C++Names

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Chapter 1

Hierarchical Index

1.1 Class Hierarchy

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

Chapter 2

Class Index

2.1 Class List

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

Chapter 3

File Index

3.1 File List

Here is a list of all files with brief descriptions:

Chapter 4

Class Documentation

4.1 GameBoard::Card Struct Reference

Structure representing a card in the game grid.

Public Attributes

- QString word
- CardType type
- bool revealed

4.1.1 Detailed Description

Structure representing a card in the game grid.

Contains the word, type, and revealed status of the card.

4.1.2 Member Data Documentation

4.1.2.1 revealed

```
bool GameBoard::Card::revealed
```

4.1.2.2 type

```
CardType GameBoard::Card::type
```

4.1.2.3 word

```
QString GameBoard::Card::word
```

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

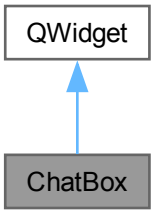
- include/gameboard.h

4.2 ChatBox Class Reference

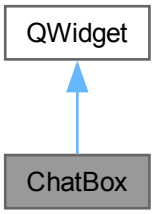
A widget for the chat feature in the game.

`#include <chatbox.h>`

Inheritance diagram for ChatBox:



Collaboration diagram for ChatBox:



Public Types

- enum Team { RED_TEAM , BLUE_TEAM }
  Enumeration for the two teams in the game.

Public Slots

- void sendMessage ()
  Sends a message from the chat input.

Signals

- void massSend (const QString &playerName, const QString &message)
  Signal emitted when a message is sent.

Public Member Functions

- ChatBox (const QString &playerName, Team team, QWidget *parent=nullptr)
  Constructor for the ChatBox class.
- ~ChatBox ()
  Destructor for the ChatBox class.
- void addSystemMessage (const QString &message, Team team)
  Adds a system message to the chat display.
- void addPlayerMessage (const QString &playerName, const QString &message)
  Adds a player message to the chat display.
- void setPlayerName (const QString &name)
  Sets the player name for the chat box.
- void clearChat ()
  Clears the chat display.
- void limitReachedMessage ()
  Displays a message when the guess limit is reached.

Private Attributes

- Team team
  The team of the player using this chat box.
- QTextEdit * chatDisplay
  The text edit widget for displaying chat messages.
- QLineEdit * chatInput
  The line edit widget for inputting chat messages.
- QPushButton * sendButton
  The button to send chat messages.
- QString playerName
  The name of the player using this chat box.

4.2.1 Detailed Description

A widget for the chat feature in the game.

This class contains a QTextEdit for displaying chat messages, a QLineEdit for inputting messages, and a QPush↩ Button to send messages. It allows players to communicate with each other during the game. It also includes functionality to display system messages and player messages with different styles based on operative guesses and spymaster hints for each team.

Author

Group 9

4.2.2 Member Enumeration Documentation

4.2.2.1 Team

```
enum ChatBox::Team
```

Enumeration for the two teams in the game.

This enum is used to differentiate between the two teams (red and blue) in the game. It is used to style the chat messages and system messages based on the team.

Enumerator

RED_TEAM	
BLUE_TEAM	

4.2.3 Constructor & Destructor Documentation

4.2.3.1 ChatBox()

```
ChatBox::ChatBox (
            const QString & playerName,
            Team team,
            QWidget * parent = nullptr)  [explicit]
```

Constructor for the ChatBox class.

This constructor sets up the layout and initializes the widgets. It connects the button to the sendMessage slot and the LineEdit to the sendMessage slot.

Parameters

playerName	The name of the player using this chat box.
team	The team of the player (red or blue).
parent	The parent widget.

4.2.3.2 ~ChatBox()

```
ChatBox::~ChatBox ()
```

Destructor for the ChatBox class.

This destructor cleans up the resources used by the class. It does not need to explicitly delete the widgets as they are managed by Qt's parent-child system.

4.2.4 Member Function Documentation

4.2.4.1 addPlayerMessage()

```
void ChatBox::addPlayerMessage (
            const QString & playerName,
            const QString & message)
```

Adds a player message to the chat display.

This function adds a player message to the chat box for both local play and online play.

Parameters

playerName	The name of the player sending the message.
message	The message text.

4.2.4.2 addSystemMessage()

```
void ChatBox::addSystemMessage (
            const QString & message,
            Team team)
```

Adds a system message to the chat display.

This function adds a system message to the chat box, printing the operative guesses and spymaster hints for each team. It styles the message based on the team and the type of message.

Parameters

message	The system message text.
team	The team associated with the message (red or blue).

4.2.4.3 clearChat()

```
void ChatBox::clearChat ()
```

Clears the chat display.

This function clears all messages from the chat display so the chat is empty for new games.

4.2.4.4 limitReachedMessage()

```
void ChatBox::limitReachedMessage ()
```

Displays a message when the guess limit is reached.

This function displays a message indicating that the operative has reached the limit for their guesses, meaning they cannot make any more guesses and must end their turn.

4.2.4.5 massSend

```
void ChatBox::massSend (
            const QString & playerName,
            const QString & message)  [signal]
```

Signal emitted when a message is sent.

This signal is emitted when the user sends a message from the chat input field. It carries the player name and the message text as parameters.

Parameters

playerName	The name of the player sending the message.
message	The message text.

4.2.4.6 sendMessage

```
void ChatBox::sendMessage ()  [slot]
```

Sends a message from the chat input.

This function retrieves the text from the chat input field and emits a signal to send the message. It also clears the input field after sending the message.

4.2.4.7 setPlayerName()

```
void ChatBox::setPlayerName (
            const QString & name)
```

Sets the player name for the chat box.

This function sets the player name for the chat box, which is used to identify the sender of messages.

Parameters

name	The name of the player.

4.2.5 Member Data Documentation

4.2.5.1 chatDisplay

```
QTextEdit* ChatBox::chatDisplay  [private]
```

The text edit widget for displaying chat messages.

4.2.5.2 chatInput

```
QLineEdit* ChatBox::chatInput  [private]
```

The line edit widget for inputting chat messages.

4.2.5.3 playerName

```
QString ChatBox::playerName  [private]
```

The name of the player using this chat box.

4.2.5.4 sendButton

```
QPushButton* ChatBox::sendButton  [private]
```

The button to send chat messages.

4.2.5.5 team

```
Team ChatBox::team  [private]
```

The team of the player using this chat box.

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

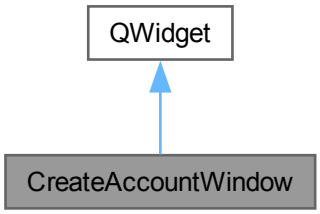
- include/chatbox.h
- src/chatbox.cpp

4.3 CreateAccountWindow Class Reference

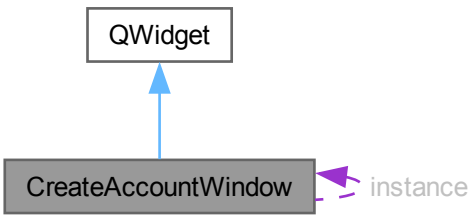
The CreateAccountWindow class provides a singleton interface for creating new user accounts This window allows users to input a username and creates a profile JSON file for the new account.

```
#include <createaccountwindow.h>
```

Inheritance diagram for CreateAccountWindow:



Collaboration diagram for CreateAccountWindow:



Public Slots

- void show ()

  Displays the account creation window and prepares the UI Resets status messages and input fields when shown.

Signals

- void back ()

  Signal emitted when returning to the previous screen Connected to the appropriate handler in the previous screen.
- void accountCreated ()

  Signal emitted when a new account is successfully created Notifies other components to update their user lists.

Public Member Functions

- void setPreviousScreen (QWidget *previous)

  Set the previous screen to return to when operation is complete Used for navigation back to the calling screen.

Static Public Member Functions

- static CreateAccountWindow * getInstance (QWidget *parent=nullptr)

  Get the singleton instance of CreateAccountWindow Creates the instance if it doesn't exist yet.

Private Slots

- void onCreateAccountClicked ()

  Handles the create account button click event Validates input and creates a new user profile if valid.
- void goBack ()

  Returns to the previous screen Called when account creation is complete or canceled.

Private Member Functions

- CreateAccountWindow (QWidget *parent=nullptr)

  Private constructor to enforce singleton pattern Initializes UI components for account creation.
- void saveJsonFile (const QString &username)

  Creates and saves a JSON profile file for the new user Stores basic user information in the specified JSON file.

Private Attributes

- QLineEdit * usernameEdit

  Text input field for entering the new username.
- QPushButton * createAccountButton

  Button to submit account creation request.
- QLabel * statusLabel

  Label to display status messages and error feedback.
- QString jsonFilePath = "resources/profile.json"

  Path to the JSON profile file where user data will be stored May need to be updated based on deployment environment.
- QWidget * previousScreen = nullptr

  Pointer to the previous screen to return to after account creation Set via setPreviousScreen() method.

Static Private Attributes

- static CreateAccountWindow * instance = nullptr

  Static pointer to the singleton instance Ensures only one instance exists throughout the application.

4.3.1 Detailed Description

The CreateAccountWindow class provides a singleton interface for creating new user accounts This window allows users to input a username and creates a profile JSON file for the new account.

4.3.2 Constructor & Destructor Documentation

4.3.2.1 CreateAccountWindow()

```
CreateAccountWindow::CreateAccountWindow (
            QWidget * parent = nullptr)  [explicit], [private]
```

Private constructor to enforce singleton pattern Initializes UI components for account creation.

Parameters

parent	Optional parent widget for memory management

4.3.3 Member Function Documentation

4.3.3.1 accountCreated

```
void CreateAccountWindow::accountCreated ()  [signal]
```

Signal emitted when a new account is successfully created Notifies other components to update their user lists.

4.3.3.2 back

```
void CreateAccountWindow::back ()  [signal]
```

Signal emitted when returning to the previous screen Connected to the appropriate handler in the previous screen.

4.3.3.3 getInstance()

```
CreateAccountWindow * CreateAccountWindow::getInstance (
            QWidget * parent = nullptr)  [static]
```

Get the singleton instance of CreateAccountWindow Creates the instance if it doesn't exist yet.

Parameters

parent	Optional parent widget for memory management purposes

Returns

CreateAccountWindow* Pointer to the singleton instance

4.3.3.4 goBack

```
void CreateAccountWindow::goBack ()  [private], [slot]
```

Returns to the previous screen Called when account creation is complete or canceled.

4.3.3.5 onCreateAccountClicked

```
void CreateAccountWindow::onCreateAccountClicked ()  [private], [slot]
```

Handles the create account button click event Validates input and creates a new user profile if valid.

4.3.3.6 saveJsonFile()

```
void CreateAccountWindow::saveJsonFile (
            const QString & username)  [private]
```

Creates and saves a JSON profile file for the new user Stores basic user information in the specified JSON file.

Parameters

username	The username for the new account

4.3.3.7 setPreviousScreen()

```
void CreateAccountWindow::setPreviousScreen (
            QWidget * previous)
```

Set the previous screen to return to when operation is complete Used for navigation back to the calling screen.

Parameters

previous	Pointer to the widget to return to

4.3.3.8 show

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

Displays the account creation window and prepares the UI Resets status messages and input fields when shown.

4.3.4 Member Data Documentation

4.3.4.1 createAccountButton

```
QPushButton* CreateAccountWindow::createAccountButton  [private]
```

Button to submit account creation request.

4.3.4.2 instance

```
CreateAccountWindow * CreateAccountWindow::instance = nullptr  [static], [private]
```

Static pointer to the singleton instance Ensures only one instance exists throughout the application.

4.3.4.3 jsonFilePath

```
QString CreateAccountWindow::jsonFilePath = "resources/profile.json"  [private]
```

Path to the JSON profile file where user data will be stored May need to be updated based on deployment environment.

4.3.4.4 previousScreen

```
QWidget* CreateAccountWindow::previousScreen = nullptr  [private]
```

Pointer to the previous screen to return to after account creation Set via setPreviousScreen() method.

4.3.4.5 statusLabel

```
QLabel* CreateAccountWindow::statusLabel  [private]
```

Label to display status messages and error feedback.

4.3.4.6 usernameEdit

```
QLineEdit* CreateAccountWindow::usernameEdit  [private]
```

Text input field for entering the new username.

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

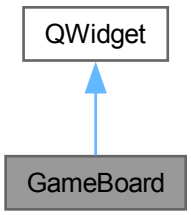
- include/createaccountwindow.h
- src/createaccountwindow.cpp

4.4 GameBoard Class Reference

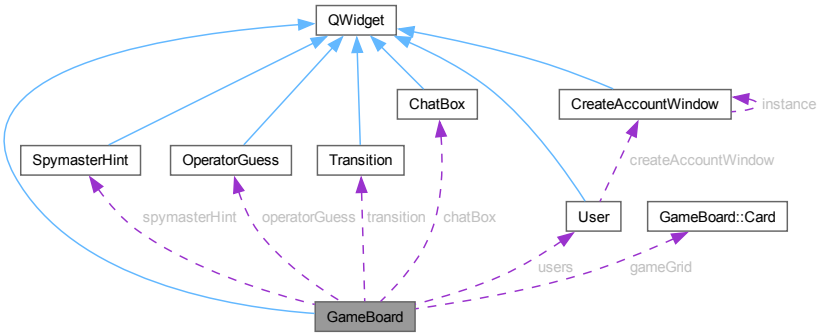
A class representing the game board for the Spy Master game.

`#include <gameboard.h>`

Inheritance diagram for GameBoard:



Collaboration diagram for GameBoard:



Classes

- struct Card

  Structure representing a card in the game grid.

Public Slots

- void show ()

  Displays the game board.
- void displayHint (const QString &hint, int number)

  Displays a hint on the game board.
- void displayGuess ()

  Displays a guess on the game board.

Signals

- void gameEnded ()

  Emitted when the game ends.

Public Member Functions

- GameBoard (const QString &redSpyMaster, const QString &redOperative, const QString &blueSpyMaster, const QString &blueOperative, QWidget *parent=nullptr)

  Constructor for the GameBoard class.
- ~GameBoard ()

  Destructor for the GameBoard class.
- void setRedSpyMasterName (const QString &name)

  Sets the names of the red team's spymaster and operative.
- void setRedOperativeName (const QString &name)

  Sets the names of the red team's operative.
- void setBlueSpyMasterName (const QString &name)

  Sets the names of the blue team's spymaster and operative.
- void setBlueOperativeName (const QString &name)

  Sets the names of the blue team's operative.
- void updateTeamLabels ()

  Updates the labels displaying team information.

Private Types

- enum CardType { RED_TEAM , BLUE_TEAM , NEUTRAL , ASSASSIN }

  Enumeration for card types.
- enum Turn { RED_SPY , RED_OP , BLUE_SPY , BLUE_OP }

  Enumeration representing the different turn states in the game board.

Private Member Functions

- void loadWordsFromFile ()

  Loads words from a file and generates the game grid.
- void generateGameGrid ()

  Generates the game grid.
- void setupUI ()

  Sets up the UI for the game board.
- void nextTurn ()

  Switches to the next turn.
- void onCardClicked (int row, int col)

  Handles a card click event.
- void onContinueClicked ()

  Handles the continue button click event.
- void showTransition ()

  Displays a transition screen.
- void updateScores ()

  Updates the scores of the teams.
- void checkGameEnd ()

  Checks if the game has ended.
- void endGame (const QString &message)

  Ends the game and displays a message.
- void resetGame ()

  Resets the game state.

