

My Project

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

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

main	30
QDialog	
quests	32
QGraphicsPixmapItem	
butb	9
butblack	10
butg	11
butp	12
QGraphicsScene	
g2_setup	20
QObject	
butb	9
butblack	10
butg	11
butp	12
Centering	13
jsonhandler	24
signup_scene	37
QWidget	
account	7
account_dashboard	8
account_sidebar	9
g1_info	14
g1_settings	15
g1_setup	17
g1_startmenu	18
g2_settings	19
g2_startmenu	21
gameLost	22
gameWon	23
noTurns	30
playasguest	31
scene1	35
signinPage	36
signupPage	37
timeUp	38

Chapter 2

Class Index

2.1 Class List

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

account	7
account_dashboard	8
account_sidebar	9
butb	9
butblack	10
butg	11
butp	12
Centering	13
g1_info	14
g1_settings	15
g1_setup	17
g1_startmenu	18
g2_settings	19
g2_setup	20
g2_startmenu	21
gameLost	22
gameWon	23
jsonhandler	24
main	30
noTurns	30
playasguest	31
quests	32
scene1	35
signinPage	36
signup_scene	37
signupPage	37
timeUp	38

Chapter 3

File Index

3.1 File List

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

account.cpp		
Account widget	41	
account.h		
Account widget	41	
account_dashboard.cpp		
Account_dashboard widget	42	
account_dashboard.h		
Account_dashboard widget	42	
account_sidebar.cpp		
This widget constructs the sidebar of the account widget	43	
account_sidebar.h		
This widget constructs the sidebar of the account widget	43	
butb.cpp		
Blue disk in game 2	44	
butb.h		
Blue disk in game 2	44	
butblack.cpp		
Grey disk in game 2	45	
butblack.h		
Grey disk in game 2	45	
butg.cpp		
Green disk in game 2	46	
butg.h		
Green disk in game 2	46	
butp.cpp		
Purple disk in game 2	47	
butp.h		
Purple disk in game 2	47	
centering.h		??
g1_info.cpp		
This class is a widget that informs the player on how to play Battleships	48	
g1_info.h		
This class is a widget that informs the player on how to play Battleships	48	
g1_settings.h		
A widget that displays a game settings window	48	

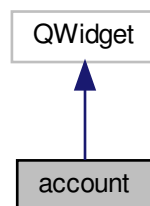
g1_setup.h	??
g1_startmenu.cpp	
Start menu of Battleships	49
g1_startmenu.h	
Start menu of Battleships	49
g2_settings.cpp	
This class creates the settings QWidget for Shooting discs. In the settings, the user can change the game difficulty and background image. Changing the difficulty changes the target score and lives. Changing the background updates the image of the gameplay ONLY. (unlike Battleships, the start menu and settings do not change backgrounds)	50
g2_settings.h	
This class creates the settings QWidget for Shooting discs. In the settings, the user can change the game difficulty and background image. Changing the difficulty changes the target score and lives. Changing the background updates the image of the gameplay ONLY. (unlike Battleships, the start menu and settings do not change backgrounds)	50
g2_setup.h	??
g2_startmenu.h	
Start menu of Shooting Disks	51
gamelost.h	??
gamewon.h	??
jsonhandler.cpp	
A class that allows us to perform queries on the json file or a json object	51
jsonhandler.h	
A class that allows us to perform queries on the json file or a json object	52
main.h	??
noturns.h	??
playasguest.h	??
quests.cpp	
A class that displays a QDialog of a question in Battleships game This class contains queries to the questions.json file	52
quests.h	
A class that displays a QDialog of a question in Battleships game This class contains queries to the questions.json file	53
scene1.h	??
signinpage.h	??
signup_scene.h	??
signuppage.h	??
timeup.h	??

Chapter 4

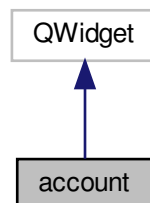
Class Documentation

4.1 `account` Class Reference

Inheritance diagram for `account`:



Collaboration diagram for `account`:



Public Member Functions

- `account` (`QWidget *parent=nullptr, QObject json={}`)
account constructor

4.1.1 Constructor & Destructor Documentation

4.1.1.1 `account()`

```
account::account (
    QWidget * parent = nullptr,
    QJsonObject json = {} ) [explicit]
```

account constructor

Parameters

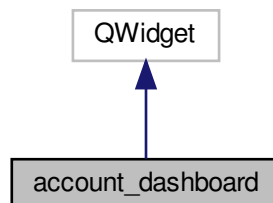
<i>parent, a</i>	pointer to a parent widget
<i>QJsonObject, the</i>	user json object returned from signin, signup, or playasguest

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

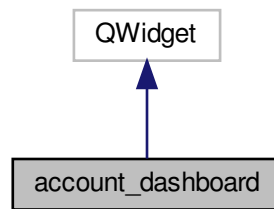
- [account.h](#)
- [account.cpp](#)

4.2 `account_dashboard` Class Reference

Inheritance diagram for `account_dashboard`:



Collaboration diagram for account_dashboard:



Public Member Functions

- [account_dashboard](#) (`QWidget *parent=nullptr`, `QJsonObject json={}`, `QString gameId=""`)
[account_dashboard](#) constructor

4.2.1 Constructor & Destructor Documentation

4.2.1.1 account_dashboard()

```

account_dashboard::account_dashboard (
    QWidget * parent = nullptr,
    QJsonObject json = {},
    QString gameId = "" ) [explicit]
  
```

[account_dashboard](#) constructor

Parameters

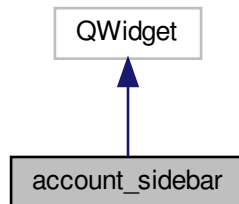
<i>parent,a</i>	pointer to a parent QWidget. Initially equal to a nullptr
<i>json,a</i>	user QJsonObject passed by the calling class. Initialized to an empty object.
<i>gameID,a</i>	QString with the game's ID to differentiate between stats of different games. Initialized to an empty string.

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

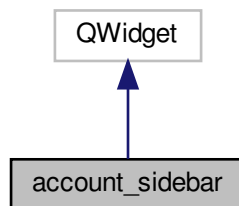
- [account_dashboard.h](#)
- [account_dashboard.cpp](#)

4.3 `account_sidebar` Class Reference

Inheritance diagram for `account_sidebar`:



Collaboration diagram for `account_sidebar`:



Public Member Functions

- [`account_sidebar`](#) (`QWidget *parent=nullptr, QJsonObject userobj={}`)
[`account_sidebar`](#) constructor

4.3.1 Constructor & Destructor Documentation

4.3.1.1 `account_sidebar()`

```
account_sidebar::account_sidebar (
    QWidget * parent = nullptr,
    QJsonObject userobj = {} ) [explicit]
```

[`account_sidebar`](#) constructor

Parameters

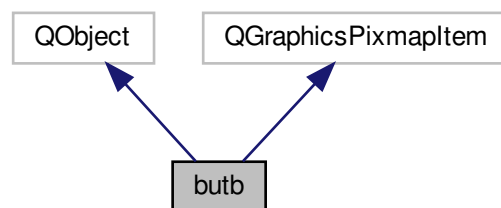
<i>parent, a</i>	pointer to a parent QWidget. Initialized to nullptr
<i>userobj, a</i>	QJsonObject. Initialized to an empty QJsonObject.

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

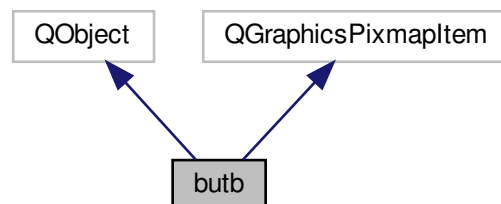
- [account_sidebar.h](#)
- [account_sidebar.cpp](#)

4.4 butb Class Reference

Inheritance diagram for butb:



Collaboration diagram for butb:



Public Types

- enum **DiskType** { **Black** = UserType + 1, **Blue** = UserType + 2, **Green** = UserType + 3, **Purple** = UserType + 4 }

Public Member Functions

- [butb](#) (QObject *parent=nullptr, int pos=5)
butb constructor
- int **type** () const override

4.4.1 Constructor & Destructor Documentation

4.4.1.1 butb()

```
butb::butb (  
    QObject * parent = nullptr,  
    int pos = 5 ) [explicit]
```

butb constructor

Parameters

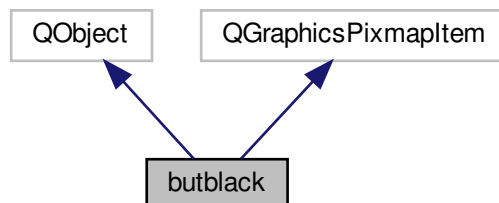
<i>parent,a</i>	pointer to a parent QObject, initialized to a nullptr
<i>pos,position</i>	by which the button falls

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

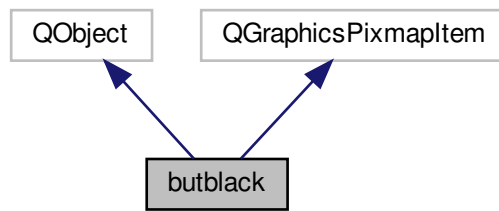
- [butb.h](#)
- [butb.cpp](#)

4.5 butblack Class Reference

Inheritance diagram for butblack:



Collaboration diagram for butblack:



Public Types

- enum **DiskType** { **Black** = UserType + 1, **Blue** = UserType + 2, **Green** = UserType + 3, **Purple** = UserType + 4 }

Public Member Functions

- butblack** (QObject *parent=nullptr, int x=0, int pos=5)
butblack constructor
- int **type** () const override

4.5.1 Constructor & Destructor Documentation

4.5.1.1 butblack()

```

butblack::butblack (
    QObject * parent = nullptr,
    int x = 0,
    int pos = 5 ) [explicit]
  
```

butblack constructor

butb constructor

Parameters

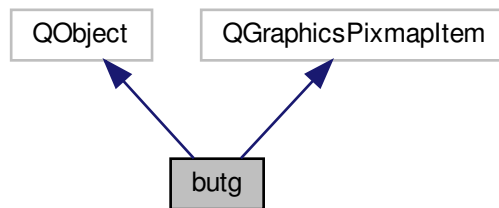
<i>parent,a</i>	pointer to a parent QObject, initialized to a nullptr
<i>x,the</i>	x coordinate at which the grey button should fall
<i>pos,position</i>	by which the button falls

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

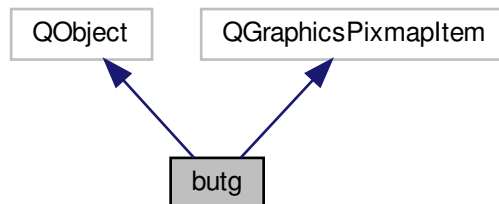
- [butblack.h](#)
- [butblack.cpp](#)

