

# Messaging Application

1.0

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# Chapter 1

## Hierarchical Index

### 1.1 Class Hierarchy

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

Admin . . . . .	5
Moderator . . . . .	12
Channel . . . . .	6
Message . . . . .	11
Media . . . . .	10
Image . . . . .	7
Video . . . . .	14
QMainWindow	
MainWindow . . . . .	8
Room . . . . .	13
User . . . . .	14



## Chapter 2

# Class Index

### 2.1 Class List

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

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<a href="#">Channel</a>	6
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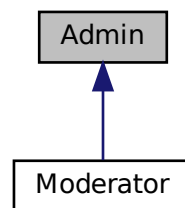


## Chapter 3

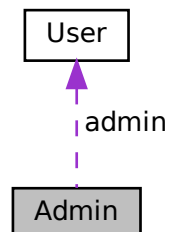
# Class Documentation

### 3.1 Admin Class Reference

Inheritance diagram for Admin:



Collaboration diagram for Admin:



## Public Attributes

- [User](#) **admin**

## Private Member Functions

- void **addModerator** ([User](#) user)
- void **removeModerator** ([User](#) user)
- void **changeAdmin** ([User](#) user)

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

- /home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/headers/admin.h
- /home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/src/admin.cpp

## 3.2 Channel Class Reference

### Public Member Functions

- void **changeTitle** (std::string title=NULL)
- void **changeDescription** (std::string desc)
- void **sendMessage** ([Message](#) message)
- std::string **getTitle** ()
- std::string **getDescription** ()
- void **deleteMessage** ([Message](#) message)
- void **subscribeToChannel** ()
- void **unsubscribeFromChannel** ()

### Public Attributes

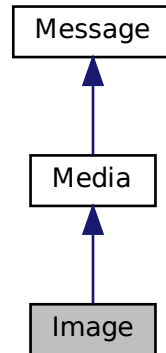
- std::string **description**

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

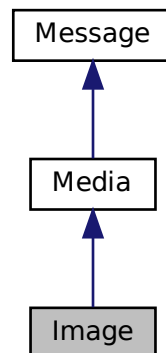
- /home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/headers/channel.h
- /home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/src/channel.cpp

### 3.3 Image Class Reference

Inheritance diagram for Image:



Collaboration diagram for Image:



#### Public Member Functions

- void **view** ()
- void **getImage** ()

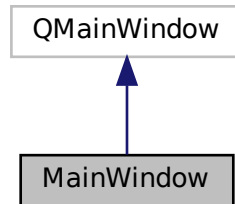
#### Additional Inherited Members

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

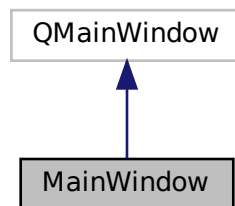
- /home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/headers/image.h
- /home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/src/image.cpp

## 3.4 MainWindow Class Reference

Inheritance diagram for MainWindow:



Collaboration diagram for MainWindow:



### Public Slots

- void [setClientPort](#) (int p)

### Public Member Functions

- [MainWindow](#) (QWidget \*parent=nullptr)

### Private Slots

- void [on\\_sendButton\\_clicked](#) ()
- void [on\\_settingsButton\\_clicked](#) ()
- void [on\\_backButton\\_clicked](#) ()
- void [on\\_buttonConnect\\_clicked](#) ()
- void [on\\_channelDropDown\\_activated](#) (int index)
- void [brokerDisconnected](#) ()

## Private Attributes

- `Ui::MainWindow * ui`
- `QMqttClient * m_client`

## 3.4.1 Constructor & Destructor Documentation

### 3.4.1.1 MainWindow()

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

Create new instance of QMqttClient and set host and port values When Client is disconnected call `brokerDisconnect()` When a message is received, create the format 'QDate + ":" + string' and send to message log

## 3.4.2 Member Function Documentation

### 3.4.2.1 brokerDisconnected

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

If client is disconnected, enable the host and port input boxes and set button text to "Connect"

### 3.4.2.2 on\_backButton\_clicked

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

Set index of stacked widget to 0, take user to main page

### 3.4.2.3 on\_buttonConnect\_clicked

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

If client is disconnected, button should say "connect" and attempt to call `connectToHost()` and disable the button on click If client is connected, button should say "disconnect" and attempt to call `disconnectFromHost()` and enable the button on click

### 3.4.2.4 on\_channelDropDown\_activated

```
void MainWindow::on_channelDropDown_activated (
    int index ) [private], [slot]
```