Private Attributes

- int currentTurn

  Structure representing a turn in the game board.
- int redCardsRemaining

  The number of remaining cards for each team.
- int blueCardsRemaining

  The number of remaining cards for each team.
- int maxGuesses = 0

  The maximum number of guesses allowed in a turn.
- int currentGuesses = 0

  The number of guesses made in the current turn.
- QString redSpyMasterName

  The names of the spymaster for the red team.
- QString redOperativeName

  The names of the operative for the blue team.
- QString blueSpyMasterName

  The names of the spymaster for the blue team.
- QString blueOperativeName

  The names of the operative for the blue team.
- Card gameGrid [GRID_SIZE][GRID_SIZE]

  The game grid.
- QStringList wordList

  The list of words.
- QGridLayout * gridLayout

  The grid layout for the game board.
- QPushButton * cards [GRID_SIZE][GRID_SIZE]

  The buttons representing the cards in the game grid.
- QLabel * redTeamLabel

  The labels for red team information.
- QLabel * blueTeamLabel

  The label for blue team information.
- QLabel * currentTurnLabel

  The label for the current turn.
- SpymasterHint * spymasterHint

  The widget for the spymaster hint.
- OperatorGuess * operatorGuess

  The widget for the operator guess.
- QLabel * currentHint

  The label for the current hint.
- QString correspondingNumber

  The label for the corresponding number.
- Transition * transition

  The transition screen widget.
- QLabel * redScoreLabel

  The label for red team score.
- QLabel * blueScoreLabel

  The label for blue team score.
- ChatBox * chatBox

  The chat box widget.
- QString currentPlayerName

The name of the current player.

- ChatBox::Team currentPlayerTeam

  The team of the current player.

- User * users

  The list of users in the game.

Static Private Attributes

- static const int GRID_SIZE = 5

  The size of the game grid.

4.4.1 Detailed Description

A class representing the game board for the Spy Master game.

The GameBoard class is responsible for displaying the game board and handling user interactions. It includes methods for loading words from a file, generating the game grid, setting up the UI, card clicks, card reveals and turns, and handling game end conditions. The game board also includes a stacked layout for transitions between screens. Codenames is a game which involves two teams (red and blue) with spymasters giving hints and operators making guesses.

Author

Group 9

4.4.2 Member Enumeration Documentation

4.4.2.1 CardType

`enum GameBoard::CardType [private]`

Enumeration for card types.

Enumerator

RED_TEAM	
BLUE_TEAM	
NEUTRAL	
ASSASSIN	

4.4.2.2 Turn

`enum GameBoard::Turn [private]`

Enumeration representing the different turn states in the game board.

Enumerator

RED_SPY	
RED_OP	
BLUE_SPY	
BLUE_OP	

4.4.3 Constructor & Destructor Documentation

4.4.3.1 GameBoard()

```
GameBoard::GameBoard (
            const QString & redSpyMaster,
            const QString & redOperative,
            const QString & blueSpyMaster,
            const QString & blueOperative,
            QWidget * parent = nullptr)  [explicit]
```

Constructor for the GameBoard class.

Initializes the game board with the provided team names and sets up the UI. It also loads words from a file and generates the game grid which is displayed on the UI.

Parameters

redSpyMaster	The name of the red team's spymaster.
redOperative	The name of the red team's operative.
blueSpyMaster	The name of the blue team's spymaster.
blueOperative	The name of the blue team's operative.
parent	Optional parent widget.

Author

Group 9

4.4.3.2 ~GameBoard()

```
GameBoard::~GameBoard ()
```

Destructor for the GameBoard class.

Cleans up resources used by the game board.

Author

Group 9

4.4.4 Member Function Documentation

4.4.4.1 checkGameEnd()

```
void GameBoard::checkGameEnd ()  [private]
```

Checks if the game has ended.

Checks if the game has ended based on the current state of the game.

Author

Group 9

4.4.4.2 displayGuess

```
void GameBoard::displayGuess ()  [slot]
```

Displays a guess on the game board.

Displays a guess on the game board for the current turn and updates the UI.

Author

Group 9

4.4.4.3 displayHint

```
void GameBoard::displayHint (
            const QString & hint,
            int number)  [slot]
```

Displays a hint on the game board.

Displays a hint on the game board for the current turn and updates the UI.

Parameters

hint	The hint to be displayed.
number	The number of words associated with the hint.

Author

Group 9

4.4.4.4 endGame()

```
void GameBoard::endGame (
            const QString & message)  [private]
```

Ends the game and displays a message.

Ends the game and displays a message.

Parameters

message	The message to be displayed.

Author

Group 9

4.4.4.5 gameEnded

```
void GameBoard::gameEnded ()  [signal]
```

Emitted when the game ends.

Signals that the game has ended and the game board should be closed.

Author

Group 9

4.4.4.6 generateGameGrid()

```
void GameBoard::generateGameGrid ()  [private]
```

Generates the game grid.

Generates the game grid based on the loaded words.

Author

Group 9

4.4.4.7 loadWordsFromFile()

```
void GameBoard::loadWordsFromFile ()  [private]
```

Loads words from a file and generates the game grid.

Loads words from a file and generates the game grid.

Author

Group 9

4.4.4.8 nextTurn()

```
void GameBoard::nextTurn ()  [private]
```

Switches to the next turn.

Switches to the next turn and updates the UI.

Author

Group 9

4.4.4.9 onCardClicked()

```
void GameBoard::onCardClicked (
            int row,
            int col)  [private]
```

Handles a card click event.

Handles a card click event and updates the UI.

Parameters

row	The row of the clicked card.
col	The column of the clicked card.

Author

Group 9

4.4.4.10 onContinueClicked()

```
void GameBoard::onContinueClicked ()  [private]
```

Handles the continue button click event.

Handles the continue button click event and updates the UI.

Author

Group 9

4.4.4.11 resetGame()

```
void GameBoard::resetGame ()  [private]
```

Resets the game state.

Resets the game state to the initial state.

Author

Group 9

4.4.4.12 setBlueOperativeName()

```
void GameBoard::setBlueOperativeName (
            const QString & name)
```

Sets the names of the blue team's operative.

Sets the names of the blue team's operative and updates the team labels.

Parameters

name	The name of the blue team's operative.

Author

Group 9

4.4.4.13 setBlueSpyMasterName()

```
void GameBoard::setBlueSpyMasterName (
            const QString & name)
```

Sets the names of the blue team's spymaster and operative.

Sets the names of the blue team's spymaster and operative and updates the team labels.

Parameters

name	The name of the blue team's spymaster.

Author

Group 9

4.4.4.14 setRedOperativeName()

```
void GameBoard::setRedOperativeName (
            const QString & name)
```

Sets the names of the red team's operative.

Sets the names of the red team's operative and updates the team labels.

Parameters

name	The name of the red team's operative.

Author

Group 9

4.4.4.15 setRedSpyMasterName()

```
void GameBoard::setRedSpyMasterName (
            const QString & name)
```

Sets the names of the red team's spymaster and operative.

Sets the names of the red team's spymaster and operative.

Parameters

name	The name of the red team's spymaster.

Author

Group 9

4.4.4.16 setupUI()

```
void GameBoard::setupUI ()  [private]
```

Sets up the UI for the game board.

Sets up the UI for the game board, including the layout, labels, and buttons.

Author

Group 9

4.4.4.17 show

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

Displays the game board.

Displays the game board and sets up the UI.

Author

Group 9

4.4.4.18 showTransition()

```
void GameBoard::showTransition ()  [private]
```

Displays a transition screen.

Displays a transition screen and updates the UI.

Author

Group 9

4.4.4.19 updateScores()

```
void GameBoard::updateScores ()  [private]
```

Updates the scores of the teams.

Updates the scores of the teams based on the current state of the game.

Author

Group 9

4.4.4.20 updateTeamLabels()

```
void GameBoard::updateTeamLabels ()
```

Updates the labels displaying team information.

Updates the labels displaying team information, such as team names and scores.

Author

Group 9

4.4.5 Member Data Documentation

4.4.5.1 blueCardsRemaining

```
int GameBoard::blueCardsRemaining  [private]
```

The number of remaining cards for each team.

4.4.5.2 blueOperativeName

```
QString GameBoard::blueOperativeName  [private]
```

The names of the operative for the blue team.

4.4.5.3 blueScoreLabel

```
QLabel* GameBoard::blueScoreLabel  [private]
```

The label for blue team score.

4.4.5.4 blueSpyMasterName

```
QString GameBoard::blueSpyMasterName  [private]
```

The names of the spymaster for the blue team.

4.4.5.5 blueTeamLabel

```
QLabel* GameBoard::blueTeamLabel  [private]
```

The label for blue team information.

4.4.5.6 cards

```
QPushButton* GameBoard::cards[GRID_SIZE][GRID_SIZE]  [private]
```

The buttons representing the cards in the game grid.

4.4.5.7 chatBox

```
ChatBox* GameBoard::chatBox  [private]
```

The chat box widget.

4.4.5.8 correspondingNumber

```
QString GameBoard::correspondingNumber  [private]
```

The label for the corresponding number.

4.4.5.9 currentGuesses

```
int GameBoard::currentGuesses = 0  [private]
```

The number of guesses made in the current turn.

4.4.5.10 currentHint

```
QLabel* GameBoard::currentHint  [private]
```

The label for the current hint.

4.4.5.11 currentPlayerName

```
QString GameBoard::currentPlayerName  [private]
```

The name of the current player.

4.4.5.12 currentPlayerTeam

```
ChatBox::Team GameBoard::currentPlayerTeam  [private]
```

The team of the current player.

4.4.5.13 currentTurn

```
int GameBoard::currentTurn  [private]
```

Structure representing a turn in the game board.

4.4.5.14 currentTurnLabel

```
QLabel* GameBoard::currentTurnLabel  [private]
```

The label for the current turn.

4.4.5.15 gameGrid

```
Card GameBoard::gameGrid[GRID_SIZE][GRID_SIZE]  [private]
```

The game grid.

4.4.5.16 GRID_SIZE

```
const int GameBoard::GRID_SIZE = 5  [static], [private]
```

The size of the game grid.

4.4.5.17 gridLayout

```
QGridLayout* GameBoard::gridLayout  [private]
```

The grid layout for the game board.

4.4.5.18 maxGuesses

```
int GameBoard::maxGuesses = 0  [private]
```

The maximum number of guesses allowed in a turn.

4.4.5.19 operatorGuess

```
OperatorGuess* GameBoard::operatorGuess  [private]
```

The widget for the operator guess.

4.4.5.20 redCardsRemaining

```
int GameBoard::redCardsRemaining  [private]
```

The number of remaining cards for each team.

4.4.5.21 redOperativeName

```
QString GameBoard::redOperativeName  [private]
```

The names of the operative for the blue team.

4.4.5.22 redScoreLabel

```
QLabel* GameBoard::redScoreLabel  [private]
```

The label for red team score.

4.4.5.23 redSpyMasterName

```
QString GameBoard::redSpyMasterName  [private]
```

The names of the spymaster for the red team.

4.4.5.24 redTeamLabel

```
QLabel* GameBoard::redTeamLabel  [private]
```

The labels for red team information.

4.4.5.25 spymasterHint

```
SpymasterHint* GameBoard::spymasterHint  [private]
```

The widget for the spymaster hint.

4.4.5.26 transition

```
Transition* GameBoard::transition  [private]
```

The transition screen widget.

4.4.5.27 users

```
User* GameBoard::users  [private]
```

The list of users in the game.

4.4.5.28 wordList

```
QStringList GameBoard::wordList  [private]
```

The list of words.

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

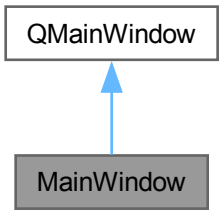
- include/gameboard.h
- src/gameboard.cpp

4.5 MainWindow Class Reference

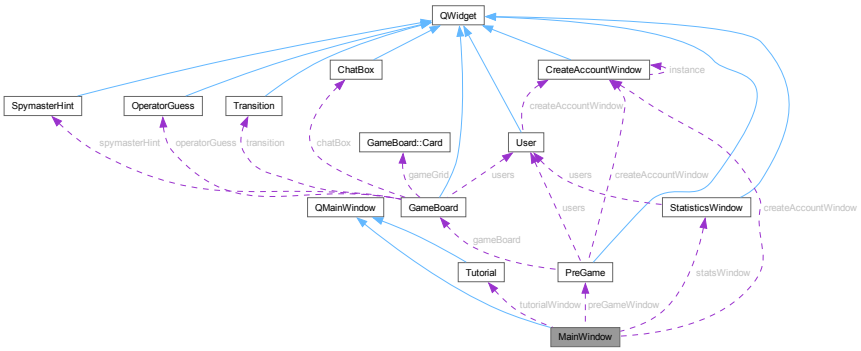
The main application window.

```
#include <mainwindow.h>
```

Inheritance diagram for MainWindow:



Collaboration diagram for MainWindow:



Public Slots

- void showMainWindow ()

  Displays the main window.

Public Member Functions

- MainWindow (QWidget *parent=nullptr)

  Constructor for MainWindow.
- ~MainWindow ()

  Destructor for MainWindow.

Private Slots

- void openPreGame ()

  Opens the PreGame window.
- void openStatsWindow ()

  Opens the statistics window.
- void openCreateAccount ()

  Opens the Create Account window.
- void openTutorial ()

  Opens the Tutorial window.
- void openMultiMain ()

  Opens the Multiplayer main window.

Private Attributes

- QWidget * centralWidget
- QVBoxLayout * layout

  Layout for organizing the widgets vertically.
- QLabel * titleLabel

  Label displaying the application title.
- PreGame * preGameWindow
- QPushButton * localPlayButton

  Button for starting a local game.
- QPushButton * onlinePlayButton

  Button for starting an online game.
- QPushButton * tutorialButton

  Button for opening the tutorial.
- QPushButton * statsButton

  Button for opening the statistics window.
- QPushButton * createAccountButton

  Button for opening the account creation window.
- CreateAccountWindow * createAccountWindow

  Pointer to the account creation window.
- StatisticsWindow * statsWindow

  Pointer to the statistics window displaying game stats.
- Tutorial * tutorialWindow

4.5.1 Detailed Description

The main application window.

4.5.2 Constructor & Destructor Documentation

4.5.2.1 MainWindow()

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

Constructor for MainWindow.

Parameters

parent	The parent widget (default is nullptr).

4.5.2.2 ~MainWindow()

```
MainWindow::~MainWindow ()
```

Destructor for MainWindow.

4.5.3 Member Function Documentation

4.5.3.1 openCreateAccount

```
void MainWindow::openCreateAccount ()  [private], [slot]
```

Opens the Create Account window.

4.5.3.2 openMultiMain

```
void MainWindow::openMultiMain ()  [private], [slot]
```

Opens the Multiplayer main window.

4.5.3.3 openPreGame

```
void MainWindow::openPreGame ()  [private], [slot]
```

Opens the PreGame window.

4.5.3.4 openStatsWindow

```
void MainWindow::openStatsWindow ()  [private], [slot]
```

Opens the statistics window.

4.5.3.5 openTutorial

```
void MainWindow::openTutorial ()  [private], [slot]
```

Opens the Tutorial window.

4.5.3.6 showMainWindow

```
void MainWindow::showMainWindow ()  [slot]
```

Displays the main window.

