**Project 01 Requirements and Use Cases**

**PhatChat**

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**May 12, 2015**

**Table of Contents**

System Requirements

1.0 Server

1.1 Startup…………………………………………………………………pg.3

1.2 Running………………………………………………………………..pg.4

2.0 Client

2.1 Startup………………………………………………………………….pg4

2.2 Running………………………………………………………………...pg5

2.3 Shutdown……………………………………………………………….pg5

**1.0 Server**

**1.1 Startup**

**1.1.1** An argument written in command line interface starts the server

**1.1.2** Command line arguments configure the server

**1.1.3** The listening port can be set by the first command line argument

**1.1.4** If the first command line argument is absent, the default port is used

**1.1.5** Thelistening hostname or ip address is set automatically to 0.0.0.0

**1.1.6** If the listening port is already in use, then the application is terminated

**1.1.7** On a successful startup, a message is printed to the console

**1.2 Running**

**1.2.1** Every five seconds, the server sends ping packets to all connected clients

**1.2.2** If a client connects, a message is printed to the server's console

**1.2.3** If a clients disconnects, a message is printed to the server's console

**1.2.4** If a client receives a packet, the message encapsulated in package is printed to the server's console

**2.0 Client**

**2.1 Startup**

**2.1.1** Client is started either by double clicking on the application symbol or by writing a specific command line argument

**2.1.2** A minimum of two command line arguments are necessary for

client connection to the server

**2.1.3** The first argument typed into the command line is the username

**2.1.4** The second argument is the ip address or hostname

**2.1.5** The third argument defines the port, if there is no third

argument specified, then a default port will be used.

**2.1.6** If the connection is successful, the chat window is displayed

**2.1.7** If the connections fails, an error message will pop up.

**2.1.8** If command line arguments are absent, a connection window is still displayed

**2.1.9** Username text box: space to input username

**2.1.10** Address text box: space to input the ip address or hostname and port separated by the colon

**2.1.11** The default address is 127.0.0.1:20901

**2.1.12** Client attempts connection, once the connect button is pushed and after the appropriate text boxes are filled out.

**2.1.13** If the connection was successful, a chat window is displayed **2.1.14** If the connection failed, an error message pops up

**2.2 Running**

**2.2.1** Text is input in a part of the chat window

**2.2.2** Then some event transfers the input text to the output portion of the window

**2.2.3** The text displays in the output portion of the window and is visible to all the connected clients.

**2.2.4** Meanwhile, the client and server exchange pong and

ping packets to confirm connectivity.

**2.3 Shutdown**