## Webchat

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# Chapter 1

# Namespace Index

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| ebchat.Ping           |   |
| ebchat.Validators     | ç |

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# Chapter 2

# **Hierarchical Index**

## 2.1 Class Hierarchy

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

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| Model used by Controllers.RoomController when the user leaves rooms | 24  |

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

webchat.Filters.AuthenticationFilterAttribute

webchat.Helpers.BindingHelper

webchat.Logging.Logger

webchat.MvcApplication 27 webchat.Ping.Pinger

webchat.Controllers.MessageController

webchat.Models.Binders.MessageModelBinder Binder for MessageModel . . . . . .

webchat.Models.MessageModel

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## **Chapter 4**

# **Namespace Documentation**

## 4.1 Package webchat

## **Namespaces**

- package Communication
- package Controllers
- · package Database
- · package Filters
- package Helpers
- package Logging
- package Models
- package Ping
- package Validators

## Classes

class MvcApplication

## 4.2 Package webchat.Communication

## Classes

• interface IPublisher< T >

Defines behaviour of publisher classes

class Publisher

Concrete implementation of IPublisher< T>

## 4.3 Package webchat.Controllers

#### Classes

· class ChatController

Handles the main page of the appliaction

• class EventStreamController

Handle the EventStream connections

· class IndexController

The controller that handles the authentication page

class MessageController

Handle the incoming messages

class PongController

Handles the PONG part of the PING PONG protocol

· class RoomController

Handle the joning and leaving of rooms (channels)

## 4.4 Package webchat. Database

#### **Classes**

class Db

A concrete implementation of IDatabase

• interface IDatabase

The interface that defines what a database class should do

## 4.5 Package webchat. Filters

#### Classes

· class AuthenticationFilterAttribute

Checks whether the user is logged in or not

## 4.6 Package webchat. Helpers

#### Classes

· class BindingHelper

Binding helpers used by Models.Binders

• class ErrorSummaryHelper

Helper to display errors

## 4.7 Package webchat.Logging

#### Classes

· interface ILogger

An interface to define logging actions

· class Logger

Concrete implementation of ILogger

## 4.8 Package webchat. Models

## **Namespaces**

· package Binders

#### **Classes**

· class ChatModel

Model for the Controllers.ChatController

class IndexModel

Model for the Controllers.IndexController

· class LeaveModel

Model used by Controllers.RoomController when the user leaves rooms

· class MessageModel

Model used by Controllers.MessageController

· class RoomsModel

Model used by Controllers.IndexController and Controllers.RoomController for joining rooms

## 4.9 Package webchat. Models. Binders

#### Classes

· class MessageModelBinder

Binder for MessageModel

• class RoomsModelBinder

Binder for RoomsModel

## 4.10 Package webchat.Ping

## **Classes**

class Pinger

Class used for sending PING to the users of the application

## 4.11 Package webchat. Validators

#### Classes

· class JoinedRoomValidationAttribute

Checks whether the user has joined a certain room

· class RoomsValidationAttribute

Check the room names

class UniqueNickValidationAttribute

Check whether a nick is unique

| Names | pace | Docur | ment | ation |
|-------|------|-------|------|-------|
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## **Chapter 5**

## **Class Documentation**

## 5.1 webchat.Filters.AuthenticationFilterAttribute Class Reference

Checks whether the user is logged in or not Inherits AuthorizeAttribute, and IAuthorizationFilter.

#### **Public Member Functions**

override void OnAuthorization (AuthorizationContext authorizationContext)
 Does the actual authorization

## 5.1.1 Detailed Description

Checks whether the user is logged in or not

## 5.1.2 Member Function Documentation

5.1.2.1 override void webchat.Filters.AuthenticationFilterAttribute.OnAuthorization ( AuthorizationContext authorizationContext )

Does the actual authorization

## **Parameters**

| authorization- | Object that holds HTTP and Session data |
|----------------|---|
| Context        |   |

If the user is not logged in he's automatically redirected to the Index

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

• D:/localhost/github/webchat/webchat/Filters/AuthenticationFilterAttribute.cs

## 5.2 webchat.Helpers.BindingHelper Class Reference

Binding helpers used by Models.Binders

#### **Static Public Member Functions**

static T GetValue < T > (ModelBindingContext bindingContext, string key)