4.5.4 Member Data Documentation

4.5.4.1 centralWidget

```
QWidget* MainWindow::centralWidget  [private]
```

Pointer to the central widget, which holds all main UI elements.

4.5.4.2 createAccountButton

```
QPushButton* MainWindow::createAccountButton  [private]
```

Button for opening the account creation window.

4.5.4.3 createAccountWindow

```
CreateAccountWindow* MainWindow::createAccountWindow  [private]
```

Pointer to the account creation window.

4.5.4.4 layout

```
QVBoxLayout* MainWindow::layout  [private]
```

Layout for organizing the widgets vertically.

4.5.4.5 localPlayButton

```
QPushButton* MainWindow::localPlayButton  [private]
```

Button for starting a local game.

4.5.4.6 onlinePlayButton

```
QPushButton* MainWindow::onlinePlayButton  [private]
```

Button for starting an online game.

4.5.4.7 preGameWindow

```
PreGame* MainWindow::preGameWindow  [private]
```

Pointer to the PreGame window for local gameplay setup.

4.5.4.8 statsButton

```
QPushButton* MainWindow::statsButton  [private]
```

Button for opening the statistics window.

4.5.4.9 statsWindow

```
StatisticsWindow* MainWindow::statsWindow  [private]
```

Pointer to the statistics window displaying game stats.

4.5.4.10 titleLabel

```
QLabel* MainWindow::titleLabel  [private]
```

Label displaying the application title.

4.5.4.11 tutorialButton

```
QPushButton* MainWindow::tutorialButton  [private]
```

Button for opening the tutorial.

4.5.4.12 tutorialWindow

```
Tutorial* MainWindow::tutorialWindow  [private]
```

Pointer to the tutorial window explaining the game mechanics.

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

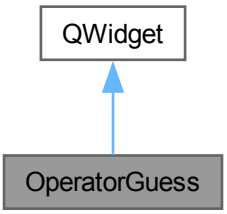
- include/mainwindow.h
- src/mainwindow.cpp

4.6 OperatorGuess Class Reference

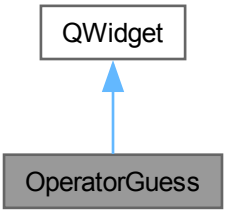
A widget that provides the interface for operators to submit guesses during gameplay.

```
#include <operatorguess.h>
```

Inheritance diagram for OperatorGuess:



Collaboration diagram for OperatorGuess:



Signals

- void guessSubmitted ()

  Signal emitted when a guess is submitted.

Public Member Functions

- OperatorGuess (QWidget *parent=nullptr)

  Constructor for the OperatorGuess class.
- ~OperatorGuess ()

  Destructor for the OperatorGuess class.
- void reset ()

  Resets the operator guess interface.

Private Slots

- void submitGuess ()

  Handles the submission of a guess.

Private Attributes

- QPushButton * submitGuessButton

  Button for submitting a guess.

4.6.1 Detailed Description

A widget that provides the interface for operators to submit guesses during gameplay.

The OperatorGuess class provides a simple UI for team operators to submit their guesses during their turn. It consists of a button that the operator can click to indicate they have made a guess on the game board.

Author

Group 9

4.6.2 Constructor & Destructor Documentation

4.6.2.1 OperatorGuess()

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

Constructor for the OperatorGuess class.

Initializes the operator guess interface with a submit button. Sets up the UI components and connections.

Parameters

parent	Optional parent widget.

Author

Group 9

4.6.2.2 ~OperatorGuess()

```
OperatorGuess::~OperatorGuess ()
```

Destructor for the OperatorGuess class.

Cleans up resources used by the OperatorGuess widget.

Author

Group 9

4.6.3 Member Function Documentation

4.6.3.1 guessSubmitted

```
void OperatorGuess::guessSubmitted ()  [signal]
```

Signal emitted when a guess is submitted.

Indicates that the operator has clicked the submit button to register their guess on the game board.

4.6.3.2 reset()

```
void OperatorGuess::reset ()
```

Resets the operator guess interface.

Resets the state of the interface to prepare it for a new turn. This may involve enabling/disabling the button or clearing any internal state.

Author

Group 9

4.6.3.3 submitGuess

```
void OperatorGuess::submitGuess ()  [private], [slot]
```

Handles the submission of a guess.

Processes the operator's action when they click the submit button to indicate they have made a guess. Emits the guessSubmitted signal.

Author

Group 9

4.6.4 Member Data Documentation

4.6.4.1 submitGuessButton

```
QPushButton* OperatorGuess::submitGuessButton  [private]
```

Button for submitting a guess.

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

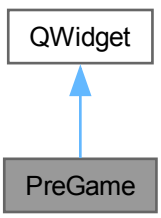
- include/operatorguess.h
- src/operatorguess.cpp

4.7 PreGame Class Reference

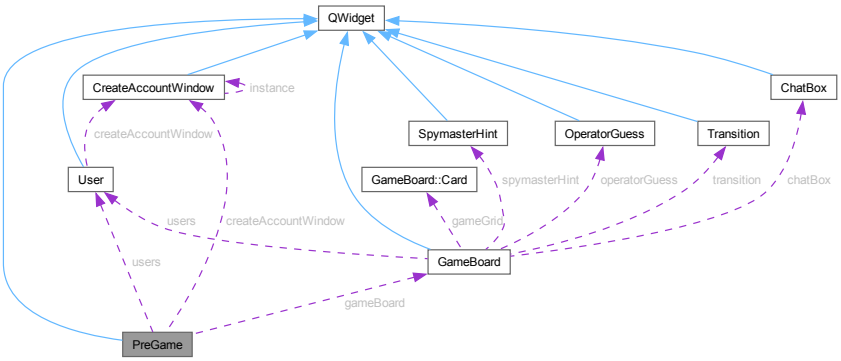
The PreGame class provides the interface for setting up a new game This includes selecting players for each team and role before starting the game.

```
#include <pregame.h>
```

Inheritance diagram for PreGame:



Collaboration diagram for PreGame:



Public Slots

- void show ()

  Shows the pregame setup window and initializes user dropdowns.

Signals

- void backToMainWindow ()

  Signal emitted when user wants to return to main window Connected to main window to show it again.
- void start ()

  Signal emitted when all players are selected and game is ready to start Connected to game initialization in the game controller.
- void update ()

  Signal emitted when user list needs to be refreshed This happens after a new account is created.

Public Member Functions

- PreGame (QWidget ∗parent=nullptr)

  Construct a new Pre Game object.
- ∼PreGame ()

  Destroy the Pre Game object and clean up resources.
- QString getRedTeamSpyMasterNickname () const

  Get the Red Team Spy Master Nickname.
- QString getRedTeamOperativeNickname () const

  Get the Red Team Operative Nickname.
- QString getBlueTeamSpyMasterNickname () const

  Get the Blue Team Spy Master Nickname.
- QString getBlueTeamOperativeNickname () const

  Get the Blue Team Operative Nickname.

Private Slots

- void goBackToMain ()

  Returns to the main menu screen Connected to the back button's clicked signal.
- void startGame ()

  Starts the game with the selected players Validates player selections and emits start signal if valid.
- void handleGameEnd ()

  Handles cleanup after a game has ended Prepares the UI for a potential new game.
- void openCreateAccount ()

  Opens the account creation window Connected to the create account button's clicked signal.

Private Member Functions

- void populateUserDropdowns ()

  Populates the user selection dropdown menus with available users This is called when the window is shown to ensure the latest user list.

Private Attributes

- User * users

  Pointer to User objects containing player information Used to populate the dropdown menus.
- QStringList usernames

  List of available usernames for player selection Populated from the users database.
- CreateAccountWindow * createAccountWindow

  Pointer to the account creation window Initialized when create account button is clicked.
- QLabel * label

  Title label for the pregame screen.
- QPushButton * backButton

  Button to return to the main menu.
- QPushButton * createAccountButton

  Button to open the account creation window.
- QPushButton * startButton

  Button to start the game with selected players.
- QComboBox * redTeamSpyMasterComboBox

  Dropdown menu for selecting the Red Team's Spy Master.
- QComboBox * redTeamOperativeComboBox

  Dropdown menu for selecting the Red Team's Operative.
- QComboBox * blueTeamSpyMasterComboBox

  Dropdown menu for selecting the Blue Team's Spy Master.
- QComboBox * blueTeamOperativeComboBox

  Dropdown menu for selecting the Blue Team's Operative.
- QVBoxLayout * layout

  Main vertical layout for the entire pregame screen.
- QHBoxLayout * teamsLayout

  Horizontal layout to contain both team selection areas.
- QVBoxLayout * redTeamLayout

  Vertical layout for the Red Team's player selections.
- QVBoxLayout * blueTeamLayout

  Vertical layout for the Blue Team's player selections.
- QHBoxLayout * buttonsLayout

  Horizontal layout for the navigation buttons.
- GameBoard * gameBoard

  Pointer to the game board that will be shown after game starts.

4.7.1 Detailed Description

The PreGame class provides the interface for setting up a new game This includes selecting players for each team and role before starting the game.

4.7.2 Constructor & Destructor Documentation

4.7.2.1 PreGame()

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

Construct a new Pre Game object.

Parameters

parent	Optional parent widget for memory management purposes

4.7.2.2 ~PreGame()

```
PreGame::~PreGame ()
```

Destroy the Pre Game object and clean up resources.

4.7.3 Member Function Documentation

4.7.3.1 backToMainWindow

```
void PreGame::backToMainWindow ()  [signal]
```

Signal emitted when user wants to return to main window Connected to main window to show it again.

4.7.3.2 getBlueTeamOperativeNickname()

```
QString PreGame::getBlueTeamOperativeNickname () const
```

Get the Blue Team Operative Nickname.

Returns

QString The nickname of the selected Blue Team Operative

4.7.3.3 getBlueTeamSpyMasterNickname()

```
QString PreGame::getBlueTeamSpyMasterNickname () const
```

Get the Blue Team Spy Master Nickname.

Returns

QString The nickname of the selected Blue Team Spy Master

4.7.3.4 getRedTeamOperativeNickname()

```
QString PreGame::getRedTeamOperativeNickname () const
```

Get the Red Team Operative Nickname.

Returns

QString The nickname of the selected Red Team Operative

4.7.3.5 getRedTeamSpyMasterNickname()

```
QString PreGame::getRedTeamSpyMasterNickname () const
```

Get the Red Team Spy Master Nickname.

Returns

QString The nickname of the selected Red Team Spy Master

4.7.3.6 goBackToMain

```
void PreGame::goBackToMain ()  [private], [slot]
```

Returns to the main menu screen Connected to the back button's clicked signal.

4.7.3.7 handleGameEnd

```
void PreGame::handleGameEnd ()  [private], [slot]
```

Handles cleanup after a game has ended Prepares the UI for a potential new game.

4.7.3.8 openCreateAccount

```
void PreGame::openCreateAccount ()  [private], [slot]
```

Opens the account creation window Connected to the create account button's clicked signal.

4.7.3.9 populateUserDropdowns()

```
void PreGame::populateUserDropdowns ()  [private]
```

Populates the user selection dropdown menus with available users This is called when the window is shown to ensure the latest user list.

4.7.3.10 show

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

Shows the pregame setup window and initializes user dropdowns.

4.7.3.11 start

```
void PreGame::start ()  [signal]
```

Signal emitted when all players are selected and game is ready to start Connected to game initialization in the game controller.

4.7.3.12 startGame

```
void PreGame::startGame ()  [private], [slot]
```

Starts the game with the selected players Validates player selections and emits start signal if valid.

4.7.3.13 update

```
void PreGame::update ()  [signal]
```

Signal emitted when user list needs to be refreshed This happens after a new account is created.

4.7.4 Member Data Documentation

4.7.4.1 backButton

```
QPushButton* PreGame::backButton  [private]
```

Button to return to the main menu.

4.7.4.2 blueTeamLayout

```
QVBoxLayout* PreGame::blueTeamLayout  [private]
```

Vertical layout for the Blue Team's player selections.

4.7.4.3 blueTeamOperativeComboBox

```
QComboBox* PreGame::blueTeamOperativeComboBox  [private]
```

Dropdown menu for selecting the Blue Team's Operative.

4.7.4.4 blueTeamSpyMasterComboBox

```
QComboBox* PreGame::blueTeamSpyMasterComboBox  [private]
```

Dropdown menu for selecting the Blue Team's Spy Master.

4.7.4.5 buttonsLayout

```
QHBoxLayout* PreGame::buttonsLayout  [private]
```

Horizontal layout for the navigation buttons.

4.7.4.6 createAccountButton

```
QPushButton* PreGame::createAccountButton  [private]
```

Button to open the account creation window.

4.7.4.7 createAccountWindow

```
CreateAccountWindow* PreGame::createAccountWindow  [private]
```

Pointer to the account creation window Initialized when create account button is clicked.

4.7.4.8 gameBoard

```
GameBoard* PreGame::gameBoard  [private]
```

Pointer to the game board that will be shown after game starts.

4.7.4.9 label

```
QLabel* PreGame::label  [private]
```

Title label for the pregame screen.

4.7.4.10 layout

```
QVBoxLayout* PreGame::layout  [private]
```

Main vertical layout for the entire pregame screen.

4.7.4.11 redTeamLayout

```
QVBoxLayout* PreGame::redTeamLayout  [private]
```

Vertical layout for the Red Team's player selections.

4.7.4.12 redTeamOperativeComboBox

```
QComboBox* PreGame::redTeamOperativeComboBox  [private]
```

Dropdown menu for selecting the Red Team's Operative.

4.7.4.13 redTeamSpyMasterComboBox

```
QComboBox* PreGame::redTeamSpyMasterComboBox  [private]
```

Dropdown menu for selecting the Red Team's Spy Master.

4.7.4.14 startButton

```
QPushButton* PreGame::startButton  [private]
```

Button to start the game with selected players.

4.7.4.15 teamsLayout

```
QHBoxLayout* PreGame::teamsLayout  [private]
```

Horizontal layout to contain both team selection areas.

4.7.4.16 usernames

```
QStringList PreGame::usernames  [private]
```

List of available usernames for player selection Populated from the users database.

4.7.4.17 users

```
User* PreGame::users  [private]
```

Pointer to User objects containing player information Used to populate the dropdown menus.

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

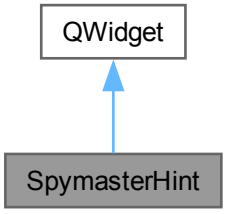
- include/pregame.h
- src/pregame.cpp

4.8 SpymasterHint Class Reference

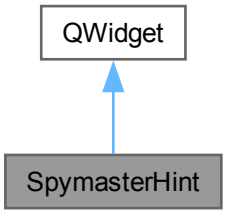
A widget for the spymaster to input a hint and the number of words associated with it.

`#include <spymasterhint.h>`

Inheritance diagram for SpymasterHint:



Collaboration diagram for SpymasterHint:



Signals

- void hintSubmitted (const QString &hint, const int number)

  Signal emitted when a hint is submitted.

Public Member Functions

- SpymasterHint (QWidget ∗parent=nullptr)

  Constructor for the SpymasterHint class.
- ∼SpymasterHint ()

  Destructor for the SpymasterHint class.
- void reset ()

  Resets the spymaster hint input fields.

Private Slots

- void submitHint ()

  Slot to handle the submission of a hint.
- void updateButtonClickable ()

  Slot to update the button's clickable state based on input.
- void textToUppercase (const QString &text)

  Slot to convert text to uppercase.