4.6 butg Class Reference

Inheritance diagram for butg:



Collaboration diagram for butg:



Public Types

- enum **DiskType** { **Black** = UserType + 1, **Blue** = UserType + 2, **Green** = UserType + 3, **Purple** = UserType + 4 }

Public Member Functions

- [butg](#) (QObject *parent=nullptr, int pos=5)
butg constructor
- int **type** () const override

4.6.1 Constructor & Destructor Documentation

4.6.1.1 butg()

```
butg::butg (
    QObject * parent = nullptr,
    int pos = 5 ) [explicit]
```

butg constructor

Parameters

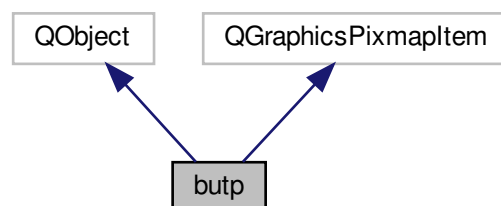
<i>parent, a</i>	pointer to a parent QObject, initialized to a nullptr
<i>x, the</i>	x coordinate at which the grey button should fall
<i>pos, position</i>	by which the button falls

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

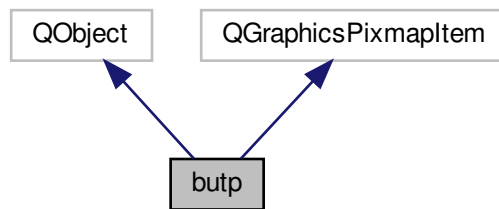
- [butg.h](#)
- [butg.cpp](#)

4.7 butp Class Reference

Inheritance diagram for butp:



Collaboration diagram for butp:



Public Types

- enum **DiskType** { **Black** = UserType + 1, **Blue** = UserType + 2, **Green** = UserType + 3, **Purple** = UserType + 4 }

Public Member Functions

- `butp` (`QObject *parent=nullptr`, `int pos=5`)
butp constructor
- `int type ()` const override

4.7.1 Constructor & Destructor Documentation

4.7.1.1 butp()

```

butp::butp (
    QObject * parent = nullptr,
    int pos = 5 ) [explicit]
  
```

butp constructor

Parameters

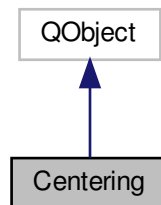
<i>parent,a</i>	pointer to a parent QObject, initialized to a nullptr
<i>pos,position</i>	by which the button falls

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

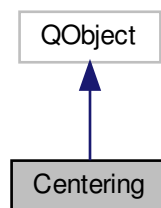
- [butp.h](#)
- [butp.cpp](#)

4.8 Centering Class Reference

Inheritance diagram for Centering:



Collaboration diagram for Centering:



Public Member Functions

- [Centering](#) (QObject *parent=nullptr)
Centering constructor.

Static Public Member Functions

- static void [centerWidget](#) (QWidget *w)
a function that centers a widget
- static void **centerScene** (QGraphicsView *s)

4.8.1 Constructor & Destructor Documentation

4.8.1.1 Centering()

```
Centering::Centering (
    QObject * parent = nullptr ) [explicit]
```

[Centering](#) constructor.

Parameters

<i>parent,a</i>	pointer to parent QObject. Initialized to a nullptr
-----------------	---

4.8.2 Member Function Documentation

4.8.2.1 centerWidget()

```
void Centering::centerWidget (
    QWidget * w ) [static]
```

a function that centers a widget

Parameters

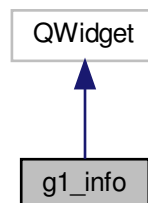
<i>w,a</i>	pointer to the QWidget to be centered
------------	---------------------------------------

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

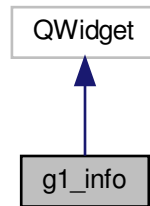
- centering.h
- centering.cpp

4.9 g1_info Class Reference

Inheritance diagram for g1_info:



Collaboration diagram for `g1_info`:



Public Member Functions

- [g1_info](#) (`QWidget *parent=nullptr, QJsonObject json={}`)
[g1_info](#) constructor

4.9.1 Constructor & Destructor Documentation

4.9.1.1 g1_info()

```

g1_info::g1_info (
    QWidget * parent = nullptr,
    QJsonObject json = {} ) [explicit]
  
```

[g1_info](#) constructor

Parameters

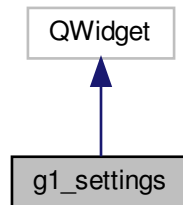
<i>parent, a</i>	pointer to a <code>QWidget</code> parent
<i>json, the</i>	<code>QJsonObject</code> for a given user

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

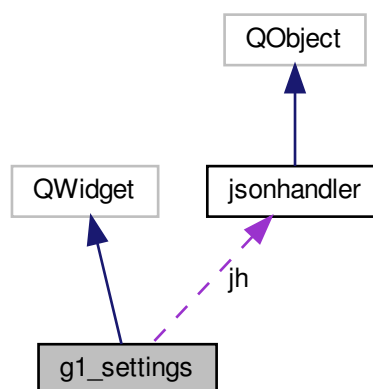
- [g1_info.h](#)
- [g1_info.cpp](#)

4.10 g1_settings Class Reference

Inheritance diagram for g1_settings:



Collaboration diagram for g1_settings:



Public Member Functions

- [g1_settings](#) (QWidget *parent=nullptr, QJsonObject json={})
g1_settings constructor
- void [setGridLayout](#) ()
Sets the widget of the grid layout.
- void [createDifficultyBox](#) ()
groups the difficulty buttons
- void [createTopicBox](#) ()
groups the topic buttons
- void [createBgBox](#) ()
groups the background buttons
- void [initBg](#) ()
initializes the background color of the QWidget as specified in userJson.

Public Attributes

- QPushButton * **backBtn**
- QLabel * **title**
- QLabel * **diffLabel**
- QLabel * **topicLabel**
- QLabel * **bgLabel**
- QPushButton * **easyBtn**
- QPushButton * **mediumBtn**
- QPushButton * **hardBtn**
- QGroupBox * **difficultyBox**
- QHBoxLayout * **diffBoxLayout**
- QPushButton * **t1Btn**
- QPushButton * **t2Btn**
- QPushButton * **t3Btn**
- QGroupBox * **topicBox**
- QHBoxLayout * **topicBoxLayout**
- QPushButton * **bg1Btn**
- QPushButton * **bg2Btn**
- QPushButton * **bg3Btn**
- QGroupBox * **bgBox**
- QHBoxLayout * **bgBoxLayout**
- QGridLayout * **grid**
- QJsonObject **userJson**
- [jsonhandler](#) * **jh** = new [jsonhandler](#)()

4.10.1 Constructor & Destructor Documentation

4.10.1.1 g1_settings()

```
g1_settings::g1_settings (
    QWidget * parent = nullptr,
    QJsonObject json = {} ) [explicit]
```

[g1_settings](#) constructor

Parameters

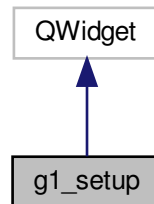
<i>parent, a</i>	pointer to a parent QWidget, initialized to a nullptr
<i>json, the</i>	player's QJsonObject, initialized to an empty json object

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

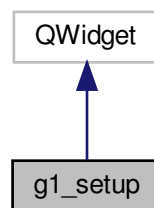
- [g1_settings.h](#)
- [g1_settings.cpp](#)

4.11 g1_setup Class Reference

Inheritance diagram for g1_setup:



Collaboration diagram for g1_setup:



Public Member Functions

- [g1_setup](#) (`QWidget *parent=nullptr`, `QJsonObject json={}`)
[g1_setup](#) constructor

4.11.1 Constructor & Destructor Documentation

4.11.1.1 g1_setup()

```
g1_setup::g1_setup (
    QWidget * parent = nullptr,
    QJsonObject json = {} ) [explicit]
```

[g1_setup](#) constructor

Parameters

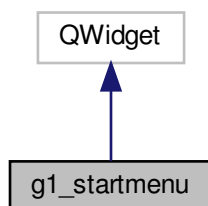
<i>parent, a</i>	pointer to a parent QWidget, initialized to a nullptr
<i>json, the</i>	player's QJsonObject, initialized to an empty json object

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

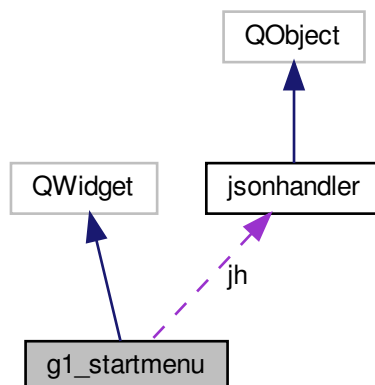
- g1_setup.h
- g1_setup.cpp

4.12 g1_startmenu Class Reference

Inheritance diagram for g1_startmenu:



Collaboration diagram for g1_startmenu:



Public Member Functions

- [g1_startmenu](#) (QWidget *parent=nullptr, QJsonObject json={})
[g1_startmenu](#) constructor
- void [initBg](#) ()
initializes the background color of the QWidget as specified in userJson.

Public Attributes

- QPushButton * **playBtn**
- QPushButton * **settingsBtn**
- QPushButton * **exitBtn**
- QLabel * **gameLogo**
- QVBoxLayout * **vLayout**
- QJsonObject **userJson**
- [jsonhandler](#) * **jh** = new [jsonhandler](#)()

4.12.1 Constructor & Destructor Documentation

4.12.1.1 g1_startmenu()

```
g1_startmenu::g1_startmenu (
    QWidget * parent = nullptr,
    QJsonObject json = {} ) [explicit]
```

[g1_startmenu](#) constructor

Parameters

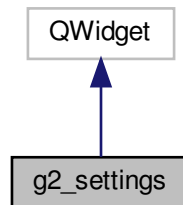
<i>parent,a</i>	pointer to a parent QWidget, initialized to a nullptr
<i>json,the</i>	player's QJsonObject, initialized to an empty json object

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

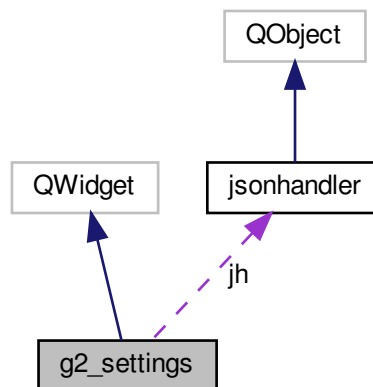
- [g1_startmenu.h](#)
- [g1_startmenu.cpp](#)

4.13 g2_settings Class Reference

Inheritance diagram for g2_settings:



Collaboration diagram for g2_settings:



Public Member Functions

- [g2_settings](#) (QWidget *parent=nullptr, QJsonObject json={})
g2_settings constructor
- void [setGridLayout](#) ()
setGridLayout, sets the widgets of a grid layout
- void [createDifficultyBox](#) ()
createDifficultyBox, creates the box of difficulty buttons
- void [createBgBox](#) ()
createBgBox, creates the box of bg buttons

Public Attributes

- QPushButton * **backBtn**
- QLabel * **title**
- QLabel * **diffLabel**
- QLabel * **topicLabel**
- QLabel * **bgLabel**
- QPushButton * **easyBtn**
- QPushButton * **mediumBtn**
- QPushButton * **hardBtn**
- QGroupBox * **difficultyBox**
- QHBoxLayout * **diffBoxLayout**
- QPushButton * **bg1Btn**
- QPushButton * **bg2Btn**
- QPushButton * **bg3Btn**
- QGroupBox * **bgBox**
- QHBoxLayout * **bgBoxLayout**
- QGridLayout * **grid**
- QJsonObject **userJson**
- [jsonhandler](#) * **jh** = new [jsonhandler](#)()

4.13.1 Constructor & Destructor Documentation

4.13.1.1 g2_settings()

```
g2_settings::g2_settings (
    QWidget * parent = nullptr,
    QJsonObject json = {} ) [explicit]
```

[g2_settings](#) constructor

Parameters

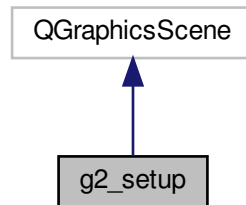
<i>parent, a</i>	nullptr to the QWidget parent
<i>json, the</i>	QJsonObject for a given user.

