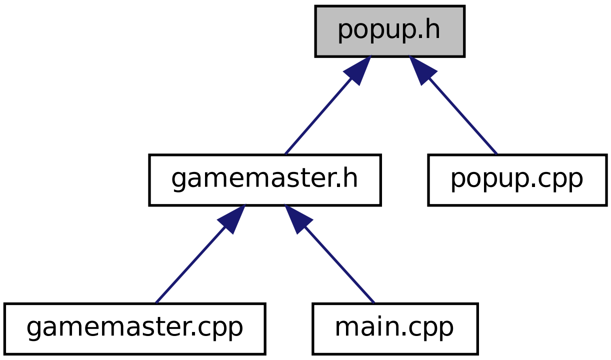
Popup class header file.

```
#include <QGraphicsRectItem>
#include <QObject>
#include "button.h"
#include <QGraphicsScene>
#include <QGraphicsPixmapItem>
#include <QGraphicsItem>
#include <QBrush>
#include <QPen>
#include <QGraphicsSceneMouseEvent>
#include <QGraphicsTextItem>
#include <QFontDatabase>
#include <QTimer>
#include <QDebug>
#include <QColor>
```

Include dependency graph for popup.h:



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



Classes

- class PopUp

  Popup class, inherits from QObject and QGraphicsRectItem.

7.24.1 Detailed Description

Popup class header file.

Version

1.0

This class is responsible for creating the three popups in the game @project ICP Project - Epic Robot Survival

Author

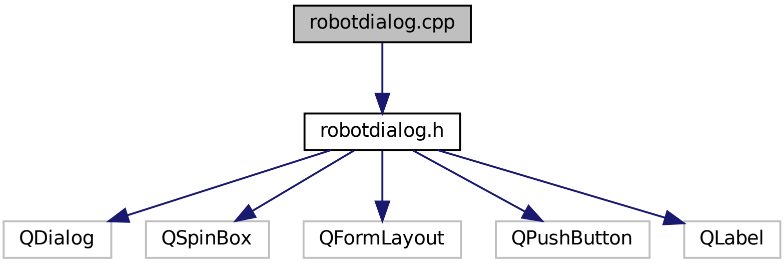
Marek Effenberger

7.25 robotdialog.cpp File Reference

Robot Dialog Class Implementation file.

```
#include "robotdialog.h"
```

Include dependency graph for robotdialog.cpp:



7.25.1 Detailed Description

Robot Dialog Class Implementation file.

Version

1.0

This class is responsible for creating a dialog where user can input the parameters of the robot/enemy @project ICP Project - Epic Robot Survival

Author

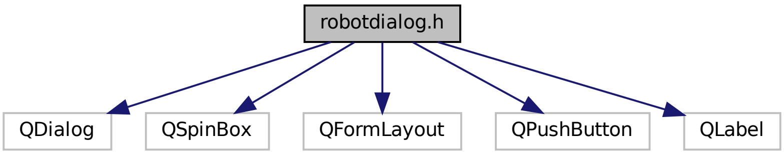
Samuel Hejnicek

7.26 robotdialog.h File Reference

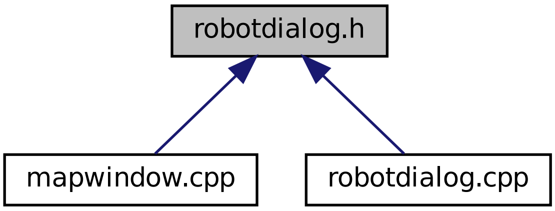
Robot Dialog Class Header file.

```
#include <QDialog>
#include <QSpinBox>
#include <QFormLayout>
#include <QPushButton>
#include <QLabel>
```

Include dependency graph for robotdialog.h:



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



Classes

- class RobotParamDialog

  The RobotParamDialog class.

7.26.1 Detailed Description

Robot Dialog Class Header file.

Version

1.0

This class is responsible for creating a dialog where user can input the parameters of the robot/enemy @project ICP Project - Epic Robot Survival

Author

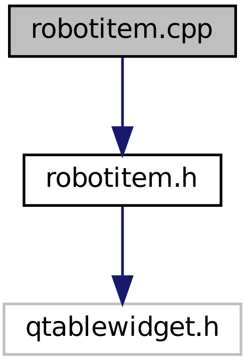
Samuel Hejnicek

7.27 robotitem.cpp File Reference

Robot Item Class Implementation file.

```
#include "robotitem.h"
```

Include dependency graph for robotitem.cpp:



7.27.1 Detailed Description

Robot Item Class Implementation file.