Get a value from a HTTP form

## 5.2.1 Detailed Description

Binding helpers used by Models.Binders

#### 5.2.2 Member Function Documentation

5.2.2.1 static T webchat.Helpers.BindingHelper.GetValue < T > ( ModelBindingContext bindingContext, string key ) [static]

Get a value from a HTTP form

#### **Template Parameters**

| T | Return's value type |
|---|---------------------|

#### **Parameters**

| bindingContext | The object that holds all the HTTP data   |
|----------------|---|
| key            | The needed value should be retrieved by it's key (the element's name attribute) |

#### Returns

Returns the value stored at the key

See: http://odetocode.com/blogs/scott/archive/2009/05/05/iterating-on-an-asp-net-mvc-mode aspx

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

• D:/localhost/github/webchat/webchat/Helpers/BindingHelpers.cs

## 5.3 webchat.Controllers.ChatController Class Reference

Handles the main page of the appliaction

Inherits Controller.

#### **Public Member Functions**

• ActionResult Index ()

Load the initial page where the user can send messages and join additional rooms

ActionResult Disconnect ()

Log the user out

## 5.3.1 Detailed Description

Handles the main page of the appliaction

In order to enter the chat the user must be authenticated

See Also

Filters.AuthenticationFilterAttribute

#### 5.3.2 Member Function Documentation

5.3.2.1 ActionResult webchat.Controllers.ChatController.Disconnect ( )

Log the user out

Returns

Redirects the user to the IndexController

5.3.2.2 ActionResult webchat.Controllers.ChatController.Index ( )

Load the initial page where the user can send messages and join additional rooms

Returns

Returns a Models.ChatModel

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

• D:/localhost/github/webchat/webchat/Controllers/ChatController.cs

## 5.4 webchat.Models.ChatModel Class Reference

Model for the Controllers.ChatController

#### **Properties**

```
Dictionary< string, HashSet</li>< string >> Users [get, set]
```

A copy of the database used to display the connected users on every room

• List< string > Rooms [get, set]

The rooms the user connected to

## 5.4.1 Detailed Description

Model for the Controllers.ChatController

## 5.4.2 Property Documentation

**5.4.2.1 List**<string> webchat.Models.ChatModel.Rooms [get], [set]

The rooms the user connected to

**5.4.2.2** Dictionary < string, HashSet < string > > webchat.Models.ChatModel.Users [get], [set]

A copy of the database used to display the connected users on every room

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

D:/localhost/github/webchat/webchat/Models/ChatModel.cs

#### 5.5 webchat.Database.Db Class Reference

A concrete implementation of IDatabase

Inherits webchat. Database. IDatabase.

#### **Public Member Functions**

• Db (IPublisher< ConcurrentQueue< StreamWriter >> p, ILogger I)

The Database's constructor

void AddUser (IEnumerable < string > rooms, string nick)

Add a user to the database

void DelUser (IEnumerable < string > rooms, string nick)

Delete a user from the database in case he leaves

void DelUserFromGlobalList (string nick)

Delete a user form the global list

• Dictionary< string, HashSet

< string > > GetUsers ()

Get the users currently connected

List< string > GetRooms ()

Get all the rooms currently populated

List< string > GetRooms (string nick)

Get all the rooms currently joined by a user

List< string > GetBackupRooms (string nick)

Get the rooms the user was connected to before the PING

• void Backup ()

Do a backup of the database before sending a PING

· bool IsPopulated ()

Check if there are users connected

• bool IsUser (string nick)

Check if a user is connected on at least a room

#### 5.5.1 Detailed Description

A concrete implementation of IDatabase

#### 5.5.2 Constructor & Destructor Documentation

5.5.2.1 webchat.Database.Db.Db ( IPublisher < ConcurrentQueue < StreamWriter >> p, ILogger I )

The Database's constructor

#### **Parameters**

| р | A concrete implementation of an Communication.IPublisher <t></t>   |
|---|--|
| 1 | A concrete implementation of an Logging.ILogger Generated on Wed Jan 30 2013 08:53:03 for Webchat by Doxygen |