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

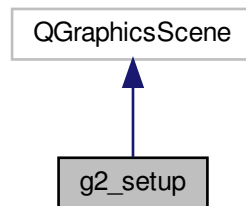
- [g2_settings.h](#)
- [g2_settings.cpp](#)

4.14 g2_setup Class Reference

Inheritance diagram for g2_setup:



Collaboration diagram for g2_setup:



Public Member Functions

- [g2_setup](#) (JsonObject json={})
[g2_setup](#) constructor

4.14.1 Constructor & Destructor Documentation

4.14.1.1 g2_setup()

```
g2_setup::g2_setup (
    JsonObject json = {} ) [explicit]
```

[g2_setup](#) constructor

Parameters

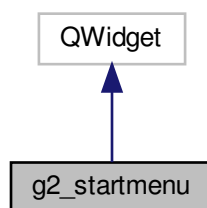
<i>json, the</i>	player's QJsonObject, initialized to an empty json object
------------------	---

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

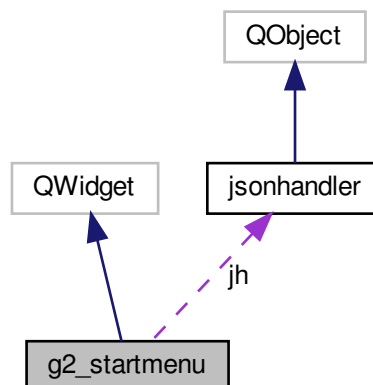
- g2_setup.h
- g2_setup.cpp

4.15 g2_startmenu Class Reference

Inheritance diagram for g2_startmenu:



Collaboration diagram for g2_startmenu:



Public Member Functions

- [g2_startmenu](#) (QWidget *parent=nullptr, QJsonObject json={})
[g2_startmenu](#) constructor

Public Attributes

- QPushButton * **playBtn**
- QPushButton * **settingsBtn**
- QPushButton * **exitBtn**
- QLabel * **gameLogo**
- QVBoxLayout * **vLayout**
- QJsonObject **userJson**
- [jsonhandler](#) * **jh** = new [jsonhandler](#)()
- QGraphicsView * **v1**

4.15.1 Constructor & Destructor Documentation

4.15.1.1 g2_startmenu()

```
g2_startmenu::g2_startmenu (
    QWidget * parent = nullptr,
    QJsonObject json = {} ) [explicit]
```

[g2_startmenu](#) constructor

Parameters

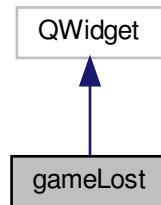
<i>parent, a</i>	pointer to a parent QWidget, initialized to a nullptr
<i>json, the</i>	player's QJsonObject, initialized to an empty json object

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

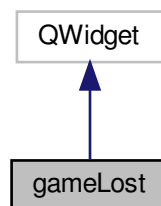
- [g2_startmenu.h](#)
- [g2_startmenu.cpp](#)

4.16 gameLost Class Reference

Inheritance diagram for gameLost:



Collaboration diagram for gameLost:



Public Member Functions

- [gameLost](#) (`QWidget *parent`, `QJsonObject json`, `int scoreNum`, `QString gameId`)
gameLost constructor

4.16.1 Constructor & Destructor Documentation

4.16.1.1 gameLost()

```
gameLost::gameLost (  
    QWidget * parent,  
    QJsonObject json,  
    int scoreNum,  
    QString gameId ) [explicit]
```

[gameLost](#) constructor

Parameters

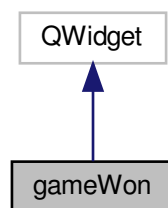
<i>parent,a</i>	pointer to a QWidget parent
<i>json,a</i>	QJsonObject for a given user
<i>scoreNum,the</i>	player's score.
<i>gameId,a</i>	QString representing game Id. "game1" means Battleships and "game2" means Shooting Discs

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

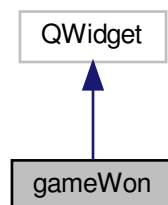
- gamelost.h
- gamelost.cpp

4.17 gameWon Class Reference

Inheritance diagram for gameWon:



Collaboration diagram for gameWon:



Public Member Functions

- [gameWon](#) (QWidget *parent, QJsonObject json, int scoreNum, QString gameId)
gameWon constructor

4.17.1 Constructor & Destructor Documentation

4.17.1.1 gameWon()

```
gameWon::gameWon (
    QWidget * parent,
    QJsonObject json,
    int scoreNum,
    QString gameId ) [explicit]
```

[gameWon](#) constructor

Parameters

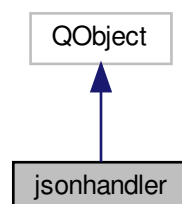
<i>parent,a</i>	pointer to a QWidget parent
<i>json,a</i>	QJsonObject for a given user
<i>scoreNum,the</i>	player's score.
<i>gameId,a</i>	QString representing game Id. "game1" means Battleships and "game2" means Shooting Discs

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

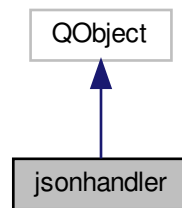
- gamewon.h
- gamewon.cpp

4.18 jsonhandler Class Reference

Inheritance diagram for jsonhandler:



Collaboration diagram for jsonhandler:



Public Member Functions

- `jsonhandler` (`QObject *parent=nullptr`)
jsonhandler constructor
- `QJsonArray readFile` (`QString path`)
a function that opens a file, reads it, and stores its data in a QJsonArray
- `void writeFile` (`QString path`)
a function that writes to a file
- `void updateUserarr` (`QJsonObject userjson`)
a function that updates a user QJsonObject in jsonhandler::userarr
- `QJsonObject updateBonus` (`QJsonObject userjson, int bonus`)
updateBonus, updates the bonus points of a user in game 2
- `QJsonObject checkUser` (`QString username, QString password`)
a function that checks whether the username and password match the credentials of the registered user
- `bool checkUser` (`QString username`)
Overloaded checkUser function that checks if the username is taken or not.
- `void insertUser` (`QJsonObject userjson`)
a function that inserts a new user QJsonObject in jsonhandler::userarr and writes the updated array to data.json
- `int getHighscore` (`QJsonObject userjson, QString gameId`)
gets the highscore of a user in either Battleships or Shooting Discs.
- `QJsonArray getScoresArr` (`QJsonObject userjson, QString gameId`)
gets the scores array of a user in either Battleships or Shooting Discs.
- `QJsonObject updateScores` (`QJsonObject userjson, int newScore, QString gameId`)
adds the new score to the user's scores array in either Battleships or Shooting Discs.
- `QJsonObject getGlobalHSAndRank` (`int hs, QString gameId`)
retrieves the global highscore of a game and computes the rank of the player
- `QString getBgColor` (`QJsonObject userjson, QString gameId`)
gets the background color as specified in the game settings in a user's QJsonObject
- `QString getBgImg` (`QJsonObject userjson, QString gameId`)
getBgImg, retrieves the path to the background image in userjson

Public Attributes

- `QString userPath` = `"../repos/lama_milia_rana/project_/data.json"`
- `QString questsPath` = `"../repos/lama_milia_rana/project_/questions.json"`
- `QJsonArray userarr`

4.18.1 Constructor & Destructor Documentation

4.18.1.1 jsonhandler()

```
jsonhandler::jsonhandler (
    QObject * parent = nullptr ) [explicit]
```

jsonhandler constructor

Parameters

<i>parent,a</i>	pointer to a QObject, initially a nullptr.
-----------------	--

The constructor creates an instance of jsonhandler class and calls the readFile function with userPath passed as an argument. The result of readFile is stored in userarr

4.18.2 Member Function Documentation

4.18.2.1 checkUser() [1/2]

```
QJsonObject jsonhandler::checkUser (
    QString username,
    QString password )
```

a function that checks whether the username and password match the credentials of the registered user

Parameters

<i>username</i>	(QString).
<i>password</i>	(QString).

Returns

QJsonObject containing the user with matching username and password. Returns an empty object otherwise.

4.18.2.2 checkUser() [2/2]

```
bool jsonhandler::checkUser (
    QString username )
```

Overloaded checkUser function that checks if the username is taken or not.

Parameters

<i>username</i>	(QString)
-----------------	-----------

Returns

bool, true in case the user is taken, false otherwise.

4.18.2.3 getBgColor()

```
QString jsonhandler::getBgColor (
    QJsonObject userjson,
    QString gameId )
```

gets the background color as specified in the game settings in a user's QJsonObject

Parameters

<i>userjson,a</i>	QJsonObject of a given user
<i>gameID,the</i>	ID of the game

Returns

QString containing the bg color in the following format '#hexrepresentation'

4.18.2.4 getBgImg()

```
QString jsonhandler::getBgImg (
    QJsonObject userjson,
    QString gameId )
```

getBgImg, retrieves the path to the background image in userjson

Parameters

<i>userjson</i>	
<i>gameID</i>	

Returns

the path to the bg img

4.18.2.5 getGlobalHSAndRank()

```
QJsonObject jsonhandler::getGlobalHSAndRank (
    int hs,
    QString gameId )
```

retrieves the global highscore of a game and computes the rank of the player

Parameters

<i>hs,int,the</i>	highscore of the player.
<i>gameID,the</i>	ID of the game

Returns

QJsonObject containing the global highscore and player rank.