Private Attributes

- QLineEdit * hintLineEdit

  QLineEdit used by the spymaster to input the hint.
- QSpinBox * numberSpinBox

  QSpinBox used by the spymaster to input the number of words correlated to the hint.
- QPushButton * giveClueButton

  QPushButton to submit the hint.
- QRegularExpressionValidator * textValidator

  QRegularExpressionValidator used to validate the hint the spymaster inputs is a single valid word.

4.8.1 Detailed Description

A widget for the spymaster to input a hint and the number of words associated with it.

This class contains a QLineEdit for the hint, a QSpinBox for the number of words, and a QPushButton to submit the hint. It also includes validation to ensure the hint is a single word and updates the button's clickable state based on input.

Author

Group 9

4.8.2 Constructor & Destructor Documentation

4.8.2.1 SpymasterHint()

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

Constructor for the SpymasterHint class.

This constructor sets up the layout and initializes the widgets. It connects the button to the submitHint slot and the LineEdit to the updateButtonClickable slot. It also sets up a validator to ensure the hint is a single word and connects the textChanged signal to the textToUppercase slot to convert the hint to uppercase.

Parameters

parent	The parent widget.

4.8.2.2 ~SpymasterHint()

```
SpymasterHint::~SpymasterHint ()
```

Destructor for the SpymasterHint class.

This destructor cleans up the resources used by the class. It does not need to explicitly delete the widgets as they are managed by Qt's parent-child system.

4.8.3 Member Function Documentation

4.8.3.1 hintSubmitted

```
void SpymasterHint::hintSubmitted (
            const QString & hint,
            const int number)  [signal]
```

Signal emitted when a hint is submitted.

This signal is emitted when the spymaster submits a hint and the number of words. It carries the hint text and the number of words as parameters.

Parameters

hint	The hint text.
number	The number of words associated with the hint.

4.8.3.2 reset()

```
void SpymasterHint::reset ()
```

Resets the spymaster hint input fields.

This function clears the hint input field and resets the number of words to 1. It also updates the button's clickable state to ensure it is disabled until valid input is provided.

4.8.3.3 submitHint

```
void SpymasterHint::submitHint ()  [private], [slot]
```

Slot to handle the submission of a hint.

This function retrieves the hint and number of words from the input fields, emits the hintSubmitted signal, and resets the input fields.

4.8.3.4 textToUppercase

```
void SpymasterHint::textToUppercase (
            const QString & text)  [private], [slot]
```

Slot to convert text to uppercase.

This function is called when the text in the hint input field changes. It converts the text to uppercase to ensure consistency in the hint format.

Parameters

text	The input text.

4.8.3.5 updateButtonClickable

```
void SpymasterHint::updateButtonClickable ()  [private], [slot]
```

Slot to update the button's clickable state based on input.

This function checks if the hint input field is empty. If the input is valid, it enables the button; otherwise, it disables it.

4.8.4 Member Data Documentation

4.8.4.1 giveClueButton

```
QPushButton* SpymasterHint::giveClueButton  [private]
```

QPushButton to submit the hint.

4.8.4.2 hintLineEdit

```
QLineEdit* SpymasterHint::hintLineEdit  [private]
```

QLineEdit used by the spymaster to input the hint.

4.8.4.3 numberSpinBox

```
QSpinBox* SpymasterHint::numberSpinBox  [private]
```

QSpinBox used by the spymaster to input the number of words correlated to the hint.

4.8.4.4 textValidator

```
QRegularExpressionValidator* SpymasterHint::textValidator  [private]
```

QRegularExpressionValidator used to validate the hint the spymaster inputs is a single valid word.

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

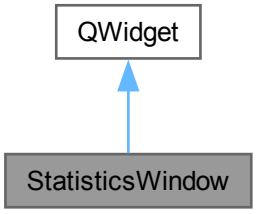
- include/spymasterhint.h
- src/spymasterhint.cpp

4.9 StatisticsWindow Class Reference

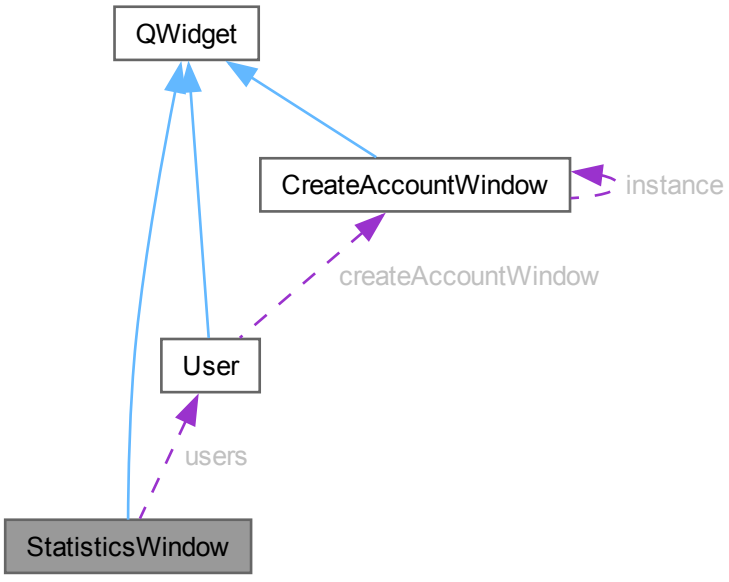
The class that shows the Statistics screen Displays game statistics for selected users including win rates and guess accuracy.

`#include <statisticswindow.h>`

Inheritance diagram for StatisticsWindow:



Collaboration diagram for StatisticsWindow:



Public Slots

- void show ()

  show the statistics screen Makes the statistics UI visible and updates data

Signals

- void backToMainWindow ()

  Go back to the main window Signal emitted when user chooses to return to main menu.

Public Member Functions

- StatisticsWindow (QWidget *parent=nullptr)

  Construct a new Statistics Window object Initializes UI components and connects signals/slots.
- ~StatisticsWindow ()

  Destructor for statistics screen Cleans up resources when StatisticsWindow is destroyed.

Private Slots

- void goBackToMain ()

  to back to the main window Slot triggered when back button is clicked
- void showUserStats ()

  showing the user stats after clicking the button Slot that retrieves and displays statistics for selected user

Private Member Functions

- void populateDropDown ()

  populate the drop down button with the usernames Fetches user list from User singleton and fills dropdown menu

Private Attributes

- User * users

  the users instance Singleton reference to access user data and statistics
- QPushButton * backToMainButton

  button to click to go back to main UI navigation element to return to main menu
- QComboBox * usernameComboBox

  the drop down box of usernames Selection widget for choosing which user's statistics to display
- QPushButton * showUserStatsButton

  the button to show the user stats after choosing in drop down menu Triggers update of statistics display for selected user
- QString username

  the username of the user Stores the currently selected username
- QLabel * usernameTitle

  title of username Display label showing selected user's name
- QLabel * gamesPlayedStats

  the number of games played of the user Display label showing total games played statistic
- QLabel * gamesWinStats

  the number of games win of the user Display label showing total games won statistic
- QLabel * gamesWinRateStats

  the win rate of the user Display label showing win percentage (wins/games played)
- QLabel * guessTotalStats

  the number of guess total of the user Display label showing total guesses made statistic
- QLabel * guessHitStats

  the number of correct guess of the user Display label showing correct guesses statistic
- QLabel * guessHitRateStats

  the guess hit rate of the user Display label showing guess accuracy percentage (hits/total)

4.9.1 Detailed Description

The class that shows the Statistics screen Displays game statistics for selected users including win rates and guess accuracy.

4.9.2 Constructor & Destructor Documentation

4.9.2.1 StatisticsWindow()

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

Construct a new Statistics Window object Initializes UI components and connects signals/slots.

Parameters

parent	the parent of the statistics window screen for widget hierarchy

4.9.2.2 ~StatisticsWindow()

```
StatisticsWindow::~StatisticsWindow ()
```

Destructor for statistics screen Cleans up resources when StatisticsWindow is destroyed.

4.9.3 Member Function Documentation

4.9.3.1 backToMainWindow

```
void StatisticsWindow::backToMainWindow ()  [signal]
```

Go back to the main window Signal emitted when user chooses to return to main menu.

4.9.3.2 goBackToMain

```
void StatisticsWindow::goBackToMain ()  [private], [slot]
```

to back to the main window Slot triggered when back button is clicked

4.9.3.3 populateDropDown()

```
void StatisticsWindow::populateDropDown ()  [private]
```

populate the drop down button with the usernames Fetches user list from User singleton and fills dropdown menu

4.9.3.4 show

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

show the statistics screen Makes the statistics UI visible and updates data

4.9.3.5 showUserStats

```
void StatisticsWindow::showUserStats ()  [private], [slot]
```

showing the user stats after clicking the button Slot that retrieves and displays statistics for selected user

4.9.4 Member Data Documentation

4.9.4.1 backToMainButton

```
QPushButton* StatisticsWindow::backToMainButton  [private]
```

button to click to go back to main UI navigation element to return to main menu

4.9.4.2 gamesPlayedStats

```
QLabel* StatisticsWindow::gamesPlayedStats  [private]
```

the number of games played of the user Display label showing total games played statistic

4.9.4.3 gamesWinRateStats

```
QLabel* StatisticsWindow::gamesWinRateStats  [private]
```

the win rate of the user Display label showing win percentage (wins/games played)

4.9.4.4 gamesWinStats

```
QLabel* StatisticsWindow::gamesWinStats  [private]
```

the number of games win of the user Display label showing total games won statistic

4.9.4.5 guessHitRateStats

```
QLabel* StatisticsWindow::guessHitRateStats  [private]
```

the guess hit rate of the user Display label showing guess accuracy percentage (hits/total)

4.9.4.6 guessHitStats

```
QLabel* StatisticsWindow::guessHitStats  [private]
```

the number of correct guess of the user Display label showing correct guesses statistic

4.9.4.7 guessTotalStats

```
QLabel* StatisticsWindow::guessTotalStats  [private]
```

the number of guess total of the user Display label showing total guesses made statistic

4.9.4.8 showUserStatsButton

```
QPushButton* StatisticsWindow::showUserStatsButton  [private]
```

the button to show the user stats after choosing in drop down menu Triggers update of statistics display for selected user

4.9.4.9 username

```
QString StatisticsWindow::username  [private]
```

the username of the user Stores the currently selected username

4.9.4.10 usernameComboBox

```
QComboBox* StatisticsWindow::usernameComboBox  [private]
```

the drop down box of usernames Selection widget for choosing which user's statistics to display

4.9.4.11 usernameTitle

```
QLabel* StatisticsWindow::usernameTitle  [private]
```

title of username Display label showing selected user's name

4.9.4.12 users

```
User* StatisticsWindow::users  [private]
```

the users instance Singleton reference to access user data and statistics

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

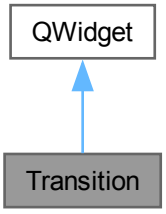
- include/statisticswindow.h
- src/statisticswindow.cpp

4.10 Transition Class Reference

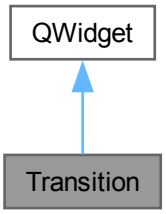
A widget for displaying a transition message and a button to continue.

`#include <transition.h>`

Inheritance diagram for Transition:



Collaboration diagram for Transition:



Signals

- void continueClicked ()

  Signal emitted when the continue button is clicked.

Public Member Functions

- Transition (QWidget *parent=nullptr)

  Constructor for the Transition class.
- ~Transition ()

  Destructor for the Transition class.
- void setMessage (const QString &message)

  Sets the message to be displayed.

Private Attributes

- QLabel * messageLabel

  The label that displays the transition message.
- QPushButton * continueButton

  The button that allows the user to continue.

4.10.1 Detailed Description

A widget for displaying a transition message and a button to continue.

This class contains a QLabel for the message and a QPushButton to continue. It emits a signal when the button is clicked.

Author

Group 9

4.10.2 Constructor & Destructor Documentation

4.10.2.1 Transition()

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

Constructor for the Transition class.

This constructor sets up the layout and initializes the widgets. It connects the button to the continueClicked signal.

Parameters

parent	The parent widget.

4.10.2.2 ~Transition()

```
Transition::~Transition ()
```

Destructor for the Transition class.

This destructor cleans up the resources used by the class. It does not need to explicitly delete the widgets as they are managed by Qt's parent-child system.

4.10.3 Member Function Documentation

4.10.3.1 continueClicked

```
void Transition::continueClicked ()  [signal]
```

Signal emitted when the continue button is clicked.

This signal is emitted when the user clicks the continue button in the transition screen. After this signal is emitted, the game can proceed to the next state.

4.10.3.2 setMessage()

```
void Transition::setMessage (
            const QString & message)
```

Sets the message to be displayed.

This function updates the text of the message label shown in the transition screen UI.

Parameters

message	The message text.

4.10.4 Member Data Documentation

4.10.4.1 continueButton

```
QPushButton* Transition::continueButton  [private]
```

The button that allows the user to continue.

4.10.4.2 messageLabel

```
QLabel* Transition::messageLabel  [private]
```

The label that displays the transition message.

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

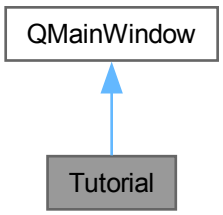
- include/transition.h
- src/transition.cpp

4.11 Tutorial Class Reference

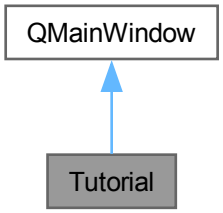
The tutorial window that guides users through the game mechanics.

```
#include <tutorial.h>
```

Inheritance diagram for Tutorial:



Collaboration diagram for Tutorial:



Signals

- void tutorialClosed ()

  Signal emitted when the tutorial is closed.

Public Member Functions

- Tutorial (QWidget ∗parent=nullptr)

  Constructor for Tutorial.
- ∼Tutorial ()

  Destructor for Tutorial.

Protected Member Functions

- void closeEvent (QCloseEvent ∗event) override

  Handles the close event.

Private Slots

- void onContinueClicked ()

  Handles the continue button click event.

Private Member Functions

- void updateContinueButtonPosition ()

  Updates the position of the continue button.
- void resetTutorial ()

  Resets the tutorial to its initial state.

Private Attributes

- QWidget * centralWidget

  Pointer to the central widget.
- QLabel * titleLabel

  Label for the tutorial title.
- QLabel * textBox

  Label for displaying tutorial text.
- QPushButton * continueButton

  Button for continuing through the tutorial.
- int clickCount

  Counter for continue button clicks.

4.11.1 Detailed Description

The tutorial window that guides users through the game mechanics.

4.11.2 Constructor & Destructor Documentation

4.11.2.1 Tutorial()

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

Constructor for Tutorial.

Parameters

parent	The parent widget (default is nullptr).

4.11.2.2 ~Tutorial()

```
Tutorial::~Tutorial ()
```

Destructor for Tutorial.

4.11.3 Member Function Documentation

4.11.3.1 closeEvent()

```
void Tutorial::closeEvent (
            QCloseEvent * event)  [override], [protected]
```

Handles the close event.

Parameters

event	Pointer to the close event.

4.11.3.2 onContinueClicked

```
void Tutorial::onContinueClicked ()  [private], [slot]
```

Handles the continue button click event.

4.11.3.3 resetTutorial()

```
void Tutorial::resetTutorial ()  [private]
```

Resets the tutorial to its initial state.