#### 5.5.3 Member Function Documentation

5.5.3.1 void webchat.Database.Db.AddUser ( IEnumerable < string > rooms, string nick )

Add a user to the database

#### **Parameters**

| rooms | Which rooms the user joined |
|-------|-----------------------------|
| nick  | The user's nickname         |

5.5.3.2 void webchat.Database.Db.Backup ( )

Do a backup of the database before sending a PING

5.5.3.3 void webchat.Database.Db.DelUser ( IEnumerable < string > rooms, string nick )

Delete a user from the database in case he leaves

#### **Parameters**

| rooms | The rooms the user left |
|-------|-------------------------|
| nick  | The user's nickname     |

#### 5.5.3.4 void webchat.Database.Db.DelUserFromGlobalList ( string nick )

Delete a user form the global list

#### **Parameters**

| nick | The user's nickname |
|------|---------------------|

5.5.3.5 List<string> webchat.Database.Db.GetBackupRooms ( string nick )

Get the rooms the user was connected to before the PING

#### **Parameters**

| nick | The user's nickname |
|------|---------------------|

#### Returns

Returns a List<string> of rooms

5.5.3.6 List<string> webchat.Database.Db.GetRooms ( )

Get all the rooms currently populated

#### Returns

Returns a List<string> of rooms

5.5.3.7 List<string> webchat.Database.Db.GetRooms ( string nick )

Get all the rooms currently joined by a user

#### **Parameters**

nick The user's nickname

#### Returns

Returns a List<string> of rooms

5.5.3.8 Dictionary < string, HashSet < string > > webchat.Database.Db.GetUsers ( )

Get the users currently connected

#### Returns

Returns a Dictionary<string, HashSet<string>> of rooms as keys and users as values for the HastSet<string>

5.5.3.9 bool webchat.Database.Db.IsPopulated ( )

Check if there are users connected

Returns

Returns true if there is at least one user, else returns false

5.5.3.10 bool webchat.Database.Db.IsUser ( string nick )

Check if a user is connected on at least a room

#### **Parameters**

| nick | The user's nickname |
|------|---------------------|

### Returns

Return true if the user is connected, else false

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

• D:/localhost/github/webchat/webchat/Database/Database.cs

## 5.6 webchat.Controllers.EventStreamController Class Reference

Handle the EventStream connections

Inherits ApiController.

#### **Public Member Functions**

HttpResponseMessage Get (HttpRequestMessage request)

Prepare the response headers for the EventStream

#### 5.6.1 Detailed Description

Handle the EventStream connections

The user cannot access this if he's not authenticated

See Also

Filters.AuthenticationFilterAttribute

#### 5.6.2 Member Function Documentation

5.6.2.1 HttpResponseMessage webchat.Controllers.EventStreamController.Get ( HttpRequestMessage request )

Prepare the response headers for the EventStream

#### **Parameters**

request | The request from which the response will be generated

#### **Returns**

Returns HttpResponseMessage whose content will be changed by MvcApplication.Pub

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

• D:/localhost/github/webchat/webchat/Controllers/EventStreamController.cs

## 5.7 webchat.Database.IDatabase Interface Reference

The interface that defines what a database class should do Inherited by webchat.Database.Db.

## **Public Member Functions**

void AddUser (IEnumerable < string > rooms, string nick)

Add a user to the daatbase

void DelUser (IEnumerable < string > rooms, string nick)

Delete a user from the database in case he leaves

void DelUserFromGlobalList (string nick)

Delete a user from the global user list

· Dictionary< string, HashSet

< string > > GetUsers ()

Get the users currently connected

• List< string > GetRooms ()

Get all the rooms currently populated

List< string > GetRooms (string nick)

Get all the rooms currently joined by a user

List< string > GetBackupRooms (string nick)

Get the rooms the user was connected to before the PING

· void Backup ()

Do a backup of the database before sending a PING

• bool IsPopulated ()

Check if there are users connected

• bool IsUser (string nick)

Check if a user is connected on at least a room

## 5.7.1 Detailed Description

The interface that defines what a database class should do

#### 5.7.2 Member Function Documentation

5.7.2.1 void webchat. Database. I Database. Add User ( |E| I Enumerable < string > rooms, |S| string |S| string