4.18.2.6 getHighscore()

```
int jsonhandler::getHighscore (
    QJsonObject userjson,
    QString gameId )
```

gets the highscore of a user in either Battleships or Shooting Discs.

Parameters

<i>userjson,a</i>	QJsonObject of a given user.
<i>gameId,a</i>	QString containing game ID.

Returns

int, the highscore

4.18.2.7 getScoresArr()

```
QJsonArray jsonhandler::getScoresArr (
    QJsonObject userjson,
    QString gameId )
```

gets the scores array of a user in either Battleships or Shooting Discs.

Parameters

<i>userjson,a</i>	QJsonObject of a given user.
<i>gameId,a</i>	QString containing game ID.

Returns

QJsonArray, the scores array

4.18.2.8 insertUser()

```
void jsonhandler::insertUser (
    QJsonObject userjson )
```

a function that inserts a new user QJsonObject in jsonhandler::userarr and writes the updated array to data.json

Parameters

<i>userjson</i> , the	new QJsonObject to be added.
-----------------------	------------------------------

4.18.2.9 readFile()

```
QJsonArray jsonhandler::readFile (
    QString path )
```

a function that opens a file, reads it, and stores its data in a QJsonArray

Parameters

<i>path</i> , a	QString containing the path to the json file.
-----------------	---

Returns

QJsonArray containing the result of readFile.

4.18.2.10 updateBonus()

```
QJsonObject jsonhandler::updateBonus (
    QJsonObject userjson,
    int bonus )
```

updateBonus, updates the bonus points of a user in game 2

Parameters

<i>userjson</i>	
<i>bonus</i>	

Returns

the new updated json object

4.18.2.11 updateScores()

```
QJsonObject jsonhandler::updateScores (
    QJsonObject userjson,
    int newScore,
    QString gameId )
```

adds the new score to the user's scores array in either Battleships or Shooting Discs.

Parameters

<i>userjson,a</i>	QJsonObject of a given user.
<i>newScore,int,the</i>	new score.
<i>gameId,a</i>	QString containing game ID.

Returns

QJsonArray, the updated scores array

4.18.2.12 updateUserarr()

```
void jsonhandler::updateUserarr (
    QJsonObject userjson )
```

a function that updates a user QJsonObject in jsonhandler::userarr

Parameters

<i>userjson,the</i>	QJsonObject to be updated.
---------------------	----------------------------

4.18.2.13 writeFile()

```
void jsonhandler::writeFile (
    QString path )
```

a function that writes to a file

Parameters

<i>path,a</i>	QString containing the path to the json file.
---------------	---

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

- [jsonhandler.h](#)
- [jsonhandler.cpp](#)

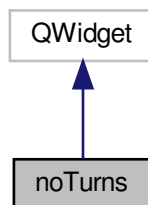
4.19 main Class Reference

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

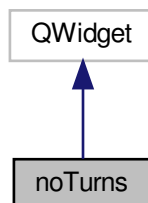
- [main.h](#)

4.20 noTurns Class Reference

Inheritance diagram for noTurns:



Collaboration diagram for noTurns:



Public Member Functions

- [noTurns](#) (QWidget *parent, QJsonObject json, int scoreNum)
[noTurns](#) constructor

4.20.1 Constructor & Destructor Documentation

4.20.1.1 noTurns()

```
noTurns::noTurns (
    QWidget * parent,
    QJsonObject json,
    int scoreNum ) [explicit]
```

[noTurns](#) constructor

Parameters

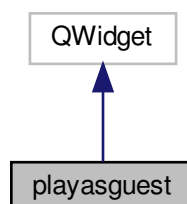
<i>parent,a</i>	pointer to a QWidget parent
<i>json,a</i>	QJsonObject for a given user
<i>scoreNum,the</i>	player's score.

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

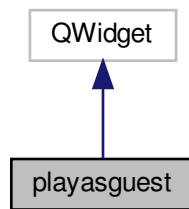
- noturns.h
- noturns.cpp

4.21 playasguest Class Reference

Inheritance diagram for playasguest:



Collaboration diagram for playasquest:



Public Member Functions

- [playasquest](#) (`QWidget *parent=nullptr`)
playasquest constructor

4.21.1 Constructor & Destructor Documentation

4.21.1.1 `playasquest()`

```
playasquest::playasquest (  
    QWidget * parent = nullptr ) [explicit]
```

`playasquest` constructor

Parameters

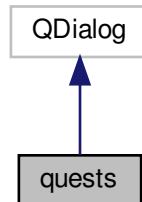
<i>parent, a</i>	pointer to the parent widget
------------------	------------------------------

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

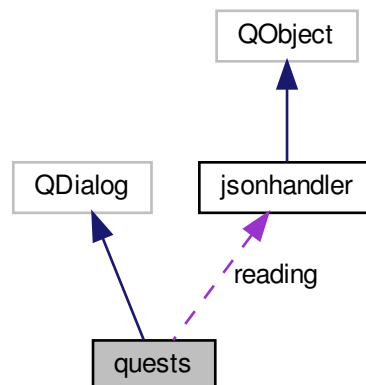
- `playasquest.h`
- `playasquest.cpp`

4.22 quests Class Reference

Inheritance diagram for quests:



Collaboration diagram for quests:



Public Slots

- void [checkanswer1](#) ()
checks whether the chosen pushbutton contains the correct answer. The function displays wrng QMessageBox in case the answer is incorrect and right QMessageBox otherwise.
- void [checkanswer2](#) ()
checks whether the chosen pushbutton contains the correct answer. The function displays wrng QMessageBox in case the answer is incorrect and right QMessageBox otherwise.
- void [checkanswer3](#) ()
checks whether the chosen pushbutton contains the correct answer. The function displays wrng QMessageBox in case the answer is incorrect and right QMessageBox otherwise.
- void [checkanswer4](#) ()
checks whether the chosen pushbutton contains the correct answer. The function displays wrng QMessageBox in case the answer is incorrect and right QMessageBox otherwise.

Public Member Functions

- [quests](#) (QWidget *parent=nullptr, QJsonObject json={}, int count=0)
quests constructor
- void [createAnsBox](#) ()
sets the widget of the answers layout
- void [setGridLayout](#) ()
sets the widgets of the grid layout
- QString [mapdiff](#) (int d)
maps an integer to the corresponding difficulty
- QString [maptop](#) (int t)
maps an integer to the corresponding topic
- QJsonArray [getquest](#) (QString d, QString t)
Retrieves array of questions of a difficulty d and topic t.
- void [setquests](#) (QJsonObject quest)
Sets the question in the QDialog.
- void [initBg](#) ()
initializes the background color of the QWidget as specified in userJson.

Public Attributes

- QLabel * **header**
- QLabel * **quest**
- QLabel * **gameLogo**
- QPushButton * **ans1**
- QPushButton * **ans2**
- QPushButton * **ans3**
- QPushButton * **ans4**
- QVBoxLayout * **answers**
- QGroupBox * **anslayout**
- QGridLayout * **grid**
- QMessageBox * **wrng**
- QMessageBox * **right**
- QPushButton * **cont**
- int **diff**
- int **top**
- QString **topstr**
- QString **diffstr**
- bool **checkAns** = false
- [jsonhandler](#) * **reading**
- QJsonObject **topicObj**
- QJsonArray **questarr**
- QJsonObject **userJson**
- QJsonObject **toset**

4.22.1 Constructor & Destructor Documentation

4.22.1.1 quests()

```
quests::quests (
    QWidget * parent = nullptr,
    QJsonObject json = {},
    int count = 0 ) [explicit]
```

quests constructor

Parameters

<i>parent,a</i>	pointer to a parent QWidget, initialized to a nullptr
<i>json,a</i>	QJsonObject of a given user.
<i>count,an</i>	int specifying the index of the question to be set

4.22.2 Member Function Documentation**4.22.2.1 getquest()**

```
QJsonArray quests::getquest (
    QString d,
    QString t )
```

Retrieves array of questions of a difficulty d and topic t.

Parameters

<i>d,a</i>	QString that specifies the level of difficulty of the questions
<i>t,a</i>	QString that specifies the topic of the questions

Returns

QJsonArray that contains the questions.

4.22.2.2 mapdiff()

```
QString quests::mapdiff (
    int d )
```

maps an integer to the corresponding difficulty

Parameters

<i>d,An</i>	int indicating the difficulty level extracted from userJson
-------------	---

Returns

QString containing the name of the difficulty level

4.22.2.3 maptop()

```
QString quests::maptop (
    int t )
```

maps an integer to the corresponding topic

Parameters

<i>t,An</i>	int indicating the topic extracted from userJson
-------------	--

Returns

QString containing the name of the topic

4.22.2.4 setquests()

```
void quests::setquests (
    QJsonObject q )
```

Sets the question in the QDialog.

Parameters

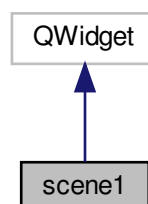
<i>quest,a</i>	QJsonObject containing a single question.
----------------	---

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

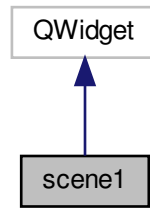
- [quests.h](#)
- [quests.cpp](#)

4.23 scene1 Class Reference

Inheritance diagram for scene1:



Collaboration diagram for scene1:



Public Member Functions

- [scene1](#) (QWidget *parent=nullptr)
[scene1](#) constructor

4.23.1 Constructor & Destructor Documentation

4.23.1.1 scene1()

```
scene1::scene1 (  
    QWidget * parent = nullptr ) [explicit]
```

[scene1](#) constructor

Parameters

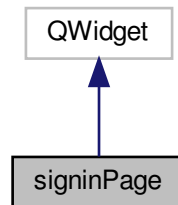
<i>parent, a</i>	pointer to the parent widget
------------------	------------------------------

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

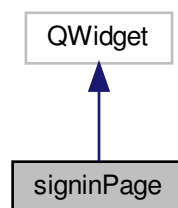
- scene1.h
- scene1.cpp

4.24 signInPage Class Reference

Inheritance diagram for signInPage:



Collaboration diagram for signInPage:



Public Member Functions

- [signInPage](#) (`QWidget *parent=nullptr`)
signInPage constructor

4.24.1 Constructor & Destructor Documentation

4.24.1.1 signInPage()

```
signInPage::signInPage (  
    QWidget * parent = nullptr ) [explicit]
```

signInPage constructor

[signInPage](#) constructor

Parameters

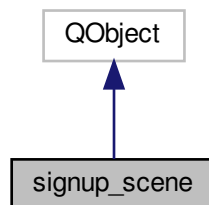
<i>parent, a</i>	pointer to the parent widget
------------------	------------------------------

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

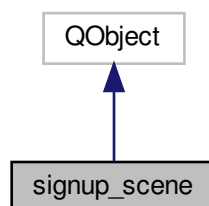
- `signinpage.h`
- `signinpage.cpp`

4.25 signup_scene Class Reference

Inheritance diagram for `signup_scene`:



Collaboration diagram for `signup_scene`:

**Public Member Functions**

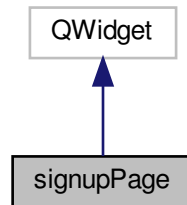
- **`signup_scene`** (`QObject *parent=nullptr`)

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

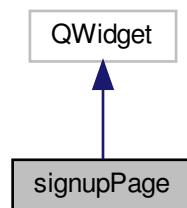
- `signup_scene.h`
- `signup_scene.cpp`

4.26 signupPage Class Reference

Inheritance diagram for signupPage:



Collaboration diagram for signupPage:



Public Member Functions

- [signupPage](#) (`QWidget *parent=nullptr`)
signupPage constructor

4.26.1 Constructor & Destructor Documentation

4.26.1.1 signupPage()

```
signupPage::signupPage (  
    QWidget * parent = nullptr ) [explicit]
```

[signupPage](#) constructor

Parameters

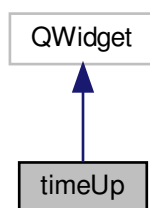
<i>parent, a</i>	pointer to the parent widget
------------------	------------------------------

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

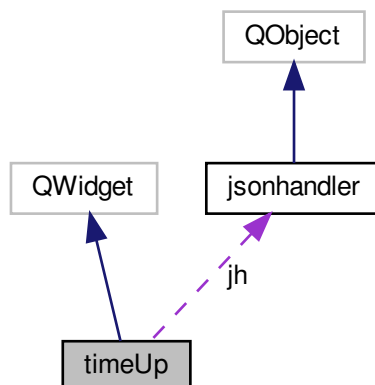
- signuppager.h
- signuppager.cpp

4.27 timeUp Class Reference

Inheritance diagram for timeUp:



Collaboration diagram for timeUp:



Public Member Functions

- [timeUp](#) (QWidget *parent=nullptr, QJsonObject json={}, int scoreNum=0, QString gameId="")
timeUp constructor
- void [initBg](#) ()
Initializes the bg of the widget.
- void [checkScore](#) ()
checks if the score is a new highscore. If the condition is true, display congrats QLabel.
- int [computeBonus](#) ()
computeBonus, computes the bonus points a user gets in game 2

Public Attributes

- QJsonObject **userJson**
- QLabel * **title**
- QLabel * **congrats**
- QLabel * **text**
- int **score**
- QString **ID**
- QPushButton * **exitBtn**
- QVBoxLayout * **vLayout**
- [jsonhandler](#) * **jh** = new [jsonhandler](#)()

4.27.1 Constructor & Destructor Documentation

4.27.1.1 timeUp()

```
timeUp::timeUp (
    QWidget * parent = nullptr,
    QJsonObject json = {},
    int scoreNum = 0,
    QString gameId = "" ) [explicit]
```

[timeUp](#) constructor

Parameters

<i>parent,a</i>	pointer to a QWidget parent
<i>json,a</i>	QJsonObject for a given user
<i>scoreNum,the</i>	player's score.
<i>gameId,the</i>	game's Id.
<i>parent,a</i>	pointer to a QWidget parent
<i>json,a</i>	QJsonObject for a given user
<i>scoreNum,the</i>	player's score.
<i>gameId,QString</i>	that specifies which game is being played.

4.27.2 Member Function Documentation

4.27.2.1 computeBonus()

```
int timeUp::computeBonus ( )
```

computeBonus, computes the bonus points a user gets in game 2

[timeUp::computeBonus](#), computes the bonus points earned in game 2

Returns

an integer, the bonus points. If bonus points is a negative number, it returns 0.
int, the bonus points

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

- timeup.h
- timeup.cpp

Chapter 5

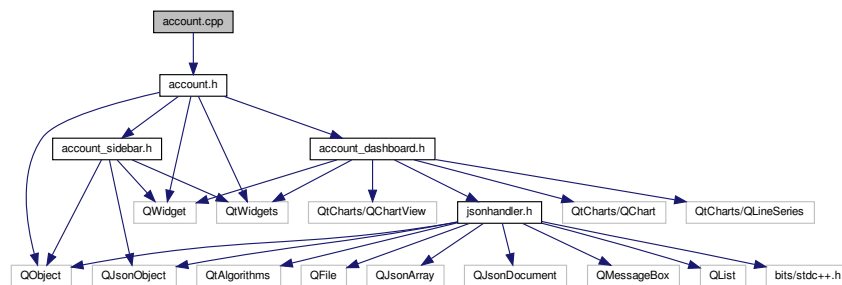
File Documentation

5.1 account.cpp File Reference

the account widget

```
#include "account.h"
```

Include dependency graph for account.cpp:



5.1.1 Detailed Description

the account widget

This widget includes two main widgets: the [account_sidebar](#) and the [account_dashboard](#)

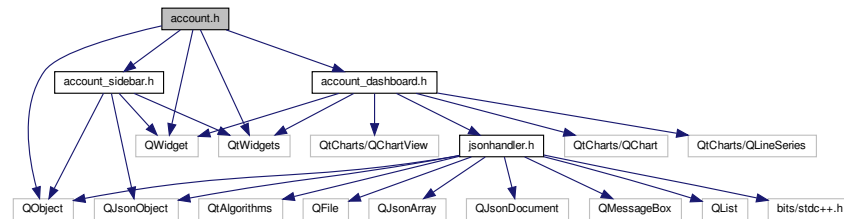
5.2 account.h File Reference

the account widget

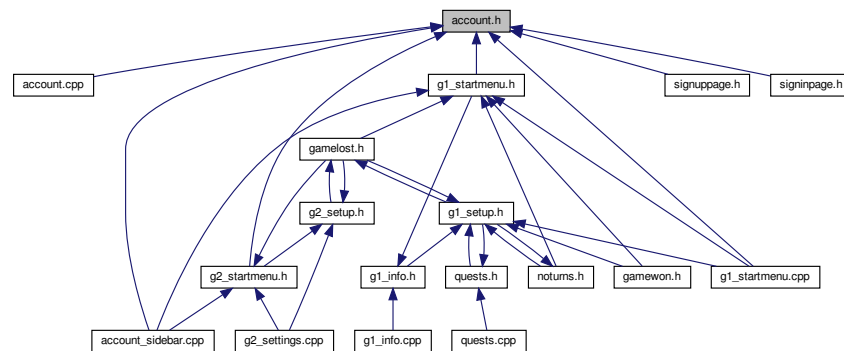
```
#include <QObject>
#include <QWidget>
#include <QtWidgets>
#include "account_sidebar.h"
```

```
#include "account_dashboard.h"
```

Include dependency graph for account.h:



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



Classes

- class [account](#)

5.2.1 Detailed Description

the account widget

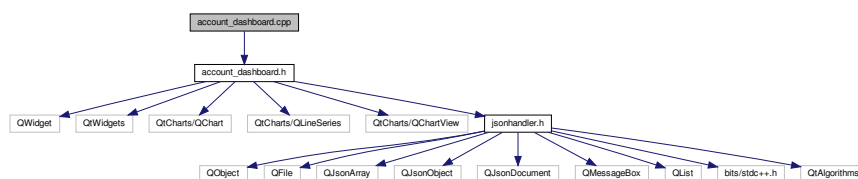
This widget includes two main widgets: the [account_sidebar](#) and the [account_dashboard](#)

5.3 account_dashboard.cpp File Reference

the [account_dashboard](#) widget

```
#include "account_dashboard.h"
```

Include dependency graph for account_dashboard.cpp:



5.3.1 Detailed Description

the [account_dashboard](#) widget

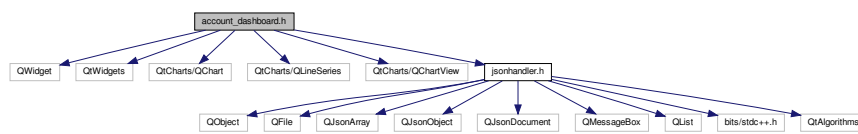
This widget displays a game stats. The stats include user highscore, global highscore, user rank, and a performance plot based on the user scores.

5.4 account_dashboard.h File Reference

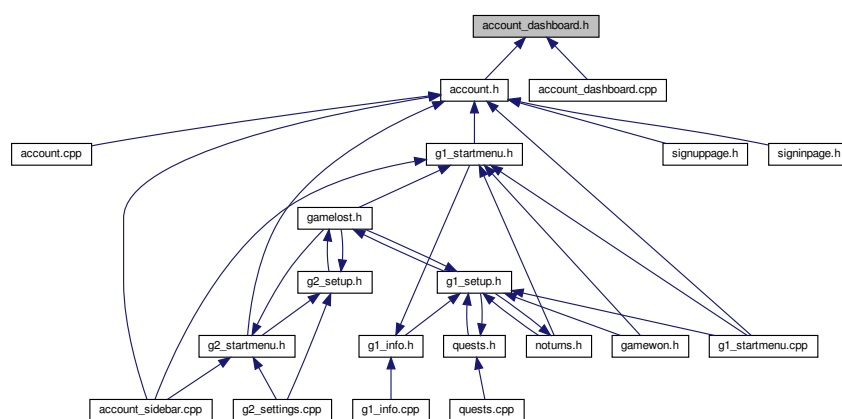
the [account_dashboard](#) widget

```
#include <QWidget>
#include <QtWidgets>
#include <QtCharts/QChart>
#include <QtCharts/QLineSeries>
#include <QtCharts/QChartView>
#include "jsonhandler.h"
```

Include dependency graph for account_dashboard.h:



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



Classes

- class [account_dashboard](#)

5.4.1 Detailed Description

the [account_dashboard](#) widget

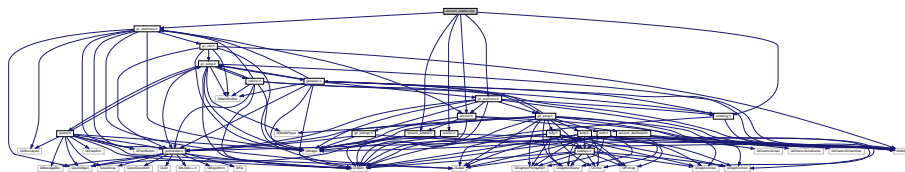
This widget displays a game stats. The stats include user highscore, global highscore, user rank, and a performance plot based on the user scores.

5.5 account_sidebar.cpp File Reference

This widget constructs the sidebar of the account widget.

```
#include "account_sidebar.h"
#include "account.h"
#include "scene1.h"
#include "g1_startmenu.h"
#include "g2_startmenu.h"
#include "centering.h"
```

Include dependency graph for account_sidebar.cpp:



5.5.1 Detailed Description

This widget constructs the sidebar of the account widget.

