



University of Dayton

Department of Computer Science

CPS 475/575

Secure Application Development

Lecture 12 - Assignment 1 Tutorial

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Assignment 1 - Full instruction:

<http://bit.ly/secad-s20-assignment1>

- Extend the **BroadcastEchoServer.go** program to become a Chat Server:
 - An user must be authenticated with username/password
 - Serve the clients with the following use cases:
 - Return the list of logged-in users
 - Send message to all users (public chat)
 - Send message to a specific user (private chat)
- Extend the **telnet.js** program to become a Chat Client:
 - Ask username/password from the user to send to the server for authentication
 - Print a simple menu for the user to
 - Execute the functions provided by the server or exit the chat program.
- ~~Database and Security (Bonus part – will be covered later)~~
 - ~~Username/password should be stored in a JSON file at server side~~
 - Data races must be identified and prevented

Guidance for Assignment 1

- You need to design the protocol between the client and the server, e.g.,:
 - How the server understand if a data is for ?
 - Login i.e., username/password
 - Public chat
 - Private chat
 - ...
- Start thinking the design and implementation as soon as possible, step-by-step, e.g.,: for authentication
 - Parse a formatted data (e.g., username=abc;password=123) from the client (tested with telnet first) and print out the extracted data (not the whole string)
 - Check the extracted data and compare with some hard-code strings