Add a user to the daatbase

#### **Parameters**

| re | ooms | Which rooms the user joined |
|----|------|-----------------------------|
|    | nick | The user's nickname         |

## 5.7.2.2 void webchat.Database.IDatabase.Backup ( )

Do a backup of the database before sending a PING

5.7.2.3 void webchat.Database.IDatabase.DelUser ( IEnumerable < string > rooms, string nick )

Delete a user from the database in case he leaves

#### **Parameters**

| rooms | The rooms the user left |
|-------|-------------------------|
| nick  | The user's nickname     |

## 5.7.2.4 void webchat.Database.IDatabase.DelUserFromGlobalList ( string nick )

Delete a user from the global user list

#### **Parameters**

| nick | The user's nickname |
|------|---------------------|

## 5.7.2.5 List<string> webchat.Database.IDatabase.GetBackupRooms ( string *nick* )

Get the rooms the user was connected to before the PING

#### **Parameters**

| nick | The user's nickname |
|------|---------------------|

Returns

Returns a List<string> of rooms

5.7.2.6 List<string> webchat.Database.IDatabase.GetRooms ( )

Get all the rooms currently populated

Returns

Returns a List<string> of rooms

5.7.2.7 List<string> webchat.Database.IDatabase.GetRooms ( string nick )

Get all the rooms currently joined by a user

**Parameters** 

nick The user's nickname

Returns

Returns a List<string> of rooms

5.7.2.8 Dictionary < string, HashSet < string > > webchat.Database.IDatabase.GetUsers ( )

Get the users currently connected

Returns

Returns a Dictionary<string, HashSet<string>> of rooms as keys and users as values for the Hast-Set<string>

5.7.2.9 bool webchat.Database.IDatabase.IsPopulated ( )

Check if there are users connected

Returns

Returns true if there is at least one user, else returns false

5.7.2.10 bool webchat.Database.IDatabase.IsUser ( string nick )

Check if a user is connected on at least a room

**Parameters** 

nick The user's nickname

#### Returns

Return true if the user is connected, else false

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

• D:/localhost/github/webchat/webchat/Database/IDatabase.cs

## 5.8 webchat.Logging.lLogger Interface Reference

An interface to define logging actions

Inherited by webchat.Logging.Logger.

#### **Public Member Functions**

• void Log (string message)

Overloaded method to log a message

void Log (string message, string category)

Overloaded method to log a message

#### 5.8.1 Detailed Description

An interface to define logging actions

#### 5.8.2 Member Function Documentation

5.8.2.1 void webchat.Logging.ILogger.Log ( string message )

Overloaded method to log a message

#### **Parameters**

| message | The string to be logged |
|---------|-------------------------|

5.8.2.2 void webchat.Logging.ILogger.Log ( string message, string category )

Overloaded method to log a message

#### **Parameters**

| message  | The string to be logged                          |
|----------|--|
| category | The category in which the logged message belongs |

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

• D:/localhost/github/webchat/webchat/Logging/ILogger.cs

## 5.9 webchat.Controllers.IndexController Class Reference

The controller that handles the authentication page

Inherits Controller.

#### **Public Member Functions**

ActionResult Index ()

Display the authentication page or the chat page, depending if the user has authenticated or not

ActionResult Index (IndexModel indexModel, bool captchaValid, string captchaErrorMessage)

Process the authentication of the user

#### 5.9.1 Detailed Description

The controller that handles the authentication page

#### See Also

Filters.AuthenticationFilterAttribute

#### 5.9.2 Member Function Documentation

#### 5.9.2.1 ActionResult webchat.Controllers.IndexController.Index ( )

Display the authentication page or the chat page, depending if the user has authenticated or not

#### Returns

Redirects the user to the chat if he's already authenticated or displays the login page

# 5.9.2.2 ActionResult webchat.Controllers.IndexController.Index ( IndexModel indexModel, bool captchaValid, string captchaErrorMessage )

Process the authentication of the user

#### **Parameters**

| indexModel    | The model that has the user's data binded to                        |
|---------------|---|
| captchaValid  | Whether the captcha is valid or not                                 |
| captchaError- | If the user failed to provide a valid captcha this holds the reason |
| Message       |   |

#### Returns

Returns an Models.IndexModel populated with data if the user submitted invalid data or redirects the user to the chat if he logged in

This also handles the CSRF token which prevents an attacker to submit the form remotely. If the user doesn't provide some rooms to join, he's automatically connected to a default one

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

D:/localhost/github/webchat/webchat/Controllers/IndexController.cs

#### 5.10 webchat.Models.IndexModel Class Reference

Model for the Controllers.IndexController

Inherits webchat. Models. Rooms Model.