Version

1.0

This class is responsible for holding the contorolled robot cell item data in the game @project ICP Project - Epic Robot Survival

Author

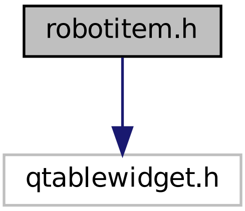
Samuel Hejnicek

7.28 robotitem.h File Reference

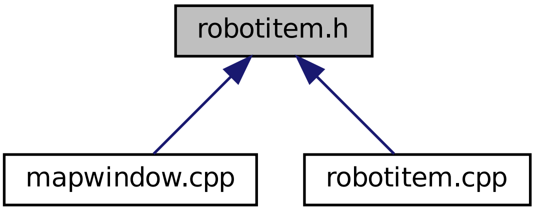
Robot Item Class header file.

```
#include "qtablewidget.h"
```

Include dependency graph for robotitem.h:



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



Classes

- class RobotItem

  The RobotItem class.

7.28.1 Detailed Description

Robot Item Class header file.

Version

1.0

This class is responsible for holding the contorolled robot cell item data in the game @project ICP Project - Epic Robot Survival

Author

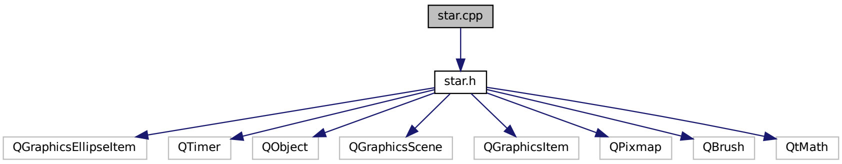
Samuel Hejnicek

7.29 star.cpp File Reference

Star class implementation file.

```
#include "star.h"
```

Include dependency graph for star.cpp:



7.29.1 Detailed Description

Star class implementation file.

Version

1.0

This class is responsible for creating and moving little stars when the user is stunned @project ICP Project - Epic Robot Survival

Author

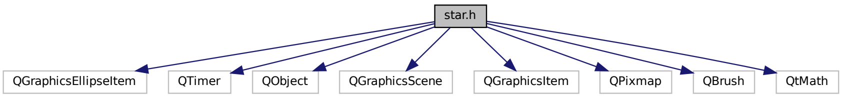
Marek Effenberger

7.30 star.h File Reference

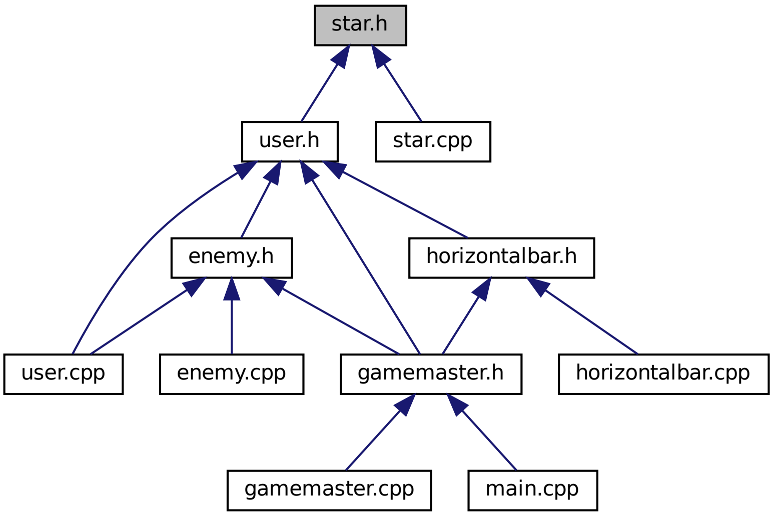
Star class header file.

```
#include <QGraphicsEllipseItem>
#include <QTimer>
#include <QObject>
#include <QGraphicsScene>
#include <QGraphicsItem>
#include <QPixmap>
#include <QBrush>
#include <QtMath>
```

Include dependency graph for star.h:



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



Classes

- class Star

    Star class, inherits from QObject and QGraphicsEllipseItem.

7.30.1 Detailed Description

Star class header file.

Version

1.0

This class is responsible for creating and moving little stars when the user is stunned @project ICP Project - Epic Robot Survival

Author

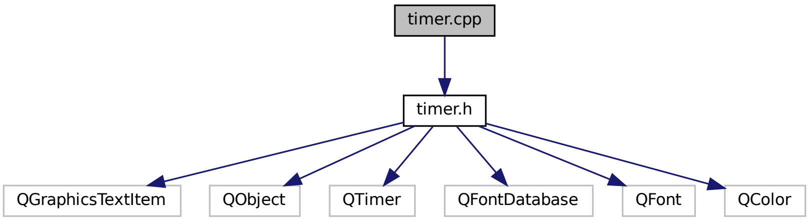
Marek Effenberger

7.31 timer.cpp File Reference

Timer class implementation file.

```
#include "timer.h"
```

Include dependency graph for timer.cpp:



7.31.1 Detailed Description

Timer class implementation file.