4.11.3.4 tutorialClosed

```
void Tutorial::tutorialClosed ()  [signal]
```

Signal emitted when the tutorial is closed.

4.11.3.5 updateContinueButtonPosition()

```
void Tutorial::updateContinueButtonPosition ()  [private]
```

Updates the position of the continue button.

4.11.4 Member Data Documentation

4.11.4.1 centralWidget

```
QWidget* Tutorial::centralWidget  [private]
```

Pointer to the central widget.

4.11.4.2 clickCount

```
int Tutorial::clickCount  [private]
```

Counter for continue button clicks.

4.11.4.3 continueButton

```
QPushButton* Tutorial::continueButton  [private]
```

Button for continuing through the tutorial.

4.11.4.4 textBox

```
QLabel* Tutorial::textBox  [private]
```

Label for displaying tutorial text.

4.11.4.5 titleLabel

```
QLabel* Tutorial::titleLabel  [private]
```

Label for the tutorial title.

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

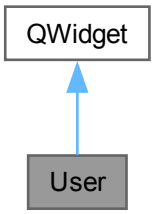
- include/tutorial.h
- src/tutorial.cpp

4.12 User Class Reference

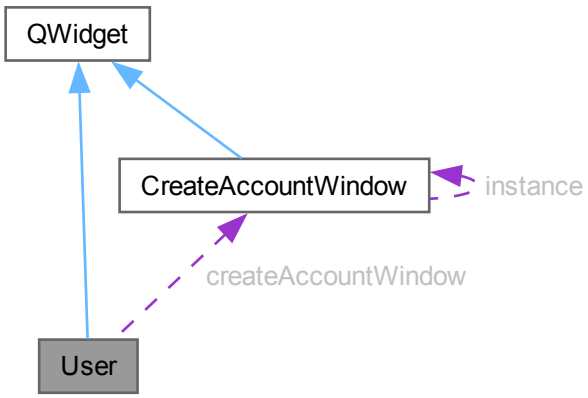
User class to handle local log in and loading/storing json files. This is a singleton class to ensure only one instance of user management exists. Manages user profiles, statistics, and authentication.

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

Inheritance diagram for User:



Collaboration diagram for User:



Public Slots

- void show ()

  show the current screen Makes the user login UI visible

Signals

- void backToMainMenu ()

  signal to go to main menu Emitted when user successfully logs in or cancels login

Public Member Functions

- ~User ()

  Destructor of user class Cleans up resources when User object is destroyed.
- void updateGamesPlayed (const QString &username, const unsigned int &newGamesPlayed)

  Update the number of games played by a user Modifies user statistics and saves to profile.
- unsigned int getGamesPlayed (const QString &username) const

  Get the number of games played by a user Retrieves game count from user profile.
- void updateWins (const QString &username, const unsigned int &newWins)

  Update the number of wins a user has Modifies win statistics and saves to profile.
- unsigned int getWins (const QString &username) const

  Get the number of wins the user has Retrieves win count from user profile.
- float getWinRate (const QString &username) const

  Get the win rate of the user (games_win/games_played) Calculates win percentage based on games played and won.
- void updateGuessTotal (const QString &username, const unsigned int &newGuessTotal)

  Update the total of guesses the user has Modifies guess statistics and saves to profile.
- unsigned int getGuessTotal (const QString &username) const

  Get the total number of guesses the user has Retrieves guess count from user profile.
- void updateGuessHit (const QString &username, const unsigned int &newGuessHit)

Update the number times the user guess correctly Modifies correct guess statistics and saves to profile.

- unsigned int getGuessHit (const QString &username) const

  Get the number of times the user guess correctly Retrieves correct guess count from user profile.
- float getHitRate (const QString &username)

  Get the rate the user guess correctly (guess_hit/guess_total) Calculates accuracy percentage based on total guesses and correct guesses.
- void renameUser (const QString &oldUsername, const QString &newUsername)

  Rename the user Changes username in profile while preserving statistics.
- void won (const QString &username)

  Change the games played total and games played win of the user when they won Convenience method to update multiple statistics after a win.
- void lost (const QString &username)

  Change the games played total of the user when they lost Convenience method to update statistics after a loss.
- void hit (const QString &username)

  Change the guess total and guess hit of the user when they guess correctly Convenience method to update multiple statistics after a correct guess.
- void miss (const QString &username)

  Change the guess total of the user when they guess incorrectly Convenience method to update statistics after an incorrect guess.
- QJsonObject loadJsonFile ()

  loading the info of the users Reads user profiles from JSON storage

Static Public Member Functions

- static User ∗ instance (QWidget ∗parent=nullptr)

  Getting the instance of user (Singleton pattern implementation) Ensures only one instance of User class exists throughout the application.

Private Slots

- void handleLogin ()

  log in the user Handles authentication and session creation
- void refreshUserDropdown ()

  refresh user info in the drop down menu Updates UI with latest user list
- void handleCreateAccount ()

  create user account Opens account creation window
- void showMainMenu ()

  show the main menu Returns to main application screen

Private Member Functions

- User (QWidget ∗parent=nullptr)

  Constructor of the User instance Private to enforce singleton pattern.
- void populateUsernameComboBox (const QJsonObject &jsonObject)

  update the usernames in the drop down when creating new users Refreshes UI with current user list

Private Attributes

- CreateAccountWindow * createAccountWindow
  variable that stores the create account window Manages account creation UI
- QString jsonFilePath = "resources/profile.json"
  the path of the users info Location of JSON profile storage
- QPushButton * backButton
  the button to go back UI element for navigation
- QPushButton * createAccountButton
  the button to create account UI element to open account creation
- QComboBox * usernameComboBox
  the drop down box of the usernames of the users UI element for user selection
- QLabel * jsonContentLabel
  the text to show the debug UI element for displaying information
- QPushButton * loginButton
  the button to log in UI element for authentication

4.12.1 Detailed Description

User class to handle local log in and loading/storing json files. This is a singleton class to ensure only one instance of user management exists. Manages user profiles, statistics, and authentication.

4.12.2 Constructor & Destructor Documentation

4.12.2.1 ~User()

```
User::~User ()
```

Destructor of user class Cleans up resources when User object is destroyed.

4.12.2.2 User()

```
User::User (
            QWidget * parent = nullptr)  [explicit], [private]
```

Constructor of the User instance Private to enforce singleton pattern.

Parameters

parent	the parent QWidget for memory management

4.12.3 Member Function Documentation

4.12.3.1 backToMainMenu

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

signal to go to main menu Emitted when user successfully logs in or cancels login

4.12.3.2 getGamesPlayed()

```
unsigned int User::getGamesPlayed (
            const QString & username) const
```

Get the number of games played by a user Retrieves game count from user profile.

Parameters

username	username of the user

Returns

`unsigned int` the number of games played

4.12.3.3 getGuessHit()

```
unsigned int User::getGuessHit (
            const QString & username) const
```

Get the number of times the user guess correctly Retrieves correct guess count from user profile.

Parameters

username	username of the user

Returns

`unsigned int` the number of times the user guess correctly

4.12.3.4 getGuessTotal()

```
unsigned int User::getGuessTotal (
            const QString & username) const
```

Get the total number of guesses the user has Retrieves guess count from user profile.

Parameters

username	username of the user

Returns

`unsigned int` the total number of guesses the user has

4.12.3.5 getHitRate()

```
float User::getHitRate (
            const QString & username)
```

Get the rate the user guess correctly (guess_hit/guess_total) Calculates accuracy percentage based on total guesses and correct guesses.

Parameters

username	username of the user

Returns

`float` the rate the user guess correctly (guess_hit/guess_total)

4.12.3.6 getWinRate()

```
float User::getWinRate (
            const QString & username) const
```

Get the win rate of the user (games_win/games_played) Calculates win percentage based on games played and won.

Parameters

username	the username of a user

Returns

`float` win rate of the user (games_win/games_played)

4.12.3.7 getWins()

```
unsigned int User::getWins (
            const QString & username) const
```

Get the number of wins the user has Retrieves win count from user profile.

Parameters

username	username of the user

Returns

`unsigned int` the number of wins the user has

4.12.3.8 handleCreateAccount

```
void User::handleCreateAccount ()  [private], [slot]
```

create user account Opens account creation window

4.12.3.9 handleLogin

```
void User::handleLogin ()  [private], [slot]
```

log in the user Handles authentication and session creation

4.12.3.10 hit()

```
void User::hit (
            const QString & username)
```

Change the guess total and guess hit of the user when they guess correctly Convenience method to update multiple statistics after a correct guess.

Parameters

username	username of the user

4.12.3.11 instance()

```
User * User::instance (
            QWidget * parent = nullptr)  [static]
```

Getting the instance of user (Singleton pattern implementation) Ensures only one instance of User class exists throughout the application.

Parameters

parent	parent QWidget for ownership hierarchy

Returns

`*User` Pointer to the single User instance

4.12.3.12 loadJsonFile()

```
QJsonObject User::loadJsonFile ()
```

loading the info of the users Reads user profiles from JSON storage

Returns

`QJsonObject` the info of the user in json format

4.12.3.13 lost()

```
void User::lost (
            const QString & username)
```

Change the games played total of the user when they lost Convenience method to update statistics after a loss.

Parameters

username	username of the user

4.12.3.14 miss()

```
void User::miss (
            const QString & username)
```

Change the guess total of the user when they guess incorrectly Convenience method to update statistics after an incorrect guess.

Parameters

username	username of the user

4.12.3.15 populateUsernameComboBox()

```
void User::populateUsernameComboBox (
            const QJsonObject & jsonObject)  [private]
```

update the usernames in the drop down when creating new users Refreshes UI with current user list

Parameters

jsonObject	the json of the users

4.12.3.16 refreshUserDropdown

```
void User::refreshUserDropdown ()  [private], [slot]
```

refresh user info in the drop down menu Updates UI with latest user list

4.12.3.17 renameUser()

```
void User::renameUser (
            const QString & oldUsername,
            const QString & newUsername)
```

Rename the user Changes username in profile while preserving statistics.

Parameters

oldUsername	old username of the user
newUsername	new username of the user

4.12.3.18 show

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

show the current screen Makes the user login UI visible

4.12.3.19 showMainMenu

```
void User::showMainMenu ()  [private], [slot]
```

show the main menu Returns to main application screen

4.12.3.20 updateGamesPlayed()

```
void User::updateGamesPlayed (
            const QString & username,
            const unsigned int & newGamesPlayed)
```

Update the number of games played by a user Modifies user statistics and saves to profile.

Parameters

username	username of the user to update
newGamesPlayed	the new number of games played by a user

4.12.3.21 updateGuessHit()

```
void User::updateGuessHit (
            const QString & username,
            const unsigned int & newGuessHit)
```

Update the number times the user guess correctly Modifies correct guess statistics and saves to profile.

Parameters

username	username of the user
newGuessHit	the number of times the user guess correctly

4.12.3.22 updateGuessTotal()

```
void User::updateGuessTotal (
            const QString & username,
            const unsigned int & newGuessTotal)
```

Update the total of guesses the user has Modifies guess statistics and saves to profile.

Parameters

username	username of the user
newGuessTotal	the new total number of guesses the user has

4.12.3.23 updateWins()

```
void User::updateWins (
            const QString & username,
            const unsigned int & newWins)
```

Update the number of wins a user has Modifies win statistics and saves to profile.

Parameters

username	username of the user
newWins	the new number of wins the user has

4.12.3.24 won()

```
void User::won (
            const QString & username)
```

Change the games played total and games played win of the user when they won Convenience method to update multiple statistics after a win.

Parameters

username	username of the user

4.12.4 Member Data Documentation

4.12.4.1 backButton

```
QPushButton* User::backButton  [private]
```

the button to go back UI element for navigation

4.12.4.2 createAccountButton

```
QPushButton* User::createAccountButton  [private]
```

the button to create account UI element to open account creation

4.12.4.3 createAccountWindow

```
CreateAccountWindow* User::createAccountWindow  [private]
```

variable that stores the create account window Manages account creation UI

4.12.4.4 jsonContentLabel

```
QLabel* User::jsonContentLabel  [private]
```

the text to show the debug UI element for displaying information

4.12.4.5 jsonFilePath

```
QString User::jsonFilePath = "resources/profile.json"  [private]
```

the path of the users info Location of JSON profile storage

4.12.4.6 loginButton

```
QPushButton* User::loginButton  [private]
```

the button to log in UI element for authentication

4.12.4.7 usernameComboBox

```
QComboBox* User::usernameComboBox  [private]
```

the drop down box of the usernames of the users UI element for user selection

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

- include/user.h
- src/user.cpp

Chapter 5

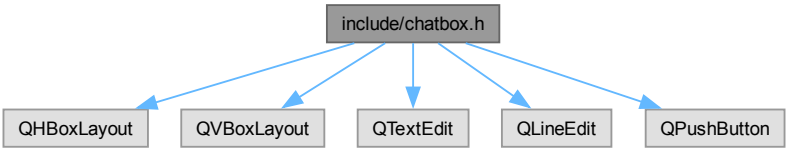
File Documentation

5.1 include/chatbox.h File Reference

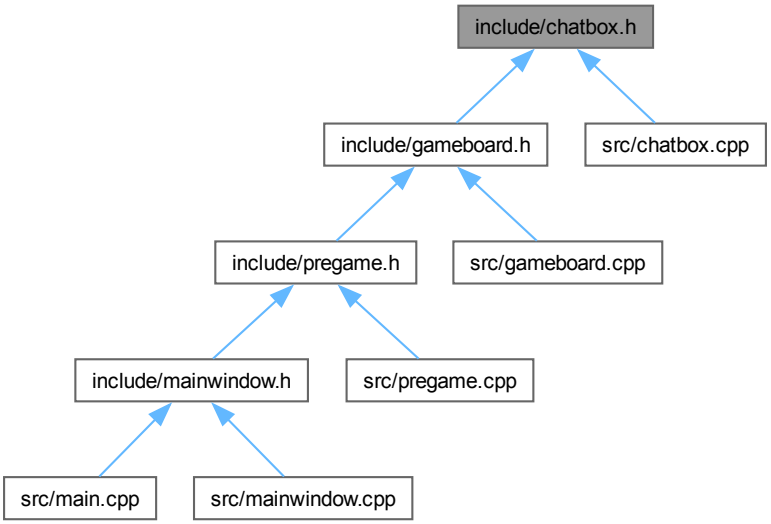
Header file for the ChatBox class, which provides a UI for the chat feature in the game.

```
#include <QHBoxLayout>
#include <QVBoxLayout>
#include <QTextEdit>
#include <QLineEdit>
#include <QPushButton>
```

Include dependency graph for chatbox.h:



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



Classes

- class ChatBox

  A widget for the chat feature in the game.

5.1.1 Detailed Description

Header file for the ChatBox class, which provides a UI for the chat feature in the game.