#### **Properties**

```
• string Nick [get, set]

The user's nickname
```

## 5.10.1 Detailed Description

Model for the Controllers.IndexController

#### 5.10.2 Property Documentation

```
5.10.2.1 string webchat.Models.IndexModel.Nick [get], [set]
```

The user's nickname

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

• D:/localhost/github/webchat/webchat/Models/IndexModel.cs

## 5.11 webchat.Communication.IPublisher < T > Interface Template Reference

Defines behaviour of publisher classes

Inherited by webchat. Communication. Publisher.

#### **Public Member Functions**

void Publish (string channel, string message)
 Define how the message is actually sent to the clients

#### **Properties**

• T Clients [get]

A collection that holds the clients to whom messages will be published

#### 5.11.1 Detailed Description

Defines behaviour of publisher classes

**Template Parameters** 

 ${\it T}\ |\$  The type of the Clients property that the class implementing this interface will hold

#### 5.11.2 Member Function Documentation

5.11.2.1 void webchat.Communication.IPublisher< T >.Publish ( string channel, string message )

Define how the message is actually sent to the clients

#### **Parameters**

| channel | The channel to publish messages on, this may be used for categorizing messages |
|---------|--|
| message | The message to be sent to every client   |

## 5.11.3 Property Documentation

**5.11.3.1 Twebchat.Communication.IPublisher**< **T**>.Clients [get]

A collection that holds the clients to whom messages will be published

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

• D:/localhost/github/webchat/webchat/Communication/IPublisher.cs

## 5.12 webchat, Validators, Joined Room Validation Attribute Class Reference

Checks whether the user has joined a certain room

Inherits ValidationAttribute.

#### **Public Member Functions**

JoinedRoomValidationAttribute ()

The constructor

override bool IsValid (object value)

Do the actual checking of the room

## 5.12.1 Detailed Description

Checks whether the user has joined a certain room

#### 5.12.2 Constructor & Destructor Documentation

5.12.2.1 webchat.Validators.JoinedRoomValidationAttribute.JoinedRoomValidationAttribute ( )

The constructor

## 5.12.3 Member Function Documentation

5.12.3.1 override bool webchat. Validators. Joined Room Validation Attribute. Is Valid (object value)

Do the actual checking of the room

#### **Parameters**

| value | The room's name as a string |
|-------|-----------------------------|

#### Returns

Returns true if the user joined the room, otherwise false

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

• D:/localhost/github/webchat/webchat/Validators/JoinedRoomValidationAttribute.cs

#### 5.13 webchat. Models. Leave Model Class Reference

Model used by Controllers.RoomController when the user leaves rooms

#### **Properties**

```
• string Room [get, set]

The room the user left
```

#### 5.13.1 Detailed Description

Model used by Controllers.RoomController when the user leaves rooms

#### 5.13.2 Property Documentation

```
5.13.2.1 string webchat.Models.LeaveModel.Room [get], [set]
```

The room the user left

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

• D:/localhost/github/webchat/webchat/Models/LeaveModel.cs

## 5.14 webchat.Logging.Logger Class Reference

Concrete implementation of ILogger

Inherits webchat.Logging.ILogger.