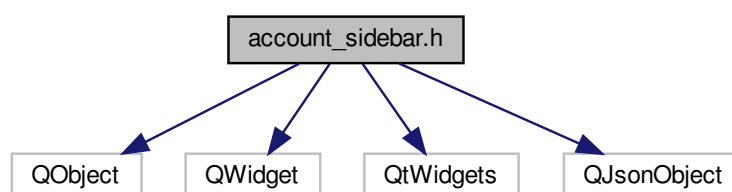
The sidebar includes information about the user. It also includes navigation buttons.

5.6 account_sidebar.h File Reference

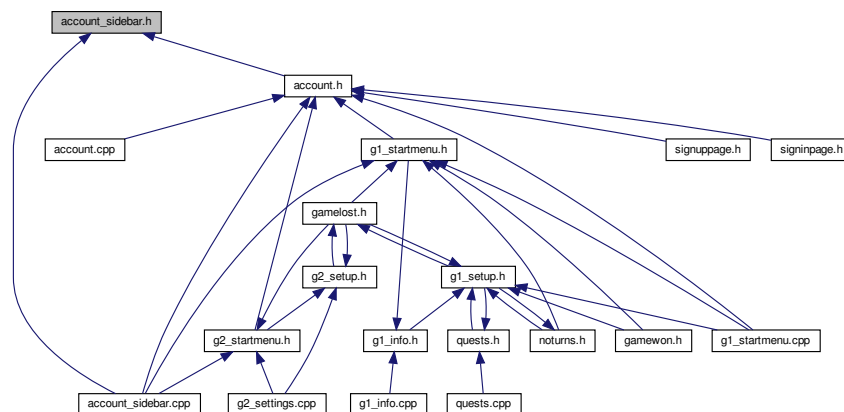
This widget constructs the sidebar of the account widget.

```
#include <QObject>
#include <QWidget>
#include <QtWidgets>
#include <QJsonObject>
```

Include dependency graph for account_sidebar.h:



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



Classes

- class [account_sidebar](#)

5.6.1 Detailed Description

This widget constructs the sidebar of the account widget.

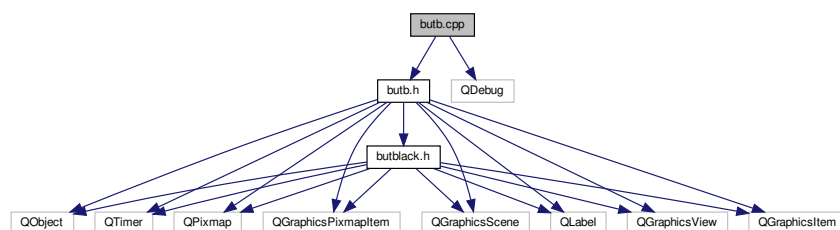
The sidebar includes information about the user. It also includes navigation buttons.

5.7 butb.cpp File Reference

the blue disk in game 2

```
#include "butb.h"
#include <QDebug>
```

Include dependency graph for butb.cpp:



5.7.1 Detailed Description

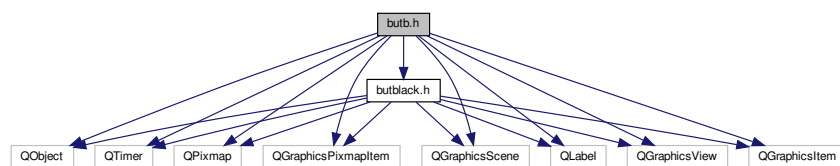
the blue disk in game 2

5.8 butb.h File Reference

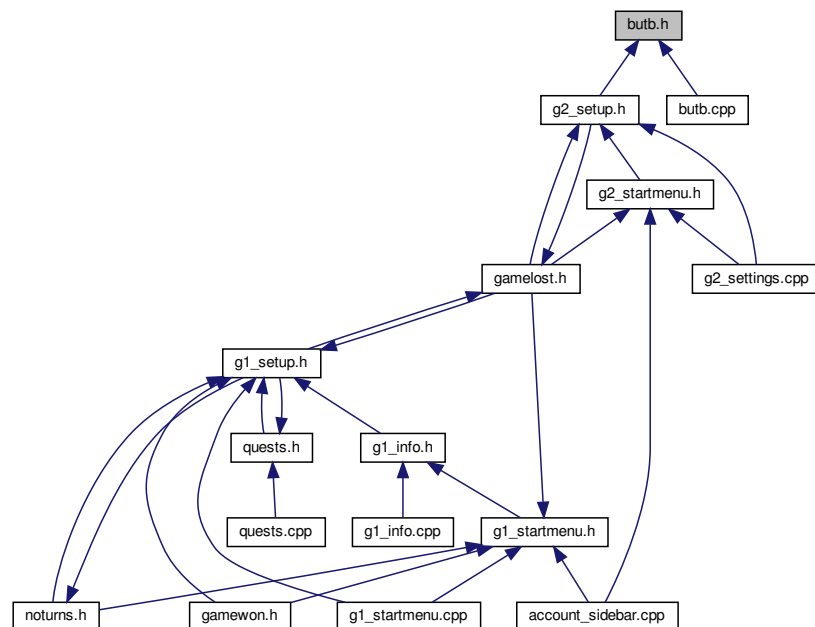
the blue disk in game 2

```
#include <QObject>
#include <QTimer>
#include <QPixmap>
#include <QGraphicsPixmapItem>
#include <QGraphicsScene>
#include <QLabel>
#include <QGraphicsView>
#include <QGraphicsItem>
#include "butblack.h"
```

Include dependency graph for butb.h:



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



Classes

- class [butb](#)

5.8.1 Detailed Description

the blue disk in game 2

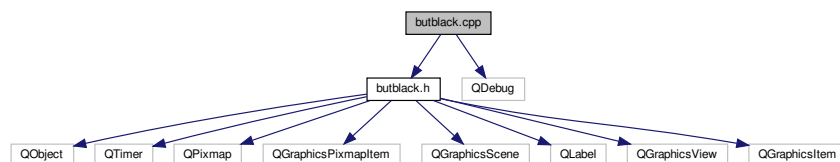
5.9 butblack.cpp File Reference

the grey disk in game 2

```
#include "butblack.h"
```

```
#include <QDebug>
```

Include dependency graph for butblack.cpp:



5.9.1 Detailed Description

the grey disk in game 2

5.10 butblack.h File Reference

the grey disk in game 2

```
#include <QObject>
```

```
#include <QTimer>
```

```
#include <QPixmap>
```

```
#include <QGraphicsPixmapItem>
```

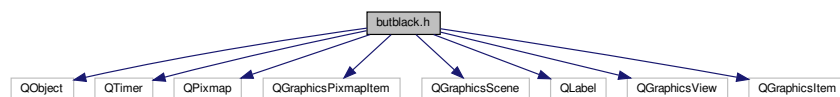
```
#include <QGraphicsScene>
```

```
#include <QLabel>
```

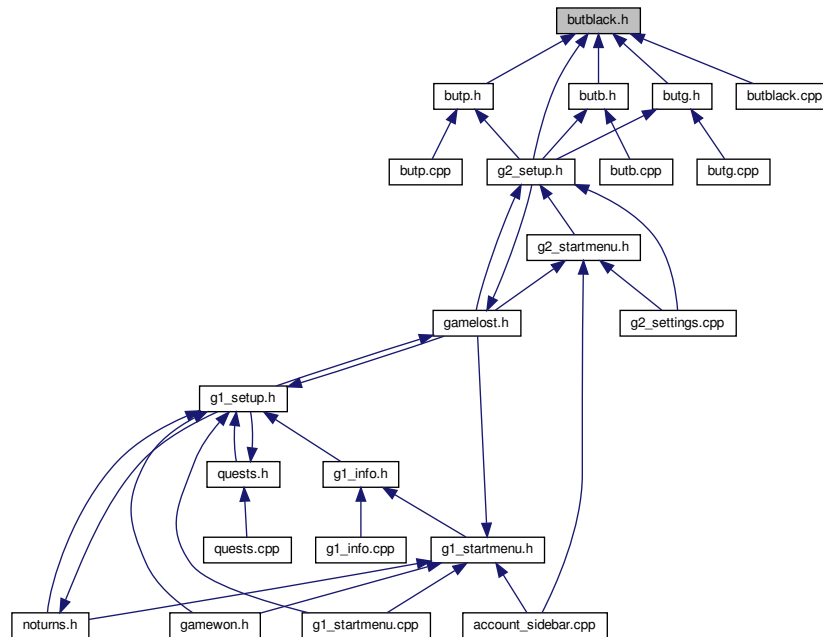
```
#include <QGraphicsView>
```

```
#include <QGraphicsItem>
```

Include dependency graph for butblack.h:



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



Classes

- class [butblack](#)

5.10.1 Detailed Description

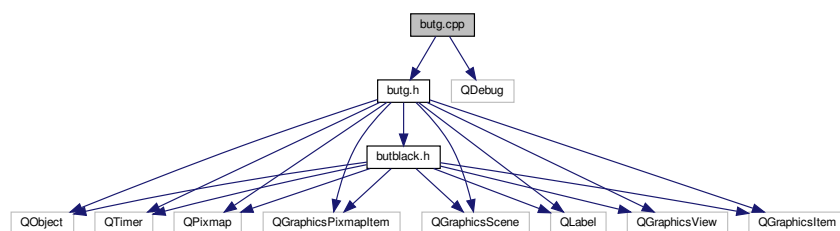
the grey disk in game 2

5.11 butg.cpp File Reference

the green disk in game 2

```
#include "butg.h"
#include <QDebug>
```

Include dependency graph for butg.cpp:



5.11.1 Detailed Description

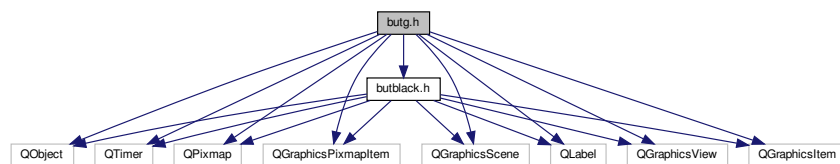
the green disk in game 2

5.12 butg.h File Reference

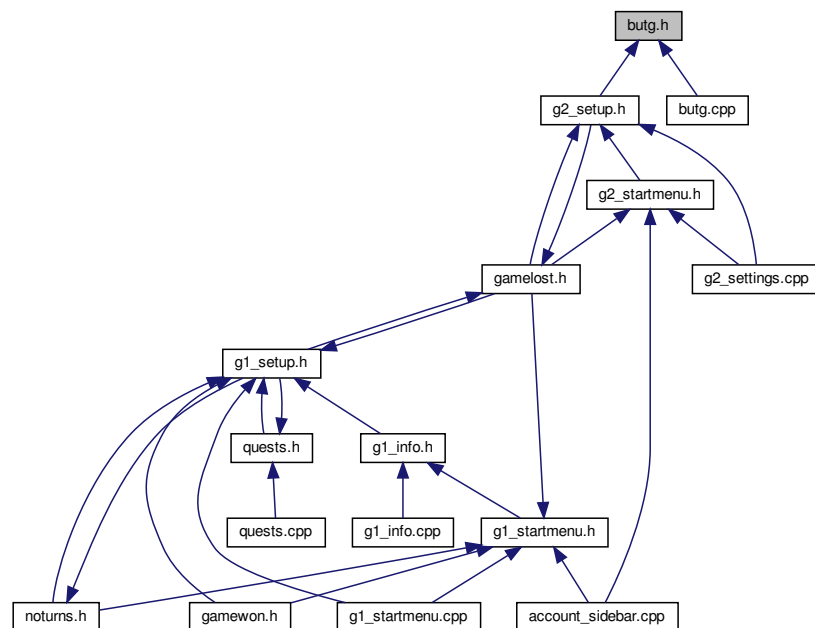
the green disk in game 2

```
#include <QObject>
#include <QTimer>
#include <QPixmap>
#include <QGraphicsPixmapItem>
#include <QGraphicsScene>
#include <QLabel>
#include <QGraphicsView>
#include <QGraphicsItem>
#include "butblack.h"
```