Author

Matthew Marbina (Group 9)

Version

0.1

Date

2025-03-30

Copyright

5.2 chatbox.h

Go to the documentation of this file.

```
00001
00010 #ifndef CHATBOX_H
00011 #define CHATBOX_H
00012
00013 #include <QHBoxLayout>
00014 #include <QVBoxLayout>
00015 #include <QTextEdit>
00016 #include <QLineEdit>
00017 #include <QPushButton>
00018
00028 class ChatBox : public QWidget {
00029     Q_OBJECT
00030
00031 public:
00038     enum Team {
00039         RED_TEAM,
00040         BLUE_TEAM
00041     };
00042
00051     explicit ChatBox(const QString& playerName, Team team, QWidget* parent = nullptr);
00052
00058     ~ChatBox();
00059
00067     void addSystemMessage(const QString& message, Team team);
00068
00075     void addPlayerMessage(const QString& playerName, const QString& message);
00076
00082     void setPlayerName(const QString& name);
00083
00088     void clearChat();
00089
00095     void limitReachedMessage();
00096
00097 public slots:
00103     void sendMessage();
00104 signals:
00112     void massSend(const QString& playerName, const QString& message);
00113
00114 private:
00118     Team team;
00119
00123     QTextEdit* chatDisplay;
00124
00128     QLineEdit* chatInput;
00129
00133     QPushButton* sendButton;
00134
00138     QString playerName;
00139 };
00140
00141 #endif // CHATBOX_H
```

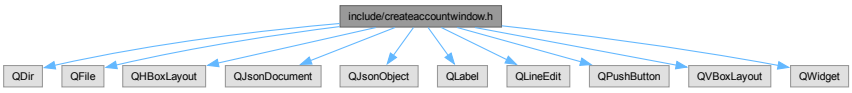
5.3 include/createaccountwindow.h File Reference

Header file for the CreateAccountWindow class which handles user account creation.

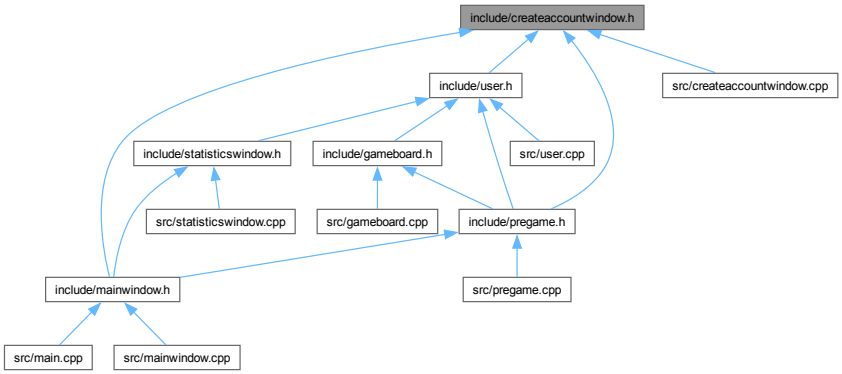
```
#include <QDir>
#include <QFile>
#include <QHBoxLayout>
#include <QJsonDocument>
#include <QJsonObject>
#include <QLabel>
#include <QLineEdit>
#include <QPushButton>
#include <QVBoxLayout>
```

```
#include <QWidget>
```

Include dependency graph for createaccountwindow.h:



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



Classes

- class CreateAccountWindow

  The CreateAccountWindow class provides a singleton interface for creating new user accounts This window allows users to input a username and creates a profile JSON file for the new account.

5.3.1 Detailed Description

Header file for the CreateAccountWindow class which handles user account creation.

Author

Team 9 - UWO CS 3307

Version

0.1

Date

2025-03-30

Copyright

Copyright (c) 2025

5.4 createaccountwindow.h

Go to the documentation of this file.

```
00001
00012
00013 #ifndef CREATEACCOUNTWINDOW_H
00014 #define CREATEACCOUNTWINDOW_H
00015
00016 #include <QDir>
00017 #include <QFile>
00018 #include <QHBoxLayout>
00019 #include <QJsonDocument>
00020 #include <QJsonObject>
00021 #include <QLabel>
00022 #include <QLineEdit>
00023 #include <QPushButton>
00024 #include <QVBoxLayout>
00025 #include <QWidget>
00026
00032 class CreateAccountWindow : public QWidget {
00033   Q_OBJECT
00034
00035  public:
00043   static CreateAccountWindow* getInstance(QWidget* parent = nullptr);
00044
00051   void setPreviousScreen(QWidget* previous);
00052
00053  public slots:
00058   void show();
00059
00060  private:
00067   explicit CreateAccountWindow(QWidget* parent = nullptr);
00068
00073   static CreateAccountWindow* instance;
00074
00075  private slots:
00080   void onCreateAccountClicked();
00081
00086   void goBack();
00087
00088  signals:
00093   void back();
00094
00099   void accountCreated();
00100
00101  private:
00108   void saveJsonFile(const QString& username);
00109
00113   QLineEdit* usernameEdit;
00114
00118   QPushButton* createAccountButton;
00119
00123   QLabel* statusLabel;
00124
00129   QString jsonFilePath = "resources/profile.json";  // Update path as necessary
00130
00135   QWidget* previousScreen = nullptr;
00136 };
00137
00138 #endif  // CREATEACCOUNTWINDOW_H
```

5.5 include/gameboard.h File Reference

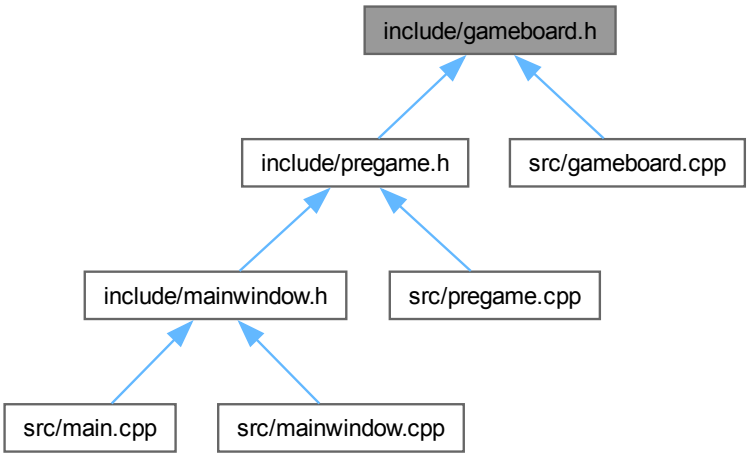
Header file for the GameBoard class, which implements a game board for the Spy Master game.

```
#include <QDebug>
#include <QFile>
#include <QGridLayout>
#include <QLabel>
#include <QMessageBox>
#include <QPushButton>
#include <QRandomGenerator>
#include <QStackedLayout>
```

```
#include <QStringList>
#include <QTextStream>
#include <QVBoxLayout>
#include <QWidget>
#include "chatbox.h"
#include "operatorguess.h"
#include "spymasterhint.h"
#include "transition.h"
#include "user.h"
```

Include dependency graph for gameboard.h:

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



Classes

- class GameBoard

  A class representing the game board for the Spy Master game.
- struct GameBoard::Card

  Structure representing a card in the game grid.

5.5.1 Detailed Description

Header file for the GameBoard class, which implements a game board for the Spy Master game.

Author

Group 9

5.6 gameboard.h

Go to the documentation of this file.

```
00001
00007
00008 #ifndef GAMEBOARD_H
00009 #define GAMEBOARD_H
00010
00011 #include <QDebug>
00012 #include <QFile>
00013 #include <QGridLayout>
00014 #include <QLabel>
00015 #include <QMessageBox>
00016 #include <QPushButton>
00017 #include <QRandomGenerator>
00018 #include <QStackedLayout>
00019 #include <QStringList>
00020 #include <QTextStream>
00021 #include <QVBoxLayout>
00022 #include <QWidget>
00023
00024 #include "chatbox.h"
00025 #include "operatorguess.h"
00026 #include "spymasterhint.h"
00027 #include "transition.h"
00028 #include "user.h"
00029
00044
00045 class GameBoard : public QWidget {
00046   Q_OBJECT
00047
00048  public:
00064   explicit GameBoard(const QString& redSpyMaster, const QString& redOperative,
00065                      const QString& blueSpyMaster, const QString& blueOperative,
00066                      QWidget* parent = nullptr);
00067
00075   ~GameBoard();
00076
00086   void setRedSpyMasterName(const QString& name);
00087
00098   void setRedOperativeName(const QString& name);
00099
00110   void setBlueSpyMasterName(const QString& name);
00111
00122   void setBlueOperativeName(const QString& name);
00123
00132   void updateTeamLabels();
00133
00134  signals:
00143   void gameEnded();
00144
00145  public slots:
00153   void show();
00154
00166   void displayHint(const QString& hint, int number);
00167
00176   void displayGuess();
00177
00178  private:
00186   void loadWordsFromFile();
00187
00195   void generateGameGrid();
00196
00205   void setupUI();
00206
00214   void nextTurn();
00215
00226   void onCardClicked(int row, int col);
00227
00235   void onContinueClicked();
00236
00244   void showTransition();
00245
00254   void updateScores();
00255
00264   void checkGameEnd();
00265
00275   void endGame(const QString& message);
00276
00284   void resetGame();
00285
00290   enum CardType { RED_TEAM, BLUE_TEAM, NEUTRAL, ASSASSIN };
00291
00297   enum Turn { RED_SPY, RED_OP, BLUE_SPY, BLUE_OP };
00298
```

```
00304   struct Card {
00305     QString word;
00306     CardType type;
00307     bool revealed;
00308   };
00309
00311   int currentTurn;
00313   int redCardsRemaining;
00315   int blueCardsRemaining;
00316
00318   int maxGuesses = 0;
00320   int currentGuesses = 0;
00321
00323   QString redSpyMasterName;
00325   QString redOperativeName;
00327   QString blueSpyMasterName;
00329   QString blueOperativeName;
00330
00332   static const int GRID_SIZE = 5;
00334   Card gameGrid[GRID_SIZE][GRID_SIZE];
00336   QStringList wordList;
00337
00339   QGridLayout* gridLayout;
00341   QPushButton* cards[GRID_SIZE][GRID_SIZE];
00342
00344   QLabel* redTeamLabel;
00346   QLabel* blueTeamLabel;
00348   QLabel* currentTurnLabel;
00349
00351   SpymasterHint* spymasterHint;
00353   OperatorGuess* operatorGuess;
00355   QLabel* currentHint;
00357   QString correspondingNumber;
00358
00360   Transition* transition;
00361
00363   QLabel* redScoreLabel;
00365   QLabel* blueScoreLabel;
00366
00368   ChatBox* chatBox;
00370   QString currentPlayerName;
00372   ChatBox::Team currentPlayerTeam;
00374   User* users;
00375 };
00376
00377 #endif  // GAMEBOARD_H
```

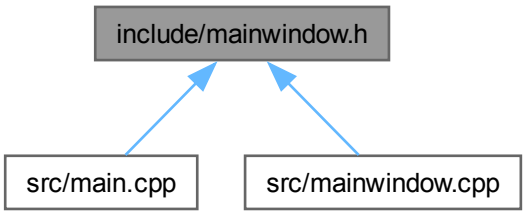
5.7 include/mainwindow.h File Reference

Declaration of the MainWindow class.

```
#include <QGraphicsDropShadowEffect>
#include <QGuiApplication>
#include <QLabel>
#include <QMainWindow>
#include <QPalette>
#include <QPixmap>
#include <QPushButton>
#include <QScreen>
#include <QVBoxLayout>
#include "createaccountwindow.h"
#include "pregame.h"
#include "statisticswindow.h"
#include "tutorial.h"
```

Include dependency graph for mainwindow.h:

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



Classes

- class MainWindow

  The main application window.

5.7.1 Detailed Description

Declaration of the MainWindow class.

5.8 mainwindow.h

Go to the documentation of this file.

```
00001
00005
00006 #ifndef MAINWINDOW_H
00007 #define MAINWINDOW_H
00008
00009 #include <QGraphicsDropShadowEffect>
00010 #include <QGuiApplication>
00011 #include <QLabel>
00012 #include <QMainWindow>
00013 #include <QPalette>
00014 #include <QPixmap>
00015 #include <QPushButton>
00016 #include <QScreen>
00017 #include <QVBoxLayout>
00018
00019 #include "createaccountwindow.h"
00020 #include "pregame.h"
00021 #include "statisticswindow.h"
00022 #include "tutorial.h"
00023
00024 class PreGame;
00025 class CreateAccountWindow;
00026 class StatisticsWindow;
00027 class Tutorial;
00028
00033 class MainWindow : public QMainWindow {
00034   Q_OBJECT
00035
00036  public:
00041   explicit MainWindow(QWidget* parent = nullptr);
00042
00046   ~MainWindow();
00047
00048  public slots:
00052   void showMainWindow();
```

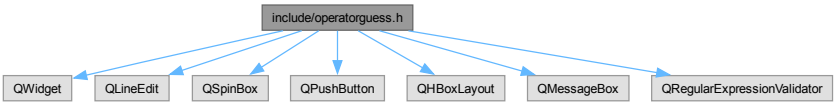
```
00053
00054  private slots:
00058   void openPreGame();
00059
00063   void openStatsWindow();
00064
00068   void openCreateAccount();
00069
00073   void openTutorial();
00074
00078   void openMultiMain();
00079
00080  private:
00081   QWidget* centralWidget;
00083   QVBoxLayout* layout;
00084
00085   QLabel* titleLabel;
00086
00087   PreGame* preGameWindow;
00089   QPushButton* localPlayButton;
00090   QPushButton* onlinePlayButton;
00091   QPushButton* tutorialButton;
00092   QPushButton* statsButton;
00093   QPushButton*
00094       createAccountButton;
00095
00096   CreateAccountWindow*
00097       createAccountWindow;
00098   StatisticsWindow*
00099       statsWindow;
00100   Tutorial* tutorialWindow;
00102 };
00103
00104 #endif  // MAINWINDOW_H
```

5.9 include/operatorguess.h File Reference

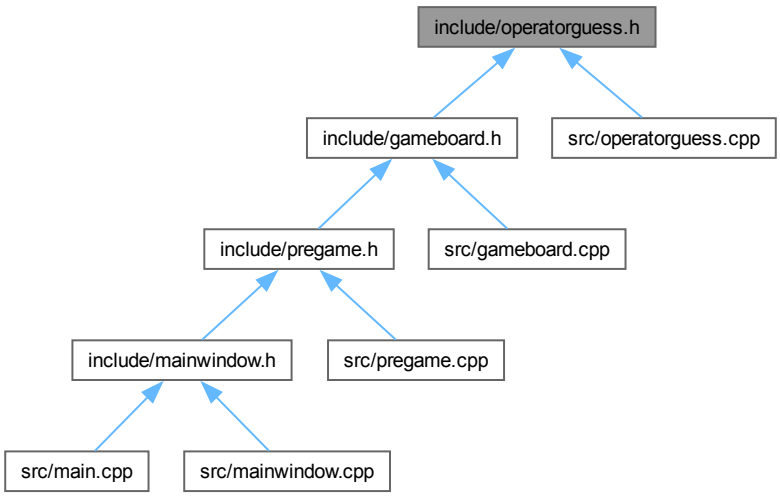
Header file for the OperatorGuess class, which handles operator guessing interface.

```
#include <QWidget>
#include <QLineEdit>
#include <QSpinBox>
#include <QPushButton>
#include <QHBoxLayout>
#include <QMessageBox>
#include <QRegularExpressionValidator>
```

Include dependency graph for operatorguess.h:



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



Classes

- class OperatorGuess

  A widget that provides the interface for operators to submit guesses during gameplay.

5.9.1 Detailed Description

Header file for the OperatorGuess class, which handles operator guessing interface.