#### **Public Member Functions**

void Log (string message)

Overloaded method to log a message to Trace

• void Log (string message, string category)

Overloaded method to log a message to Trace

#### 5.14.1 Detailed Description

Concrete implementation of ILogger

## 5.14.2 Member Function Documentation

5.14.2.1 void webchat.Logging.Logger.Log ( string message )

Overloaded method to log a message to Trace

#### **Parameters**

| message | The string to be logged |
|---------|-------------------------|

#### 5.14.2.2 void webchat.Logging.Logger.Log ( string message, string category )

Overloaded method to log a message to Trace

#### **Parameters**

| message  | The string to be logged                          |
|----------|--|
| category | The category in which the logged message belongs |

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

• D:/localhost/github/webchat/webchat/Logging/Logger.cs

## 5.15 webchat.Controllers.MessageController Class Reference

Handle the incoming messages

Inherits Controller.

#### **Public Member Functions**

HttpStatusCode Post (MessageModel m)
 Publish the message to every chat user on the corresponding channel

#### 5.15.1 Detailed Description

Handle the incoming messages

In order to send messages the user must be authenticated

See Also

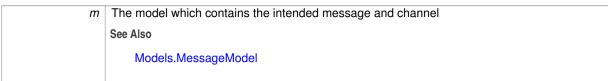
Filters.AuthenticationFilterAttribute

## 5.15.2 Member Function Documentation

 $5.15.2.1 \quad \text{HttpStatusCode webchat.Controllers.MessageController.Post (} \ \ \text{MessageModel} \ m \ )$ 

Publish the message to every chat user on the corresponding channel

### **Parameters**



#### Returns

Returns a HttpStatusCode which represents whether the opperation was successful or not

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

• D:/localhost/github/webchat/webchat/Controllers/MessageController.cs

## 5.16 webchat.Models.MessageModel Class Reference

Model used by Controllers.MessageController

## **Properties**

```
    string Message [get, set]
        Users message
    string Room [get, set]
        The room on which the message was sent
```

#### 5.16.1 Detailed Description

Model used by Controllers.MessageController

## 5.16.2 Property Documentation

```
\textbf{5.16.2.1} \quad \textbf{string webchat.} \textbf{Models.} \textbf{Message} \quad \texttt{[get], [set]}
```

Users message

```
5.16.2.2 string webchat.Models.MessageModel.Room [get], [set]
```

The room on which the message was sent

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

• D:/localhost/github/webchat/webchat/Models/MessageModel.cs

## 5.17 webchat.Models.Binders.MessageModelBinder Class Reference

Binder for MessageModel

Inherits DefaultModelBinder.

### **Protected Member Functions**

• override void BindProperty (ControllerContext controllerContext, ModelBindingContext bindingContext, PropertyDescriptor propertyDescriptor)

Overridden method to customly bind a string by trimming and escaping it

#### 5.17.1 Detailed Description

Binder for MessageModel

#### 5.17.2 Member Function Documentation

5.17.2.1 override void webchat.Models.Binders.MessageModelBinder.BindProperty ( ControllerContext controllerContext, ModelBindingContext bindingContext, PropertyDescriptor propertyDescriptor ) [protected]

Overridden method to customly bind a string by trimming and escaping it

#### **Parameters**

| controllerCor |  |
|---------------|--|
| bindingCor    |  |
| prope         |  |
| Descri        |  |

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

• D:/localhost/github/webchat/webchat/Models/Binders/MessageModelBinder.cs

## 5.18 webchat.MvcApplication Class Reference

Inherits HttpApplication.

#### **Static Public Attributes**

- static IPublisher
  - < ConcurrentQueue
  - < StreamWriter > > Pub = new Publisher()

A singleton of a Communication. IPublisher< T> to use throughout the application

• static ILogger Logger = new Logger()

A singleton of an Logging. ILogger to use throughout the application

• static IDatabase Db = new Db(Pub, Logger)

A singleton of an Database. IDatabase to use throughout the application

#### **Protected Member Functions**

void Application\_Start ()

## 5.18.1 Detailed Description

## 5.18.2 Member Function Documentation

**5.18.2.1** void webchat.MvcApplication.Application\_Start() [protected]

#### 5.18.3 Member Data Documentation

5.18.3.1 IDatabase webchat.MvcApplication.Db = new Db(Pub, Logger) [static]

A singleton of an Database.IDatabase to use throughout the application

5.18.3.2 | ILogger webchat.MvcApplication.Logger = new Logger() [static]