Include dependency graph for butg.h:



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



Classes

- class [butg](#)

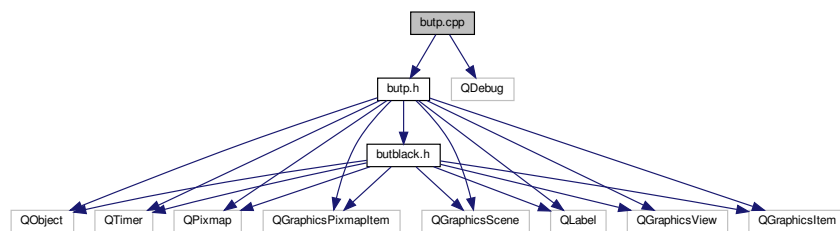
5.12.1 Detailed Description

the green disk in game 2

5.13 butp.cpp File Reference

the purple disk in game 2

```
#include "butp.h"
#include <QDebug>
Include dependency graph for butp.cpp:
```



5.13.1 Detailed Description

the purple disk in game 2

5.14 butp.h File Reference

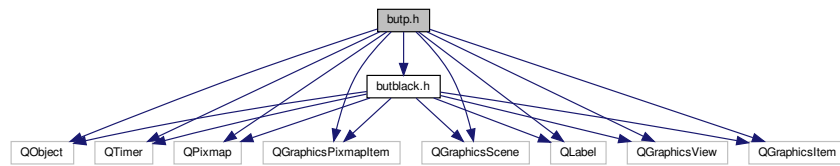
the purple disk in game 2

```
#include <QObject>
#include <QTimer>
#include <QPixmap>
#include <QGraphicsPixmapItem>
#include <QGraphicsScene>
#include <QLabel>
#include <QGraphicsView>
#include <QGraphicsItem>
```

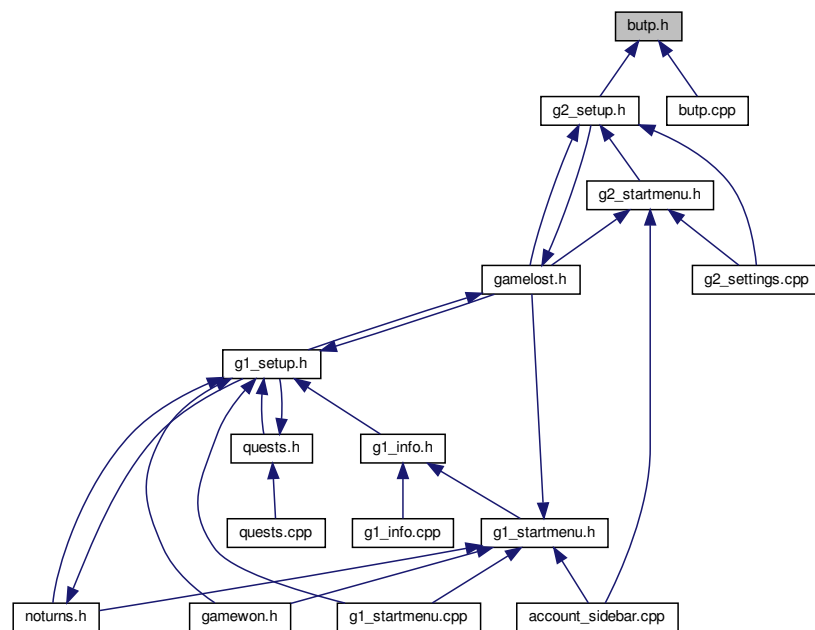


```
#include "butblack.h"
```

Include dependency graph for butp.h:



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



Classes

- class [butp](#)

5.14.1 Detailed Description

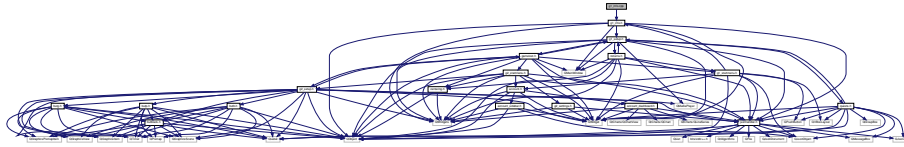
the purple disk in game 2

5.15 g1_info.cpp File Reference

this class is a widget that informs the player on how to play Battleships.

```
#include "g1_info.h"
```

Include dependency graph for g1_info.cpp:



5.15.1 Detailed Description

this class is a widget that informs the player on how to play Battleships.

5.16 g1_info.h File Reference

this class is a widget that informs the player on how to play Battleships.

```
#include <QMainWindow>
```

```
#include <QObject>
```

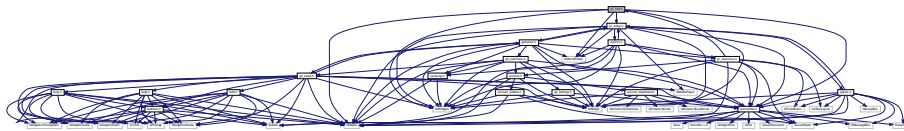
```
#include <QWidget>
```

```
#include <QtWidgets>
```

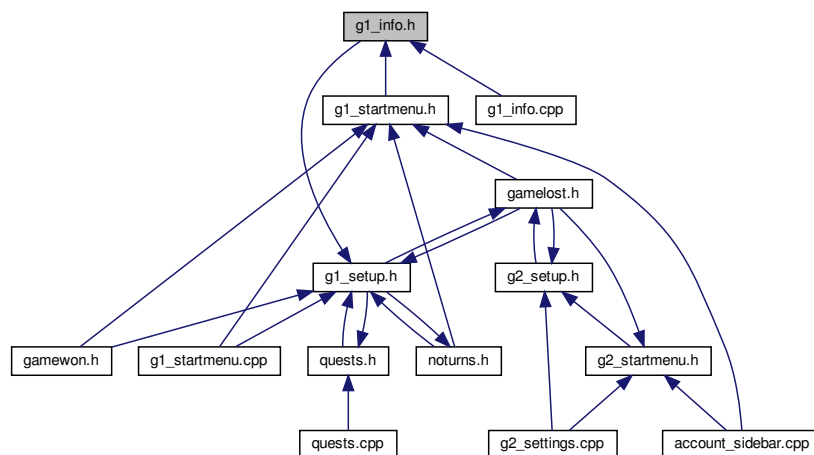
```
#include "jsonhandler.h"
```

```
#include "g1_setup.h"
```

Include dependency graph for g1_info.h:



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



Classes

- class [g1_info](#)

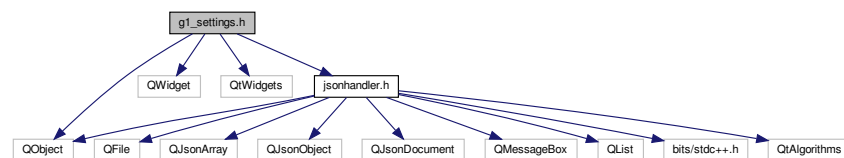
5.16.1 Detailed Description

this class is a widget that informs the player on how to play Battleships.

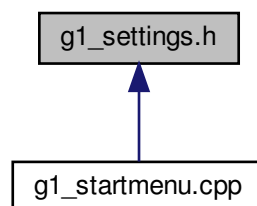
5.17 g1_settings.h File Reference

A widget that displays a game settings window.

```
#include <QObject>
#include <QWidget>
#include <QtWidgets>
#include "jsonhandler.h"
Include dependency graph for g1_settings.h:
```



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



Classes

- class [g1_settings](#)

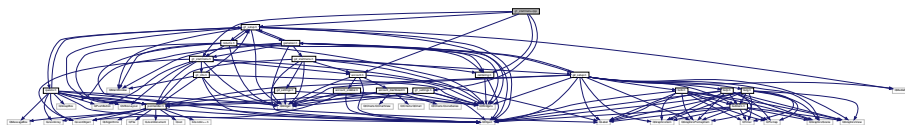
5.17.1 Detailed Description

A widget that displays a game settings window.

5.18 g1_startmenu.cpp File Reference

the start menu of Battleships

```
#include "g1_settings.h"
#include "g1_setup.h"
#include "account.h"
#include "centering.h"
#include "g1_startmenu.h"
Include dependency graph for g1_startmenu.cpp:
```



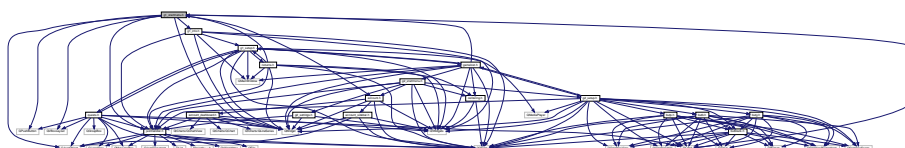
5.18.1 Detailed Description

the start menu of Battleships

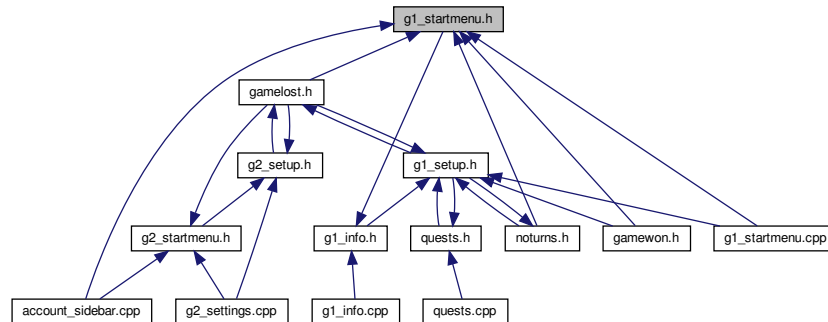
5.19 g1_startmenu.h File Reference

the start menu of Battleships

```
#include <QWidget>
#include <QPushButton>
#include <QVBoxLayout>
#include <QLabel>
#include <QJsonObject>
#include "jsonhandler.h"
#include "account.h"
#include "g1_info.h"
Include dependency graph for g1_startmenu.h:
```



