**Project metrics before refactoring**

Tool used: JDepend

**Package Metrics:**

- **Package: com.ays.javachat.client**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 0 | 1 | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 0 | 1 | 0 | 1 | 0 |

Abstract Classes: (none)

Concrete Classes:

com.ays.javachat.client.Main

Depends Upon:

com.ays.javachat.client.manager

Used By:

Not used by any packages.

- **Package: com.ays.javachat.client.interfaces**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 4 | 0 | 4 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 3 | 2 | 1 | 0.4 | 0.4 |

Abstract Classes:

com.ays.javachat.client.interfaces.ScreenCallback

com.ays.javachat.client.interfaces.ScreenCapables

com.ays.javachat.client.interfaces.TransmitterCallback

com.ays.javachat.client.interfaces.TransmitterCapables

Concrete Classes: (none)

Depends Upon:

com.ays.javachat.common.datatypes

com.ays.javachat.common.messages

Used By:

com.ays.javachat.client.manager

com.ays.javachat.client.screen

com.ays.javachat.client.transmitter

- **Package: com.ays.javachat.client.manager**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 0 | 1 | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 1 | 5 | 0 | 0.83 | 0.17 |

Abstract Classes: (none)

Concrete Classes:

com.ays.javachat.client.manager.ClientManager

Depends Upon:

com.ays.javachat.client.interfaces

com.ays.javachat.client.screen

com.ays.javachat.client.transmitter

com.ays.javachat.common.datatypes

com.ays.javachat.common.messages

Used By:

com.ays.javachat.client

- **Package: com.ays.javachat.client.screen**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 3 | 9 | 12 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 1 | 5 | 0.25 | 0.83 | 0.08 |

Abstract Classes:

com.ays.javachat.client.screen.DoubleClick

com.ays.javachat.client.screen.OnlineListActions

com.ays.javachat.client.screen.RoomActions

Concrete Classes:

com.ays.javachat.client.screen.ClientScreen

com.ays.javachat.client.screen.Dialogs

com.ays.javachat.client.screen.Dialogs$1

com.ays.javachat.client.screen.Dialogs$2

com.ays.javachat.client.screen.Dialogs$3

com.ays.javachat.client.screen.DoubleClickImplementor

com.ays.javachat.client.screen.OnlineList

com.ays.javachat.client.screen.PrivateRoomContainer

com.ays.javachat.client.screen.Rooms

Depends Upon:

com.ays.javachat.client.interfaces

com.ays.javachat.common.datatypes

com.ays.javachat.common.globalconsts

com.ays.javachat.common.messages

com.ays.javachat.common.utils

Used By:

com.ays.javachat.client.manager

- **Package: com.ays.javachat.client.transmitter**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 1 | 2 | 0 | 0.67 | 0.33 |

Abstract Classes: (none)

Concrete Classes:

com.ays.javachat.client.transmitter.ClientTransmitter

com.ays.javachat.client.transmitter.ThreadListener

Depends Upon:

com.ays.javachat.client.interfaces

com.ays.javachat.common.datatypes

Used By:

com.ays.javachat.client.manager

- **Package: com.ays.javachat.common.datatypes**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 1 | 4 | 5 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 8 | 0 | 0.2 | 0 | 0.8 |

Abstract Classes:

com.ays.javachat.common.datatypes.Data

Concrete Classes:

com.ays.javachat.common.datatypes.IPPort

com.ays.javachat.common.datatypes.IgnoredUsers2

com.ays.javachat.common.datatypes.LoginData

com.ays.javachat.common.datatypes.UserDetails

Depends Upon:

Not dependent on any packages.

Used By:

com.ays.javachat.client.interfaces

com.ays.javachat.client.manager

com.ays.javachat.client.screen

com.ays.javachat.client.transmitter

com.ays.javachat.common.messages

com.ays.javachat.server.database

com.ays.javachat.server.interfaces

com.ays.javachat.server.manager

- **Package: com.ays.javachat.common.globalconsts**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 0 | 1 | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 2 | 0 | 0 | 0 | 1 |

Abstract Classes: (none)

Concrete Classes:

com.ays.javachat.common.globalconsts.Net

Depends Upon:

Not dependent on any packages.

Used By:

com.ays.javachat.client.screen

com.ays.javachat.server.manager

- **Package: com.ays.javachat.common.messages**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 2 | 27 | 29 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 4 | 1 | 0.07 | 0.2 | 0.73 |

Abstract Classes:

com.ays.javachat.common.messages.Message

com.ays.javachat.common.messages.ReplyEmpty

Concrete Classes:

com.ays.javachat.common.messages.ClientText

com.ays.javachat.common.messages.Connect

com.ays.javachat.common.messages.Disconnect

com.ays.javachat.common.messages.GetOnlineUsersList

com.ays.javachat.common.messages.GetUserDetails

com.ays.javachat.common.messages.GetUsersIgnoredByMe

com.ays.javachat.common.messages.IgnoreUsers

com.ays.javachat.common.messages.Login

com.ays.javachat.common.messages.Logout

com.ays.javachat.common.messages.Register

com.ays.javachat.common.messages.ReplyClientText

com.ays.javachat.common.messages.ReplyConnect

com.ays.javachat.common.messages.ReplyDisconnect

com.ays.javachat.common.messages.ReplyGetOnlineUsersList

com.ays.javachat.common.messages.ReplyGetUserDetails

com.ays.javachat.common.messages.ReplyGetUsersIgnoredByMe

com.ays.javachat.common.messages.ReplyIgnoreUsers

com.ays.javachat.common.messages.ReplyLogin

com.ays.javachat.common.messages.ReplyLogout

com.ays.javachat.common.messages.ReplyRegister

com.ays.javachat.common.messages.ReplySetUserDetails

com.ays.javachat.common.messages.ReplyUnregister

com.ays.javachat.common.messages.ServerNotification

com.ays.javachat.common.messages.ServerText

com.ays.javachat.common.messages.SetUserDetails

com.ays.javachat.common.messages.UnRegister

com.ays.javachat.common.messages.UpdateUsersList

Depends Upon:

com.ays.javachat.common.datatypes

Used By:

com.ays.javachat.client.interfaces

com.ays.javachat.client.manager

com.ays.javachat.client.screen

com.ays.javachat.server.manager

- **Package: com.ays.javachat.common.utils**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 0 | 1 | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 1 | 0 | 0 | 0 | 1 |

Abstract Classes: (none)

Concrete Classes:

com.ays.javachat.common.utils.StringUtils

Depends Upon:

Not dependent on any packages.

Used By:

com.ays.javachat.client.screen

- **Package: com.ays.javachat.server**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 0 | 1 | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 0 | 1 | 0 | 1 | 0 |

Abstract Classes:

Concrete Classes:

com.ays.javachat.server.Main

Depends Upon:

com.ays.javachat.server.manager

Used By:

Not used by any packages.

- **Package: com.ays.javachat.server.database**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 0 | 1 | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 1 | 2 | 0 | 0.67 | 0.33 |

Abstract Classes: (none)

Concrete Classes:

com.ays.javachat.server.database.ServerDatabase

Depends Upon:

com.ays.javachat.common.datatypes

com.ays.javachat.server.interfaces

Used By:

com.ays.javachat.server.manager

- **Package: com.ays.javachat.server.interfaces**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 5 | 0 | 5 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 3 | 1 | 1 | 0.25 | 0.25 |

Abstract Classes:

com.ays.javachat.server.interfaces.ConnectionsListenerCallback

com.ays.javachat.server.interfaces.ConnectionsListenerCapables

com.ays.javachat.server.interfaces.ServerDatabaseCapables

com.ays.javachat.server.interfaces.TransmitterCallback

com.ays.javachat.server.interfaces.TransmitterCapables

Concrete Classes: (none)

Depends Upon:

com.ays.javachat.common.datatypes

Used By:

com.ays.javachat.server.database

com.ays.javachat.server.manager

com.ays.javachat.server.transmitter

- **Package: com.ays.javachat.server.manager**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 0 | 1 | 1 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 1 | 6 | 0 | 0.86 | 0.14 |

Abstract Classes:

Concrete Classes:

com.ays.javachat.server.manager.ServerManager

Depends Upon:

com.ays.javachat.common.datatypes

com.ays.javachat.common.globalconsts

com.ays.javachat.common.messages

com.ays.javachat.server.database

com.ays.javachat.server.interfaces

com.ays.javachat.server.transmitter

Used By:

com.ays.javachat.server

- **Package: com.ays.javachat.server.transmitter**

Stats:

|  |  |  |
| --- | --- | --- |
| **Abstract** | **Concrete** | **Total** |
| 0 | 2 | 2 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Ca** | **Ce** | **A** | **I** | **D** |
| 1 | 1 | 0 | 0.5 | 0.5 |

Abstract Classes: (none)

Concrete Classes:

com.ays.javachat.server.transmitter.ConnectionsListener

com.ays.javachat.server.transmitter.ServerTransmitter

Depends Upon:

com.ays.javachat.server.interfaces

Used By:

com.ays.javachat.server.manager

-- **Package Dependency Cycles:**

The project does not have any dependency cycles

**SUMMARY**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Package** | **Number of classes** | **Number of Abstract Classes** | **Number of Concrete Classes** | **Ca** | **Ce** | **A** | **I** | **D** |
| com.ays.javachat.client | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| com.ays.javachat.client.interfaces | 4 | 4 | 0 | 3 | 2 | 1 | 0.4 | 0.4 |
| com.ays.javachat.client.manager | 1 | 0 | 1 | 1 | 5 | 0 | 0.83 | 0.17 |
| com.ays.javachat.client.screen | 12 | 3 | 9 | 1 | 5 | 0.25 | 0.83 | 0.08 |
| com.ays.javachat.client.transmitter | 2 | 0 | 2 | 1 | 2 | 0 | 0.67 | 0.33 |
| com.ays.javachat.common.datatypes | 5 | 1 | 4 | 8 | 0 | 0.2 | 0 | 0.8 |
| com.ays.javachat.common.globalconsts | 1 | 0 | 1 | 2 | 0 | 0 | 0 | 1 |
| com.ays.javachat.common.messages | 29 | 2 | 27 | 4 | 1 | 0.07 | 0.02 | 0.73 |
| com.ays.javachat.common.utils | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| com.ays.javachat.server | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| com.ays.javachat.server.database | 1 | 0 | 1 | 1 | 2 | 0 | 0.67 | 0.33 |
| com.ays.javachat.server.interfaces | 5 | 5 | 0 | 3 | 1 | 1 | 0.25 | 0.25 |
| com.ays.javachat.server.manager | 1 | 0 | 1 | 1 | 6 | 0 | 0.86 | 0.14 |
| com.ays.javachat.server.transmitter | 2 | 0 | 2 | 1 | 1 | 0 | 0.5 | 0.5 |

**Package Dependency UML Diagram :**

Drawn on Gliffy