A singleton of an Logging. ILogger to use throughout the application

5.18.3.3 | | Publisher < ConcurrentQueue < StreamWriter > > webchat.MvcApplication.Pub = new Publisher() [static]

A singleton of a Communication.IPublisher<T> to use throughout the application

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

• D:/localhost/github/webchat/webchat/Global.asax.cs

## 5.19 webchat.Ping.Pinger Class Reference

Class used for sending PING to the users of the application

#### **Public Member Functions**

• Pinger (int i=60000)

The constructor

• void Ping ()

Send the PING by using the MvcApplication.Pub and log the action using MvcApplication.Logger

#### 5.19.1 Detailed Description

Class used for sending PING to the users of the application

### 5.19.2 Constructor & Destructor Documentation

5.19.2.1 webchat.Ping.Pinger.Pinger ( int i = 60000 )

The constructor

Parameters

i The time interval between two PINGs

#### 5.19.3 Member Function Documentation

5.19.3.1 void webchat.Ping.Pinger.Ping ( )

Send the PING by using the MvcApplication. Pub and log the action using MvcApplication. Logger

The backup is done by MvcApplication.Db

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

• D:/localhost/github/webchat/webchat/Ping/Pinger.cs

## 5.20 webchat.Controllers.PongController Class Reference

Handles the PONG part of the PING PONG protocol

Inherits Controller.

#### **Public Member Functions**

• HttpStatusCode Index ()

Restore the user's state in the application if he has an active connection to it

#### 5.20.1 Detailed Description

Handles the PONG part of the PING PONG protocol

In order to be able to respond to pings the user must be authenticated

See Also

Filters.AuthenticationFilterAttribute

#### 5.20.2 Member Function Documentation

5.20.2.1 HttpStatusCode webchat.Controllers.PongController.Index ( )

Restore the user's state in the application if he has an active connection to it

**Returns** 

Returns a HttpStatusCode which represents whether the opperation was successful or not

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

• D:/localhost/github/webchat/webchat/Controllers/PongController.cs

#### 5.21 webchat.Communication.Publisher Class Reference

Concrete implementation of IPublisher<T>

Inherits webchat.Communication.IPublisher< T >.

### **Public Member Functions**

· void Publish (string channel, string message)

Publish a certain message on a certain channel to all clients by using the stream set up in Controllers. EventStream-Controller

#### **Properties**

ConcurrentQueue < StreamWriter > Clients [get]
 Get a list of all connected clients

#### 5.21.1 Detailed Description

Concrete implementation of IPublisher<T>

## 5.21.2 Member Function Documentation

5.21.2.1 void webchat.Communication.Publisher.Publish ( string channel, string message )

Publish a certain message on a certain channel to all clients by using the stream set up in Controllers. EventStream-Controller

#### **Parameters**

| channel | The channel to publish messages on, this may be used for categorizing messages |
|---------|--|
| message | The message to be sent to every client   |

#### 5.21.3 Property Documentation

**5.21.3.1** ConcurrentQueue < StreamWriter > webchat.Communication.Publisher.Clients [get]

Get a list of all connected clients

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

• D:/localhost/github/webchat/webchat/Communication/Publisher.cs

## 5.22 webchat.Controllers.RoomController Class Reference

Handle the joning and leaving of rooms (channels)

Inherits Controller.

#### **Public Member Functions**

• string Join (RoomsModel roomsModel)

Join a list of rooms

• string Leave (LeaveModel leaveModel)

Leave a room

## 5.22.1 Detailed Description

Handle the joning and leaving of rooms (channels)

In order to be able to join or leave rooms the user must be authenticated

See Also

Filters.AuthenticationFilterAttribute

#### 5.22.2 Member Function Documentation

5.22.2.1 string webchat.Controllers.RoomController.Join ( RoomsModel roomsModel )

Join a list of rooms

#### **Parameters**

| roomsModel | The list of rooms to be joined |
|------------|--------------------------------|
|            |                                |

#### Returns

Returns the user's currently joined rooms as JSON

This may also return a localized error string if the room names are invalid

#### See Also

Validators.RoomsValidationAttribute

#### 5.22.2.2 string webchat.Controllers.RoomController.Leave ( LeaveModel leaveModel )

Leave a room

#### **Parameters**

| leaveModel | The room to leave |
|------------|-------------------|

#### Returns

If the user is still connected on other rooms returns them as JSON or returns "" if the user left the only room he was connected to

This may also return a localized error string if the user tries to leave a room he's not connected to

#### See Also

Validators.JoinedRoomValidationAttribute

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

D:/localhost/github/webchat/webchat/Controllers/RoomController.cs

#### 5.23 webchat. Models. Rooms Model Class Reference

Model used by Controllers.IndexController and Controllers.RoomController for joining rooms Inherited by webchat.Models.IndexModel.

