
Class GossipP2PServer

```
java.lang.Object
|
+--GossipP2PServer
```

< [Constructors](#) > < [Methods](#) >

```
public class GossipP2PServer
extends java.lang.Object
```

Gossip P2P Server

Author:

sroig2013@my.fit.edu

Constructors

GossipP2PServer

```
public GossipP2PServer()
```

Methods

main

```
public static void main(java.lang.String[] args)
```

Package gossipp2p.database

Class Summary

[Database](#)

Database class for Gossip P2P Server

gossip2p.database

Class Database

```
java.lang.Object
|
+--gossip2p.database.Database
```

< [Methods](#) >

```
public class Database
extends java.lang.Object
```

Database class for Gossip P2P Server

Author:

sroig2013@my.fit.edu

Methods

getInstance

```
public static synchronized Database getInstance()
```

Access the database singleton object.

Returns:

Return instance of the Database.

getPeersList

```
public PeersListMessage getPeersList()
```

Queries list of all known peers in the db.

Returns:

List of all known peers.

handleGossipMessage

```
public boolean handleGossipMessage(GossipMessage _gossipMessage)
```

Checks db for Gossip Message. Inserts if message doesn't exist. Updates record if it does exist.

Parameters:

_gossipMessage - Message to search for in db.

Returns:

handlePeerMessage

```
public boolean handlePeerMessage(PeerMessage _peerMessage)
```

Checks db for peer message. Inserts if message doesn't exist. Updates record if it does exist.

Parameters:

_peerMessage - The message to update or insert into db.

Returns:

Returns true if query is successful. False if not.

initializeDatabase

```
public void initializeDatabase(java.lang.String _connectionString)  
    throws java.sql.SQLException
```

Setup database using the path passed in from args.

Parameters:

_connectionString - Path to the database.

Throws:

java.sql.SQLException -

Package gossip2p.messagehandler

Class Summary

[MessageHandler](#)

Class to handle actions for specific message types.

gossip2p.messagehandler

Class MessageHandler

```
java.lang.Object
|
+--gossip2p.messagehandler.MessageHandler
```

< [Constructors](#) > < [Methods](#) >

```
public class MessageHandler
extends java.lang.Object
```

Class to handle actions for specific message types.

Author:

sroig2013@my.fit.edu

Constructors

MessageHandler

```
public MessageHandler()
```

Methods

HandleGossipMessage

```
public static void HandleGossipMessage(Message _gossipMessage)
```

Handles gossip messages. Store message in database and broadcast it to all known peers.

Parameters:

_gossipMessage - Gossip message to handle.

HandlePeerMessage

```
public static void HandlePeerMessage(Message _peerMessage)
```

Hanldes peer message. Sends message to database to be processed.

Parameters:

_peerMessage - Peer message to handle.

Package gossip2p.messages

Class Summary

[ErrorMessage](#)

Represents an invalid message.

[GossipMessage](#)

Represents a GOSSIP message received by the server

[Message](#)

Super class that represents messages received by the server

[PeerMessage](#)

Message that will add a new peer to the list of known peers

[PeersListMessage](#)

Represents list of known peers.

gossip2p.messages

Class ErrorMessage

```
java.lang.Object
|
+-- Message
    |
    +-- gossip2p.messages.ErrorMessage
```

< [Constructors](#) >

```
public class ErrorMessage
extends Message
```

Represents an invalid message.

Author:

sroig2013@my.fit.edu

Constructors

ErrorMessage

```
public ErrorMessage()
```

gossipp2p.messages

Class GossipMessage

```
java.lang.Object
|
+--Message
|
+--gossipp2p.messages.GossipMessage
```

< [Constructors](#) > < [Methods](#) >

public class **GossipMessage**
extends [Message](#)

Represents a GOSSIP message received by the server

Author:

sroig2013@my.fit.edu

Constructors

GossipMessage

```
public GossipMessage()
```

Default constructor

GossipMessage

```
public GossipMessage( java.lang.String _sha256EncodedMessage,  
                      java.lang.String _messageDate,  
                      java.lang.String _message)
```

Constructs new GossipMessage.

Parameters:

- _sha256EncodedMessage - SHA256 encoding of message.
- _messageDate - Date of message.
- _message - Contents of message.

GossipMessage

```
public GossipMessage(java.lang.String _sha256EncodedMessage,  
                     java.lang.String _messageDate,  
                     java.lang.String _message,  
                     int _id)
```

Constructs new GossipMessage.

Parameters:

_sha256EncodedMessage - SHA256 encoding of message.
_messageDate - Date of message.
_message - Contents of message.

GossipMessage

```
public GossipMessage(java.lang.String _sha256EncodedMessage,  
                     java.util.Date _messageDate,  
                     java.lang.String _message)
```

Constructs new GossipMessage.

Parameters:

_sha256EncodedMessage - SHA256 encoding of message.
_messageDate - Date of message.
_message - Contents of message.

GossipMessage

```
public GossipMessage(java.lang.String _sha256EncodedMessage,  
                     java.util.Date _messageDate,  
                     java.lang.String _message,  
                     int _id)
```

Constructs new GossipMessage.

Parameters:

_sha256EncodedMessage - SHA256 encoding of message.
_messageDate - Date of message.
_message - Contents of message.
_id - Id assigned from db.

Methods

getId

```
public int getId()
```

Returns:

Gossip Message id.

getMessage

```
public java.lang.String getMessage()
```

Returns:

Gossip Message message.

getMessageDate

```
public java.util.Date getMessageDate()
```

Returns:

Gossip Message date.

getSha256EncodedMessage

```
public java.lang.String getSha256EncodedMessage()
```

Returns:

Gossip Message SHA 256 encrypted message.

toString

```
public java.lang.String toString()
```

String representation of GossipMessage.