Set the current topic to the currently selected option from the dropdown box Set the label defining the topic for the user to the text in the currently selected dropdown box Clear the message log

#### 3.4.2.5 on\_sendButton\_clicked

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

Publish text in input box to message log if client is successfully connected

#### 3.4.2.6 on\_settingsButton\_clicked

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

Set index of stackedWidget to 1, take user to setting screen

#### 3.4.2.7 setClientPort

```
void MainWindow::setClientPort (
    int p ) [slot]
```

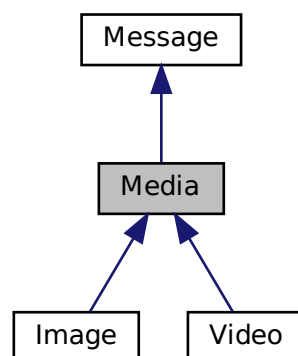
Set client port

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

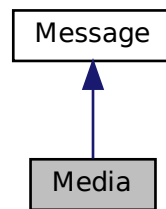
- /home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/headers/mainwindow.h
- /home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/src/mainwindow.cpp

## 3.5 Media Class Reference

Inheritance diagram for Media:



Collaboration diagram for Media:



### Public Member Functions

- void **Download** ()

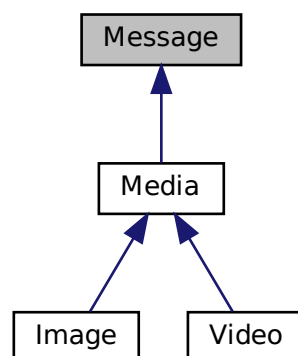
### Additional Inherited Members

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

- /home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/headers/media.h
- /home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/src/media.cpp

## 3.6 Message Class Reference

Inheritance diagram for Message:



## Public Member Functions

- [Message](#) `getMessage ()`
- `std::string` `getMessageContent ()`

## Public Attributes

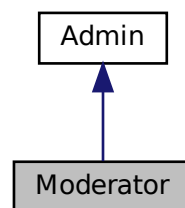
- `std::string` `messageContent`

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

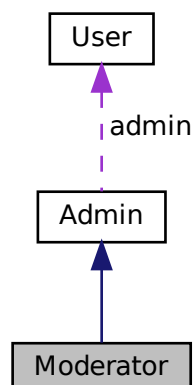
- `/home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/headers/message.h`
- `/home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/src/message.cpp`

## 3.7 Moderator Class Reference

Inheritance diagram for Moderator:



Collaboration diagram for Moderator:





## Public Member Functions

- [User](#) `getUser ()`

## Public Attributes

- `std::vector< User > moderator`

## Protected Member Functions

- `void addUser (User user)`
- `void removeUser (User user)`

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

- `/home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/headers/moderator.h`
- `/home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/src/moderator.cpp`

## 3.8 Room Class Reference

### Public Member Functions

- `void changeName ()`
- `void getName ()`
- `void getDescription ()`
- `void getRoomID ()`
- `void getMembers ()`

### Public Attributes

- `std::string name`
- `std::string description`
- `std::vector< Channel > channel`
- `int roomID`

### Protected Attributes

- `std::vector< User > members`

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

- `/home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/headers/room.h`
- `/home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/src/room.cpp`

## 3.9 User Class Reference

### Public Member Functions

- `std::string changeName ()`
- `void subscribeToRoom ()`
- `void unsubscribeFromRoom ()`
- `std::string getName ()`
- `std::string getStatus ()`
- `std::string getNickname ()`
- `bool getOnline ()`

### Public Attributes

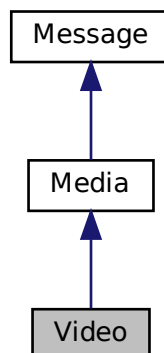
- `std::string userID`
- `std::string name`
- `std::string nickname`
- `std::string status`
- `bool online`

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

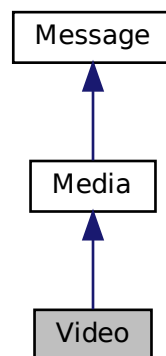
- `/home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/headers/user.h`
- `/home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/src/user.cpp`

## 3.10 Video Class Reference

Inheritance diagram for Video:



Collaboration diagram for Video:



### Public Member Functions

- void **play** ()
- void **stop** ()
- void **load** ()

### Additional Inherited Members

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

- /home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/headers/video.h
- /home/ntu-user/git/SDI-Project/Project Implementation/Messaging App Codebase/src/video.cpp



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