Author

Group 9

5.10 operatorguess.h

Go to the documentation of this file.

```
00001
00006
00007 #ifndef OPERATORGUESS_H
00008 #define OPERATORGUESS_H
00009
00010 #include <QWidget>
00011 #include <QLineEdit>
00012 #include <QSpinBox>
00013 #include <QPushButton>
00014 #include <QHBoxLayout>
00015 #include <QMessageBox>
00016 #include <QRegularExpressionValidator>
00017
00028 class OperatorGuess : public QWidget {
00029     Q_OBJECT
00030
00031 public:
00042     explicit OperatorGuess(QWidget* parent = nullptr);
```

```
00043
00051     ~OperatorGuess();
00052
00061     void reset();
00062
00063 signals:
00070     void guessSubmitted();
00071
00072 private slots:
00081     void submitGuess();
00082
00083 private:
00084
00086     QPushButton* submitGuessButton;
00087 };
00088
00089 #endif // OPERATORGUESS_H
```

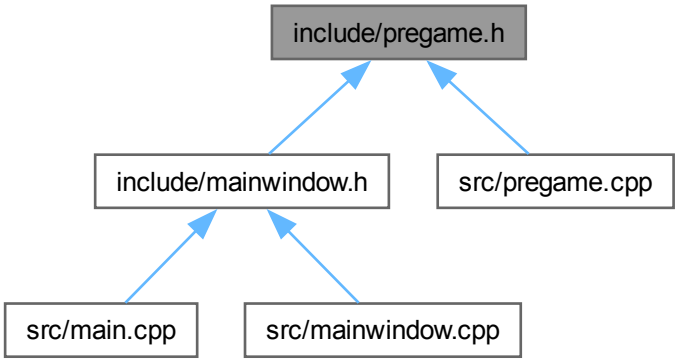
5.11 include/pregame.h File Reference

Header file for the PreGame class which handles the game setup screen.

```
#include <QComboBox>
#include <QDebug>
#include <QGuiApplication>
#include <QHBoxLayout>
#include <QLabel>
#include <QLineEdit>
#include <QPushButton>
#include <QScreen>
#include <QVBoxLayout>
#include <QWidget>
#include "createaccountwindow.h"
#include "gameboard.h"
#include "user.h"
```

Include dependency graph for pregame.h:

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



Classes

- class PreGame

  The PreGame class provides the interface for setting up a new game This includes selecting players for each team and role before starting the game.

5.11.1 Detailed Description

Header file for the PreGame class which handles the game setup screen.

Author

Team 9 - UWO CS 3307

Version

0.1

Date

2025-03-30

Copyright

Copyright (c) 2025

5.12 pregame.h

Go to the documentation of this file.

```
00001
00011
00012 #ifndef PREGAME_H
00013 #define PREGAME_H
00014
00015 #include <QComboBox>
00016 #include <QDebug>
00017 #include <QGuiApplication>
00018 #include <QHBoxLayout>
00019 #include <QLabel>
00020 #include <QLineEdit>
00021 #include <QPushButton>
00022 #include <QScreen>
00023 #include <QVBoxLayout>
00024 #include <QWidget>
00025
00026 #include "createaccountwindow.h"
00027 #include "gameboard.h"
00028 #include "user.h"
00029
00030 class User;
00031 class CreateAccountWindow;
00032
00038 class PreGame : public QWidget {
00039   Q_OBJECT
00040
00041  public:
00047   explicit PreGame(QWidget* parent = nullptr);
00048
00053   ~PreGame();
00054
00060   QString getRedTeamSpyMasterNickname() const;
00061
00067   QString getRedTeamOperativeNickname() const;
00068
00074   QString getBlueTeamSpyMasterNickname() const;
00075
00081   QString getBlueTeamOperativeNickname() const;
00082
00083  public slots:
00088   void show();
00089
00090  private:
00097   void populateUserDropdowns();
00098
00099  private slots:
00105   void goBackToMain();
00106
00112   void startGame();
00113
00119   void handleGameEnd();
00120
00126   void openCreateAccount();
00127
00128  signals:
00134   void backToMainWindow();
00135
00141   void start();
00142
00148   void update();
00149
00150  private:
00156   User* users;
00157
00163   QStringList usernames;
00164
00170   CreateAccountWindow* createAccountWindow;
00171
00176   QLabel* label;
00177
00182   QPushButton* backButton;
00183
00188   QPushButton* createAccountButton;
00189
00194   QPushButton* startButton;
00195
00200   QComboBox* redTeamSpyMasterComboBox;
00201
00206   QComboBox* redTeamOperativeComboBox;
00207
00212   QComboBox* blueTeamSpyMasterComboBox;
00213
```

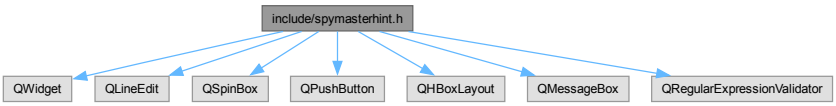
```
00218   QComboBox* blueTeamOperativeComboBox;
00219
00224   QVBoxLayout* layout;
00225
00230   QHBoxLayout* teamsLayout;
00231
00236   QVBoxLayout* redTeamLayout;
00237
00242   QVBoxLayout* blueTeamLayout;
00243
00248   QHBoxLayout* buttonsLayout;
00249
00254   GameBoard* gameBoard;
00255 };
00256
00257 #endif  // PREGAME_H
```

5.13 include/spymasterhint.h File Reference

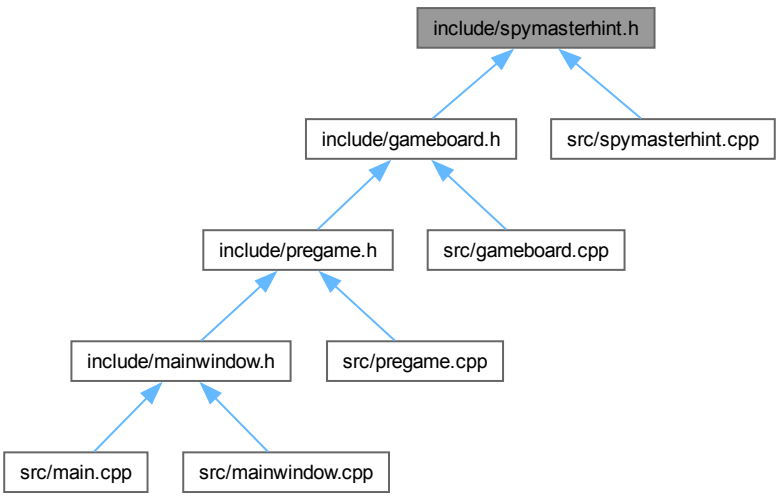
Header file for the SpymasterHint class, which provides a UI for the spymaster to give hints.

```
#include <QWidget>
#include <QLineEdit>
#include <QSpinBox>
#include <QPushButton>
#include <QHBoxLayout>
#include <QMessageBox>
#include <QRegularExpressionValidator>
```

Include dependency graph for spymasterhint.h:



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



Classes

- class SpymasterHint

  A widget for the spymaster to input a hint and the number of words associated with it.

5.13.1 Detailed Description

Header file for the SpymasterHint class, which provides a UI for the spymaster to give hints.

Author

Matthew Marbina (Group 9)

Version

0.1

Date

2025-03-30

Copyright

Copyright (c) 2025

5.14 spymasterhint.h

Go to the documentation of this file.

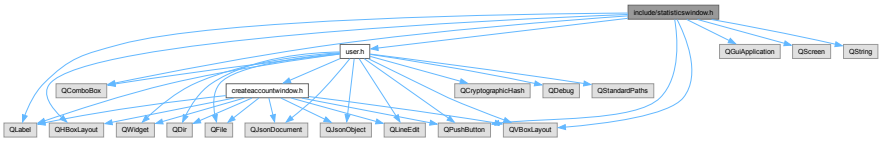
```
00001
00010 #ifndef SPYMASTERHINT_H
00011 #define SPYMASTERHINT_H
00012
00013 #include <QWidget>
00014 #include <QLineEdit>
00015 #include <QSpinBox>
00016 #include <QPushButton>
00017 #include <QHBoxLayout>
00018 #include <QMessageBox>
00019 #include <QRegularExpressionValidator>
00020
00029 class SpymasterHint : public QWidget {
00030   Q_OBJECT
00031
00032 public:
00041   explicit SpymasterHint(QWidget* parent = nullptr);
00042
00048   ~SpymasterHint();
00049
00055   void reset();
00056
00057 signals:
00065   void hintSubmitted(const QString& hint, const int number);
00066
00067 private slots:
00073   void submitHint();
00074
00080   void updateButtonClickable();
00081
00088   void textToUppercase(const QString& text);
00089
00090 private:
00094   QLineEdit* hintLineEdit;
00095
00099   QSpinBox* numberSpinBox;
00100
00104   QPushButton* giveClueButton;
00105
00109   QRegularExpressionValidator* textValidator;
00110 };
00111
00112 #endif // SPYMASTERHINT_H
```

5.15 include/statisticswindow.h File Reference

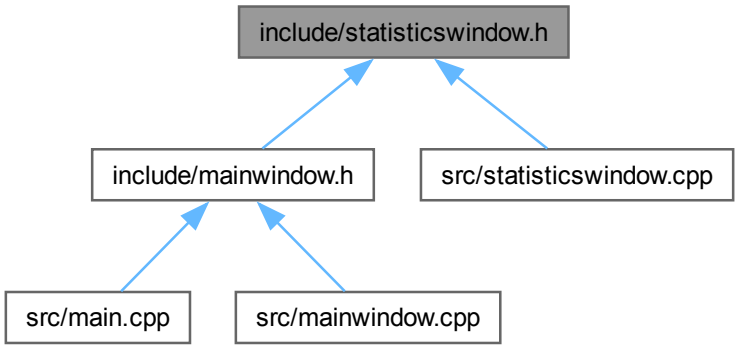
The screen to show the user's statistics.

```
#include <QComboBox>
#include <QGuiApplication>
#include <QHBoxLayout>
#include <QLabel>
#include <QPushButton>
#include <QScreen>
#include <QString>
#include <QVBoxLayout>
#include "user.h"
```

Include dependency graph for statisticswindow.h:



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



Classes

- class StatisticsWindow

  The class that shows the Statistics screen Displays game statistics for selected users including win rates and guess accuracy.

5.15.1 Detailed Description

The screen to show the user's statistics.

Author

Team 9 - UWO CS 3307

Version

0.1

Date

2025-03-30

Copyright

5.16 statisticswindow.h

Go to the documentation of this file.

```
00001
00011 #ifndef STATISTICS_WINDOW_H
00012 #define STATISTICS_WINDOW_H
00013
00014 // Qt framework includes for UI components and screen management
00015 #include <QComboBox>        // For dropdown menu of usernames
00016 #include <QGuiApplication>  // For application-level GUI functionality
00017 #include <QHBoxLayout>      // For horizontal layout arrangement
00018 #include <QLabel>           // For text display in UI
00019 #include <QPushButton>      // For button UI elements
00020 #include <QScreen>          // For screen geometry information
00021 #include <QString>          // For string handling
00022 #include <QVBoxLayout>      // For vertical layout arrangement
00023
00024 #include "user.h"  // Include for user data access
00025
00026 // Forward declaration to resolve circular dependency
00027 class User;
00028
00034 class StatisticsWindow : public QWidget {
00035   Q_OBJECT  // Qt macro for enabling signals and slots mechanism
00036
00037       signals :
00042       void
00043       backToMainWindow();
00044
00045  public:
00053   explicit StatisticsWindow(QWidget* parent = nullptr);
00054
00059   ~StatisticsWindow();
00060
00061  public slots:
00066   void show();
00067
00068  private:
00073   User* users;
00074
00079   QPushButton* backToMainButton;
00080
00085   QComboBox* usernameComboBox;
00086
00091   QPushButton* showUserStatsButton;
00092
00097   QString username;
00098
00103   QLabel* usernameTitle;
00104
00109   QLabel* gamesPlayedStats;
00110
00115   QLabel* gamesWinStats;
00116
00121   QLabel* gamesWinRateStats;
00122
```

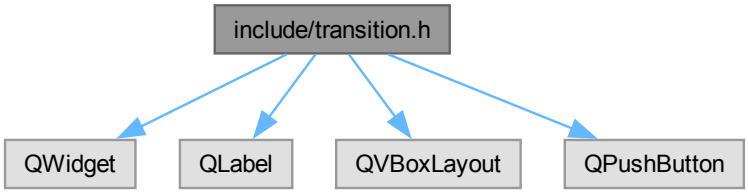
```
00127   QLabel* guessTotalStats;
00128
00133   QLabel* guessHitStats;
00134
00139   QLabel* guessHitRateStats;
00140
00141  private:
00146   void populateDropDown();
00147
00148  private slots:
00153   void goBackToMain();
00154
00159   void showUserStats();
00160 };
00161
00162 #endif  // STATISTICS_WINDOW_H
```

5.17 include/transition.h File Reference

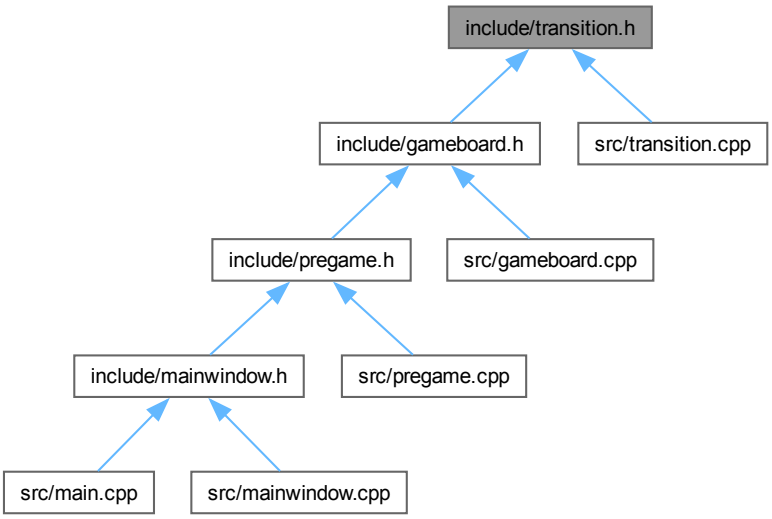
Header file for the Transition class, which provides a UI for transitions between game states.

```
#include <QWidget>
#include <QLabel>
#include <QVBoxLayout>
#include <QPushButton>
```

Include dependency graph for transition.h:



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



Classes

- class Transition

  A widget for displaying a transition message and a button to continue.

5.17.1 Detailed Description

Header file for the Transition class, which provides a UI for transitions between game states.