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



Classes

- class [g1_startmenu](#)

5.19.1 Detailed Description

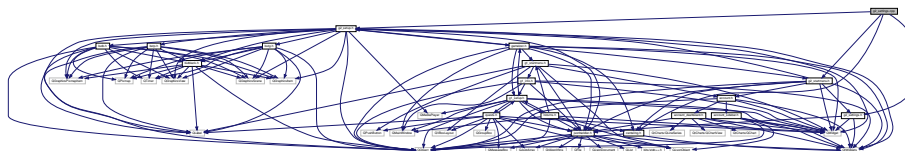
the start menu of Battleships

5.20 g2_settings.cpp File Reference

This class creates the settings QWidget for Shooting discs. In the settings, the user can change the game difficulty and background image. Changing the difficulty changes the target score and lives. Changing the background updates the image of the gameplay ONLY. (unlike Battleships, the start menu and settings do not change backgrounds).

```
#include "g2_settings.h"
#include "g2_setup.h"
#include "g2_startmenu.h"
#include "centering.h"
```

Include dependency graph for g2_settings.cpp:



5.20.1 Detailed Description

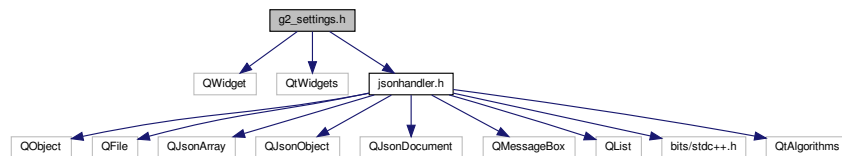
This class creates the settings QWidget for Shooting discs. In the settings, the user can change the game difficulty and background image. Changing the difficulty changes the target score and lives. Changing the background updates the image of the gameplay ONLY. (unlike Battleships, the start menu and settings do not change backgrounds).

5.21 g2_settings.h File Reference

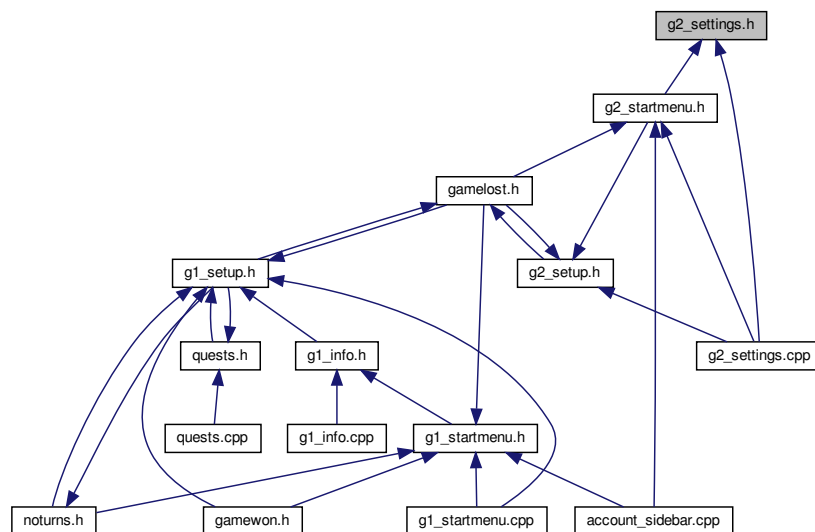
This class creates the settings QWidget for Shooting discs. In the settings, the user can change the game difficulty and background image. Changing the difficulty changes the target score and lives. Changing the background updates the image of the gameplay ONLY. (unlike Battleships, the start menu and settings do not change backgrounds).

```
#include <QWidget>
#include <QtWidgets>
#include "jsonhandler.h"
```

Include dependency graph for g2_settings.h:



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



Classes

- class [g2_settings](#)

5.21.1 Detailed Description

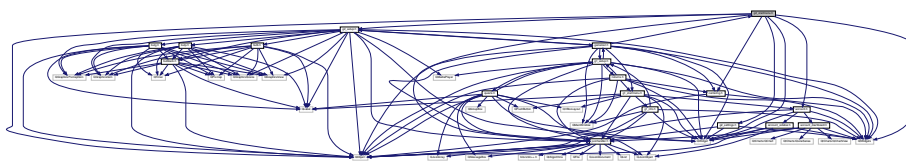
This class creates the settings QWidget for Shooting discs. In the settings, the user can change the game difficulty and background image. Changing the difficulty changes the target score and lives. Changing the background updates the image of the gameplay ONLY. (unlike Battleships, the start menu and settings do not change backgrounds).

5.22 g2_startmenu.h File Reference

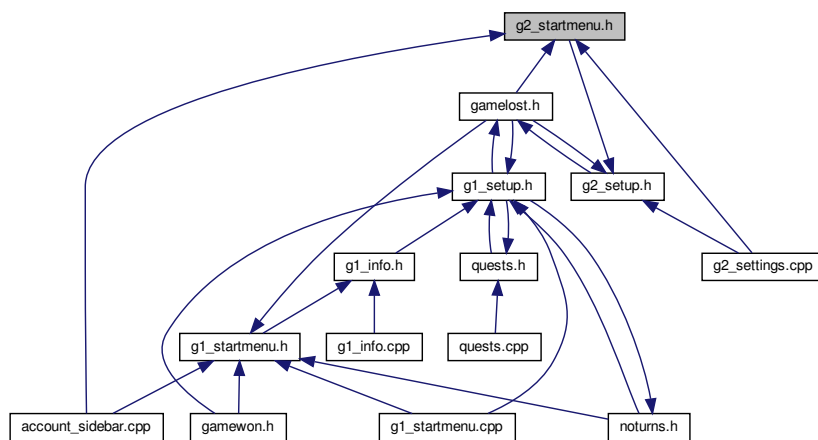
the start menu of Shooting Disks

```
#include <QObject>
#include <QWidget>
#include <QtWidgets>
#include "jsonhandler.h"
#include "account.h"
#include "g2_settings.h"
#include "g2_setup.h"
#include "centering.h"
```

Include dependency graph for g2_startmenu.h:



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



Classes

- class [g2_startmenu](#)

5.22.1 Detailed Description

the start menu of Shooting Disks

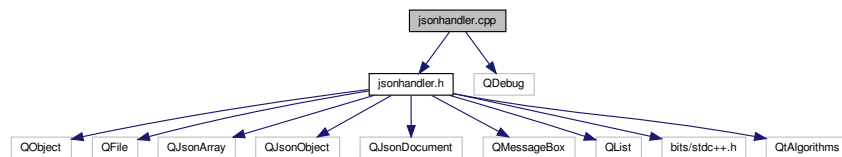
5.23 jsonhandler.cpp File Reference

A class that allows us to perform queries on the json file or a json object.

```
#include "jsonhandler.h"
```

```
#include <QDebug>
```

Include dependency graph for jsonhandler.cpp:



5.23.1 Detailed Description

A class that allows us to perform queries on the json file or a json object.

5.24 jsonhandler.h File Reference

A class that allows us to perform queries on the json file or a json object.

```
#include <QObject>
```

```
#include <QFile>
```

```
#include <QJsonArray>
```

```
#include <QJsonObject>
```

```
#include <QJsonDocument>
```

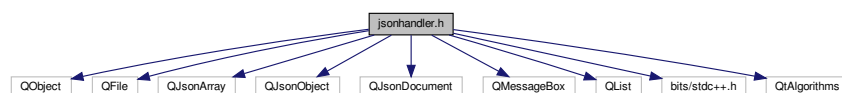
```
#include <QMessageBox>
```

```
#include <QList>
```

```
#include <bits/stdc++.h>
```

```
#include <QtAlgorithms>
```

Include dependency graph for jsonhandler.h:

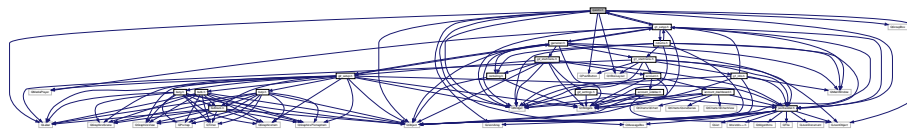


5.26 quests.h File Reference

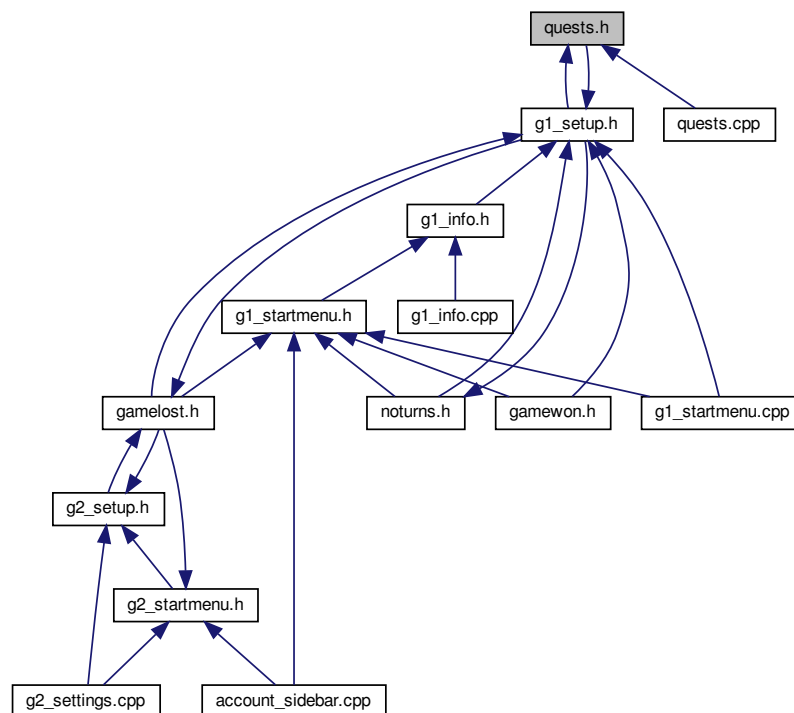
A class that displays a QDialog of a question in Battleships game This class contains queries to the questions.json file.

```
#include <jsonhandler.h>
#include <QObject>
#include <QWidget>
#include <QLabel>
#include <QPushButton>
#include <QVBoxLayout>
#include <QGroupBox>
#include <QMessageBox>
#include <QJsonArray>
#include <QJsonObject>
#include "g1_setup.h"
```

Include dependency graph for quests.h:



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



Classes

- class [quests](#)

5.26.1 Detailed Description

A class that displays a QDialog of a question in Battleships game This class contains queries to the questions.json file.