## **Properties**

```
    List< string > Rooms [get, set]
    The rooms joined
```

#### 5.23.1 Detailed Description

Model used by Controllers.IndexController and Controllers.RoomController for joining rooms

## 5.23.2 Property Documentation

```
5.23.2.1 List<string> webchat.Models.RoomsModel.Rooms [get], [set]
```

The rooms joined

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

D:/localhost/github/webchat/webchat/Models/RoomsModel.cs

### 5.24 webchat. Models. Binders. Rooms Model Binder Class Reference

Binder for RoomsModel

Inherits DefaultModelBinder.

#### **Protected Member Functions**

 override void BindProperty (ControllerContext controllerContext, ModelBindingContext bindingContext, System.ComponentModel.PropertyDescriptor propertyDescriptor)

Overridden method to customly bind a string to a List<string> after splitting and sanitizing it

#### 5.24.1 Detailed Description

Binder for RoomsModel

#### 5.24.2 Member Function Documentation

5.24.2.1 override void webchat.Models.Binders.RoomsModelBinder.BindProperty ( ControllerContext controllerContext, ModelBindingContext bindingContext, System.ComponentModel.PropertyDescriptor propertyDescriptor )

[protected]

Overridden method to customly bind a string to a List<string> after splitting and sanitizing it

#### **Parameters**

| controllerContext |  |
|-------------------|--|
| bindingContext    |  |
| property-         |  |
| Descriptor        |  |

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

 $\bullet \ \ \, \text{D:/localhost/github/webchat/webchat/Models/Binders/RoomsModelBinder.cs}$ 

## 5.25 webchat. Validators. Rooms Validation Attribute Class Reference

Check the room names

Inherits ValidationAttribute.

#### **Public Member Functions**

· RoomsValidationAttribute ()

The constructor

override bool IsValid (object value)

Do the actual checking against the rooms

### 5.25.1 Detailed Description

Check the room names

#### 5.25.2 Constructor & Destructor Documentation

5.25.2.1 webchat.Validators.RoomsValidationAttribute.RoomsValidationAttribute ( )

The constructor

#### 5.25.3 Member Function Documentation

5.25.3.1 override bool webchat. Validators. Rooms Validation Attribute. Is Valid (object value)

Do the actual checking against the rooms

#### **Parameters**

value A List<string> of rooms to be checked

#### Returns

Returns true if all rooms are valid, else false

A room name is considered valid if it matches the regex:  $^{\land}$  [  $\setminus$ w] +\$

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

• D:/localhost/github/webchat/webchat/Validators/RoomsValidationAttribute.cs

## 5.26 webchat. Validators. Unique Nick Validation Attribute Class Reference

Check whether a nick is unique

Inherits ValidationAttribute.

#### **Public Member Functions**

UniqueNickValidationAttribute ()

The constructor

override bool IsValid (object value)

Do the actual checking of the uniqueness of the nick

## 5.26.1 Detailed Description

Check whether a nick is unique

#### 5.26.2 Constructor & Destructor Documentation

5.26.2.1 webchat. Validators. UniqueNickValidationAttribute. UniqueNickValidationAttribute ( )

The constructor

#### 5.26.3 Member Function Documentation

5.26.3.1 override bool webchat. Validators. Unique Nick Validation Attribute. Is Valid (object value)

Do the actual checking of the uniqueness of the nick

## **Parameters**

| value | The user's nick as string |
|-------|---------------------------|

## Returns

Return true if the nick is unique

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

• D:/localhost/github/webchat/webchat/Validators/UniqueNickValidationAttribute.cs

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