Author

Matthew Marbina (Group 9)

Version

0.1

Date

2025-03-30

Copyright

Copyright (c) 2025

5.18 transition.h

Go to the documentation of this file.

```
00001
00010 #ifndef TRANSITION_H
00011 #define TRANSITION_H
00012
00013 #include <QWidget>
00014 #include <QLabel>
00015 #include <QVBoxLayout>
00016 #include <QPushButton>
00017
00025 class Transition : public QWidget {
00026     Q_OBJECT
00027
00028 public:
00035     explicit Transition(QWidget* parent = nullptr);
00036
00042     ~Transition();
00043
00049     void setMessage(const QString& message);
00050
00051 signals:
00057     void continueClicked();
00058
00059 private:
00063     QLabel* messageLabel;
00064
00068     QPushButton* continueButton;
00069 };
00070
00071 #endif // TRANSITION_H
```

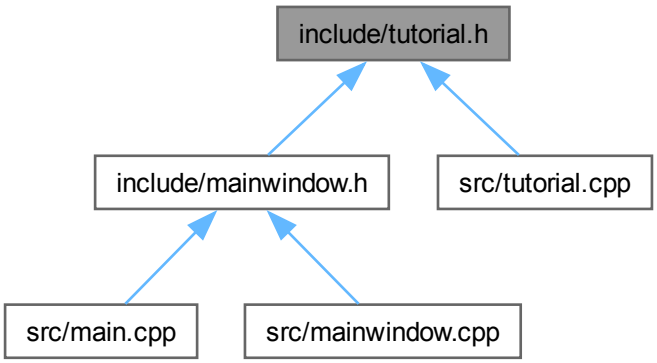
5.19 include/tutorial.h File Reference

Declaration of the Tutorial class.

```
#include <QCloseEvent>
#include <QDebug>
#include <QDir>
#include <QFile>
#include <QGraphicsDropShadowEffect>
#include <QGuiApplication>
#include <QLabel>
#include <QMainWindow>
#include <QPushButton>
#include <QScreen>
#include <QVBoxLayout>
#include <QWidget>
```

Include dependency graph for tutorial.h:

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



Classes

- class Tutorial

  The tutorial window that guides users through the game mechanics.

5.19.1 Detailed Description

Declaration of the Tutorial class.

5.20 tutorial.h

Go to the documentation of this file.

```
00001
00005
00006 #ifndef TUTORIAL_H
00007 #define TUTORIAL_H
00008
00009 #include <QCloseEvent>
00010 #include <QDebug>
00011 #include <QDir>
00012 #include <QFile>
00013 #include <QGraphicsDropShadowEffect>
00014 #include <QGuiApplication>
00015 #include <QLabel>
00016 #include <QMainWindow>
00017 #include <QPushButton>
00018 #include <QScreen>
00019 #include <QVBoxLayout>
00020 #include <QWidget>
00021
00026 class Tutorial : public QMainWindow {
00027   Q_OBJECT
00028
00029  public:
00034   explicit Tutorial(QWidget* parent = nullptr);
00035
00039   ~Tutorial();
00040
00041  signals:
00045   void tutorialClosed();
```

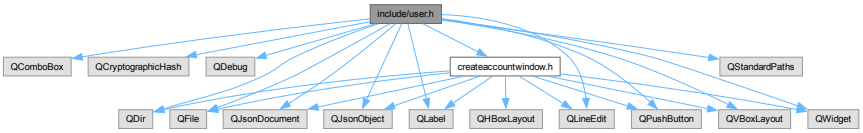
```
00046
00047  protected:
00052   void closeEvent(QCloseEvent* event) override;
00053
00054  private slots:
00058   void onContinueClicked();
00059
00060  private:
00064   void updateContinueButtonPosition();
00065
00069   void resetTutorial();
00070
00071   QWidget* centralWidget;
00072   QLabel* titleLabel;
00073   QLabel* textBox;
00074   QPushButton* continueButton;
00075   int clickCount;
00076 };
00077
00078 #endif  // TUTORIAL_H
```

5.21 include/user.h File Reference

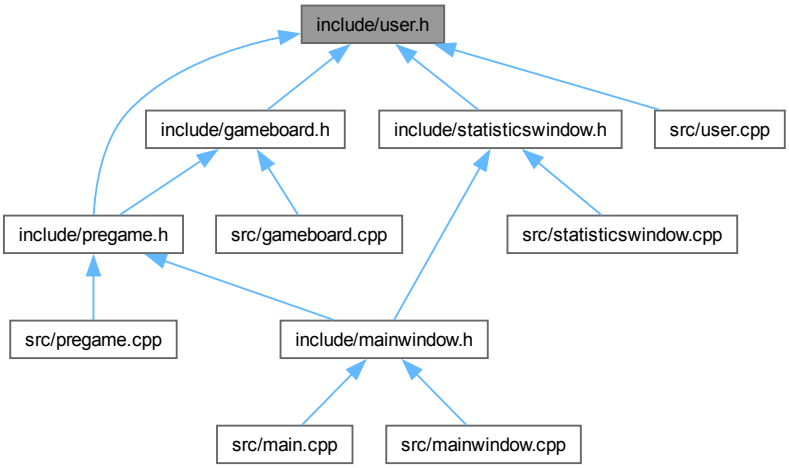
User class to handle local log in and loading/storing json files.

```
#include <QComboBox>
#include <QCryptographicHash>
#include <QDebug>
#include <QDir>
#include <QFile>
#include <QJsonDocument>
#include <QJsonObject>
#include <QLabel>
#include <QLineEdit>
#include <QPushButton>
#include <QStandardPaths>
#include <QVBoxLayout>
#include <QWidget>
#include "createaccountwindow.h"
```

Include dependency graph for user.h:



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



Classes

- class User

  User class to handle local log in and loading/storing json files. This is a singleton class to ensure only one instance of user management exists. Manages user profiles, statistics, and authentication.

5.21.1 Detailed Description

User class to handle local log in and loading/storing json files.

Author

Team 9 - UWO CS 3307

Version

0.1

Date

2025-03-30

Copyright

Copyright (c) 2025

5.22 user.h

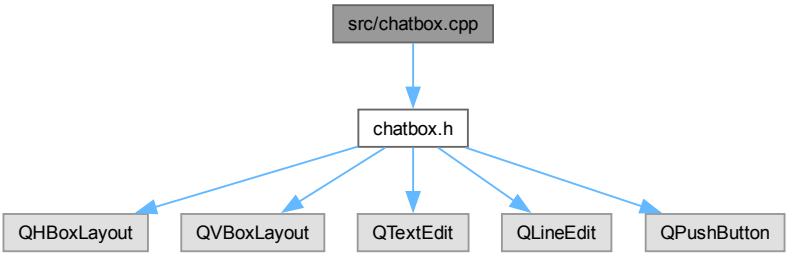
Go to the documentation of this file.

```
00001
00011 #ifndef USER_H
00012 #define USER_H
00013
00014 // Qt framework includes for UI components and file handling
00015 #include <QComboBox>           // For dropdown menu of usernames
00016 #include <QCryptographicHash>  // For password hashing functionality
00017 #include <QDebug>              // For debug output to console
00018 #include <QDir>                // For directory manipulation
00019 #include <QFile>               // For file I/O operations
00020 #include <QJsonDocument>       // For JSON document parsing
00021 #include <QJsonObject>         // For JSON object manipulation
00022 #include <QLabel>              // For text display in UI
00023 #include <QLineEdit>           // For text input fields
00024 #include <QPushButton>         // For button UI elements
00025 #include <QStandardPaths>      // For accessing standard file locations
00026 #include <QVBoxLayout>         // For vertical layout arrangement
00027 #include <QWidget>             // Base class for all UI elements
00028
00029 #include "createaccountwindow.h"  // Include for account creation UI
00030
00031 // Forward declaration to resolve circular dependency
00032 class CreateAccountWindow;
00033
00039 class User : public QWidget {
00040  Q_OBJECT  // Qt macro for enabling signals and slots mechanism
00041
00042     public :
00051     static User*
00052     instance(QWidget* parent = nullptr);
00053
00058   ~User();
00059
00067   void updateGamesPlayed(const QString& username,
00068                          const unsigned int& newGamesPlayed);
00069
00077   unsigned int getGamesPlayed(const QString& username) const;
00078
00086   void updateWins(const QString& username, const unsigned int& newWins);
00087
00095   unsigned int getWins(const QString& username) const;
00096
00104   float getWinRate(const QString& username) const;
00105
00113   void updateGuessTotal(const QString& username,
00114                         const unsigned int& newGuessTotal);
00115
00123   unsigned int getGuessTotal(const QString& username) const;
00124
00132   void updateGuessHit(const QString& username, const unsigned int& newGuessHit);
00133
00141   unsigned int getGuessHit(const QString& username) const;
00142
00150   float getHitRate(const QString& username);
00151
00159   void renameUser(const QString& oldUsername, const QString& newUsername);
00160
00168   void won(const QString& username);
00169
00176   void lost(const QString& username);
00177
00185   void hit(const QString& username);
00186
00193   void miss(const QString& username);
00194
00201   QJsonObject loadJsonFile();  // Function to load JSON data
00202
00203  public slots:
00208   void show();
00209
00210  signals:
00215   void backToMainMenu();
00216
00217  private slots:
00222   void handleLogin();
00223
00228   void refreshUserDropdown();
00229
00234   void handleCreateAccount();
00235
00240   void showMainMenu();
00241
```

```
00242  private:
00249   explicit User(QWidget* parent = nullptr);
00250
00255   CreateAccountWindow* createAccountWindow;
00256
00261   QString jsonFilePath = "resources/profile.json";
00262
00267   QPushButton* backButton;
00268
00273   QPushButton* createAccountButton;
00274
00279   QComboBox* usernameComboBox;
00280
00285   QLabel* jsonContentLabel;
00286
00291   QPushButton* loginButton;
00292
00299   void populateUsernameComboBox(const QJsonObject& jsonObject);
00300 };
00301
00302 #endif  // USER_H
```

5.23 src/chatbox.cpp File Reference

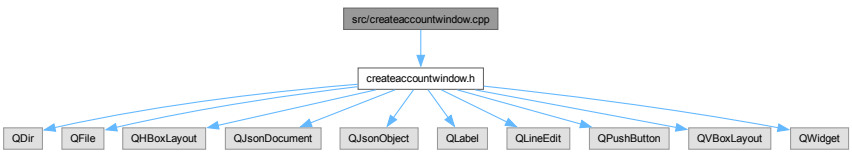
`#include "chatbox.h"`
Include dependency graph for chatbox.cpp:



5.24 src/createaccountwindow.cpp File Reference

CPP file for the CreateAccountWindow class which handles user account creation.

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



5.24.1 Detailed Description

CPP file for the CreateAccountWindow class which handles user account creation.

Author

Team 9 - UWO CS 3307

Version

0.1

Date

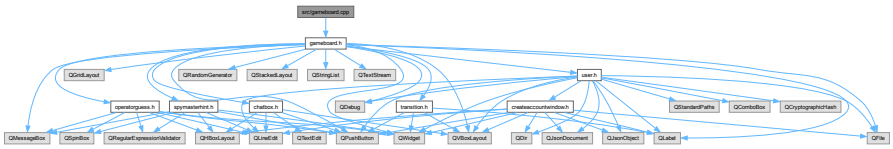
2025-03-30

Copyright

5.25 src/gameboard.cpp File Reference

```
#include "gameboard.h"
```

Include dependency graph for gameboard.cpp:



5.26 src/main.cpp File Reference

```
#include "mainwindow.h"
#include <QFile>
#include <QApplication>
#include <QLoggingCategory>
#include <QPalette>
```

Include dependency graph for main.cpp:

Functions

- int main (int argc, char ∗argv[ ])

5.26.1 Function Documentation

5.26.1.1 main()

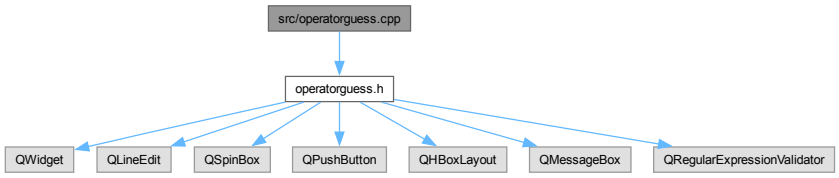
```
int main (
            int argc,
            char * argv[ ])
```

5.27 src/mainwindow.cpp File Reference

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

5.28 src/operatorguess.cpp File Reference

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



5.29 src/pregame.cpp File Reference

CPP file for the PreGame class which handles the game setup screen.

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

5.29.1 Detailed Description

CPP file for the PreGame class which handles the game setup screen.

Author

Team 9 - UWO CS 3307

Version

0.1

Date

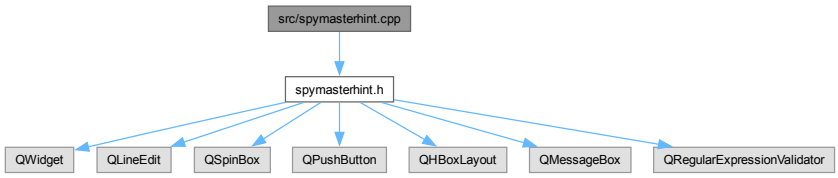
2025-03-30

Copyright

Copyright (c) 2025

5.30 src/spymasterhint.cpp File Reference

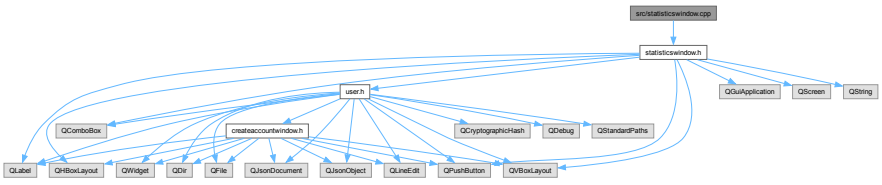
```
#include "spymasterhint.h"
```
Include dependency graph for spymasterhint.cpp:



5.31 src/statisticswindow.cpp File Reference

The screen to show the user's statistics.

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



5.31.1 Detailed Description

The screen to show the user's statistics.

Author

Team 9 - UWO CS 3307

Version

0.1

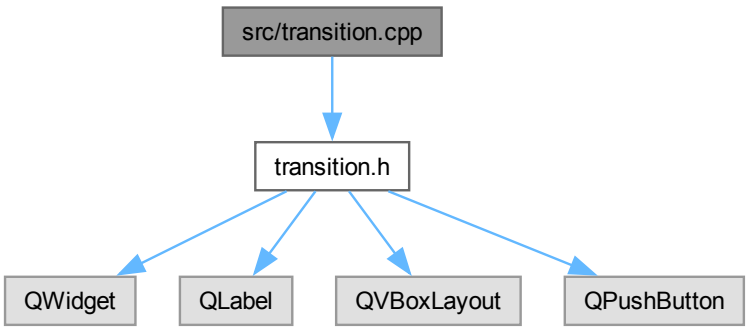
Date

2025-03-30

Copyright

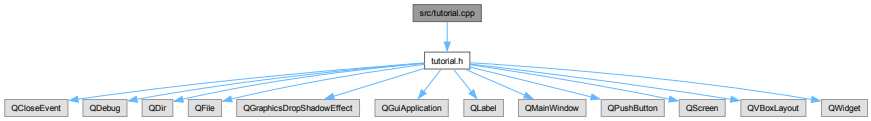
5.32 src/transition.cpp File Reference

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



5.33 src/tutorial.cpp File Reference

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

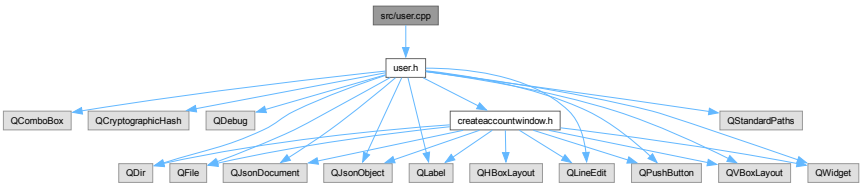


5.34 src/user.cpp File Reference

User class to handle local log in and loading/storing json files.

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

Include dependency graph for user.cpp:



5.34.1 Detailed Description

User class to handle local log in and loading/storing json files.

Author

Team 9 - UWO CS 3307

Version

0.1

Date

2025-03-30

Copyright

Copyright (c) 2025

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