Version

1.0

This class is responsible for a timer that counts up to a certain limit @project ICP Project - Epic Robot Survival

Author

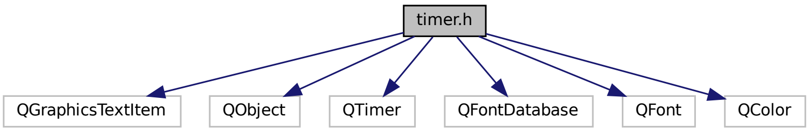
Marek Effenberger

7.32 timer.h File Reference

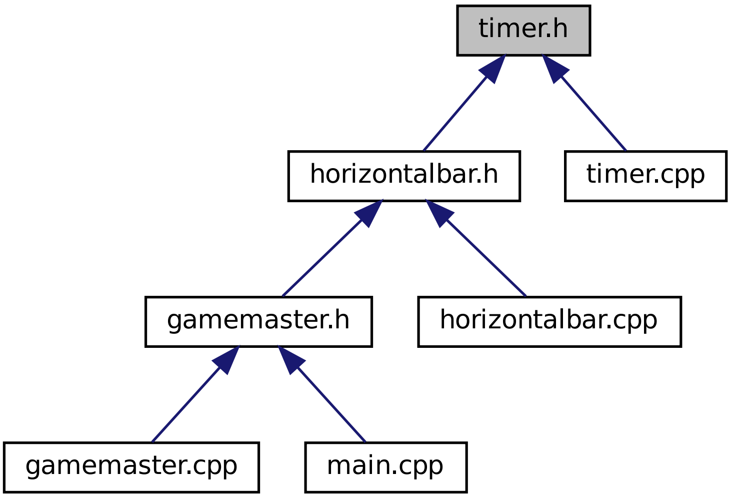
Timer class header file.

```
#include <QGraphicsTextItem>
#include <QObject>
#include <QTimer>
#include <QFontDatabase>
#include <QFont>
#include <QColor>
```

Include dependency graph for timer.h:



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



Classes

- class Timer

  Timer class, inherits from QGraphicsTextItem.

7.32.1 Detailed Description

Timer class header file.

Version

1.0

This class is responsible for creating a timer that counts up to a certain limit @project ICP Project - Epic Robot Survival

Author

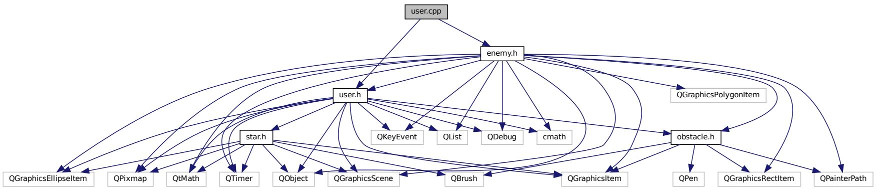
Marek Effenberger

7.33 user.cpp File Reference

User class implementation file.

```
#include "user.h"
#include "enemy.h"
```

Include dependency graph for user.cpp:



7.33.1 Detailed Description

User class implementation file.

Version

1.0

This class is responsible for creating and moving the User robot @project ICP Project - Epic Robot Survival

Author

Marek Effenberger

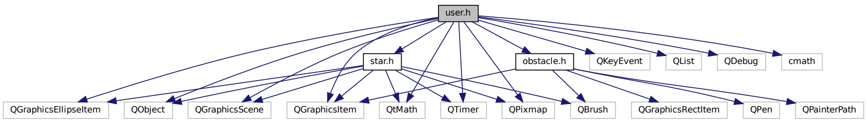
7.34 user.h File Reference

User class header file.

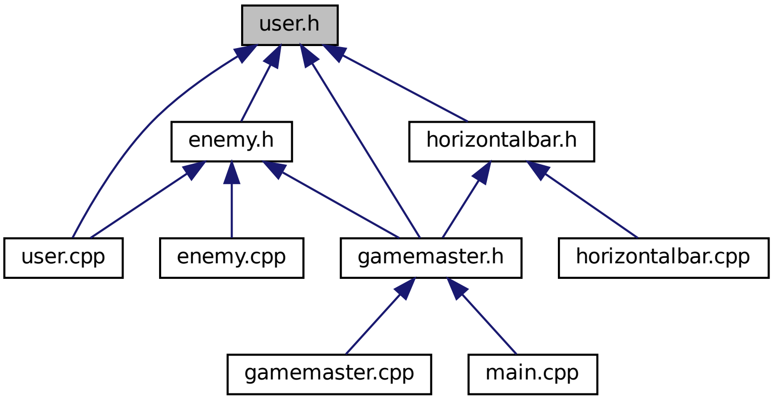
```
#include <QGraphicsEllipseItem>
#include <QObject>
#include <QKeyEvent>
#include <QList>
#include <QDebug>
#include <QGraphicsScene>
#include "obstacle.h"
#include <cmath>
#include <QGraphicsItem>
#include <QtMath>
#include <QTimer>
#include <QPixmap>
```

```
#include "star.h"
```

Include dependency graph for user.h:



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



Classes

- class User

  User class, inherits from QObject and QGraphicsEllipseItem.

7.34.1 Detailed Description

User class header file.

Version

1.0

This class is responsible for creating and moving the User robot @project ICP Project - Epic Robot Survival

Author

Marek Effenberger

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