Overrides:

toString in class java.lang.Object

gossip2p.messages

Class Message

```
java.lang.Object
|
+--gossip2p.messages.Message
```

Direct Known Subclasses:

[ErrorMessage](#), [GossipMessage](#), [PeerMessage](#), [PeersListMessage](#)

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```
public class Message
extends java.lang.Object
```

Super class that represents messages received by the server

Author:

Santiago Roig

Constructors

Message

```
public Message()
```

Methods

identifyMessage

```
public static Message identifyMessage(java.lang.String strMessage)
```

Identifies message type and returns new instance based on message type.

Parameters:

strMessage - String message to be identified.

Returns:

Returns a message that has been identified by strMessage.

gossip2p.messages

Class PeerMessage

```

java.lang.Object
|
+--Message
    |
    +--gossip2p.messages.PeerMessage
  
```

< [Constructors](#) > < [Methods](#) >

public class **PeerMessage**
 extends [Message](#)

Message that will add a new peer to the list of known peers

Author:

sroig2013@my.fit.edu

Constructors

PeerMessage

```

public PeerMessage(java.lang.String _peerName,
                    int _portNumber,
                    java.lang.String _ipAddress)
  
```

Constructs a new peer message.

Parameters:

_peerName -
 _portNumber -
 _ipAddress -

PeerMessage

```

public PeerMessage(java.lang.String[] _peerMessage)
  
```

Constructs new Peer Message.

Parameters:

_peerMessage - Array of strings to be turned into peer message.

Methods

getId

```
public int getId()
```

Returns:

Peer Message id.

getIpAddress

```
public java.lang.String getIpAddress()
```

Returns:

Peer Message IP Address.

getPeerName

```
public java.lang.String getPeerName()
```

Returns:

Peer Message peer name.

getPortNumber

```
public int getPortNumber()
```

Returns:

Peer Message port number.

gossip2p.messages

Class PeersListMessage

```
java.lang.Object
|
+-- Message
|
+-- gossip2p.messages.PeersListMessage
```

< [Constructors](#) > < [Methods](#) >

```
public class PeersListMessage
extends Message
```

Represents list of known peers.

Author:

sroig2013@my.fit.edu

Constructors

PeersListMessage

```
public PeersListMessage()
```

PeersListMessage

```
public PeersListMessage(java.util.ArrayList _peers)
```

Constructs new list of peers.

Parameters:

_peers - List of known peers.

Methods

getPeers

```
public java.util.ArrayList getPeers()
```

Returns:

List of known peers.

toString

```
public java.lang.String toString()
```

String representation of Peers List.

Overrides:

toString in class java.lang.Object

Package gossip2p.serverthreads

Class Summary

[ConcurrentTCPServerThread](#)

[ConcurrentUDPServerThread](#)

[IterativeTCPServerThread](#)

Thread for an iterative TCP Gossip Server.

[IterativeUDPServerThread](#)

Thread for an iterative UDP Gossip Server.

gossip2p.serverthreads

Class ConcurrentTCPServerThread

```
java.lang.Object
|
+-- java.lang.Thread
|
+-- gossip2p.serverthreads.ConcurrentTCPServerThread
```

All Implemented Interfaces:

java.lang.Runnable

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```
public class ConcurrentTCPServerThread
extends java.lang.Thread
```

Constructors

ConcurrentTCPServerThread

```
public ConcurrentTCPServerThread(java.net.Socket _sock)
```

Methods

run

```
public void run()
```

Overrides:

run in class java.lang.Thread

gossip2p.serverthreads

Class ConcurrentUDPServerThread

```
java.lang.Object
|
+-- java.lang.Thread
|
+-- gossip2p.serverthreads.ConcurrentUDPServerThread
```

All Implemented Interfaces:

java.lang.Runnable

< [Constructors](#) > < [Methods](#) >

```
public class ConcurrentUDPServerThread
extends java.lang.Thread
```

Constructors

ConcurrentUDPServerThread

```
public ConcurrentUDPServerThread(java.net.DatagramSocket _dgSocket)
```

Methods

run

```
public void run()
```

Overrides:

run in class java.lang.Thread

gossipp2p.serverthreads

Class IterativeTCPServerThread

```
java.lang.Object
|
+-- java.lang.Thread
|
+-- gossipp2p.serverthreads.IterativeTCPServerThread
```

All Implemented Interfaces:

java.lang.Runnable

< [Constructors](#) > < [Methods](#) >

```
public class IterativeTCPServerThread
extends java.lang.Thread
```

Thread for an iterative TCP Gossip Server.

Author:

sroig2013@my.fit.edu

Constructors

IterativeTCPServerThread

```
public IterativeTCPServerThread(int _port)
```

Construct a new iterative TCP Gossip Server.

Parameters:

_port - Port that server will listen on.

Methods

run

```
public void run()
```

Run the thread.

Overrides:

run in class java.lang.Thread

gossipp2p.serverthreads

Class IterativeUDPServerThread

```
java.lang.Object
|
+-- java.lang.Thread
|
+-- gossipp2p.serverthreads.IterativeUDPServerThread
```

All Implemented Interfaces:

java.lang.Runnable

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```
public class IterativeUDPServerThread
extends java.lang.Thread
```

Thread for an iterative UDP Gossip Server.

Author:

sroig2013@my.fit.edu

Constructors

IterativeUDPServerThread

```
public IterativeUDPServerThread(int _port)
```

Construct a new iterative UDP Gossip Server.

Parameters:

_port - Port that server will listen on.

Methods

run

```
public void run()
```

Run the thread.

Overrides:

run in class java.lang.Thread