# Hacknet, Real-Life Hacking, and You

Progress Report #2 Logan Grannis ITC499 - Web Systems

### **Project Summary**

- This project consists of simulations of the hacking simulator Hacknet. The user will "hack" into a fake wiretapping server, and then defend that same server against a foreign intrusion. Once each game is completed, a short video or other media will be shown to the user, explaining how this would happen in real life. After completing both games, a webpage called "why.html" will be shown to the user. Why.html will summarize what was learned, and will try to convince the user to become more involved in cybersecurity.
- Users have the ability to create an account to track their progress in the game. There may also be a leaderboard to track who completed the game fastest. This user data will be stored with mySQL.

## Overview

- Main Component:
  - Web site with login, registration, and log out.
    - Can reset their progress or create a new account
    - Password is optional; cybersecurity for site will be ironically, slightly lax
      - Letting users compromise the site could be another learning tool

### **Project Scope**

- Activities
  - Design Website
  - Build Website
  - Code Logic
  - Design and Build Database
- Testing
  - Register, login, and logout
  - Progress tracker

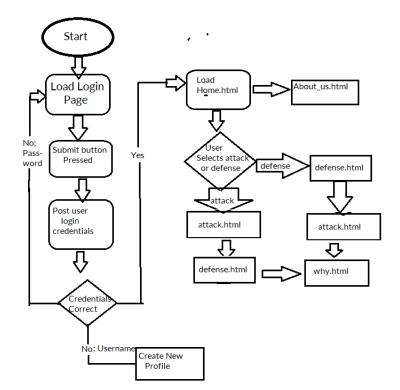
### **Problems and Corrections**

- Lack of Knowledge
  - Need to go over old course material in regards to web design and building
- Unattractive UI
  - Need a more attractive way to present text; will study other websites' page's source
- Lack of familiarity with MySQL
  - Will have to use DDL statements to create database table
- User creation and login functionality non-functional
  - Need to debug php to find error

### **Project Milestones and Deliverables**

- Prototype
  - Working website with correctly functioning games and database
- Final Report
- Final Project Presentation

### Web System Design



### System Requirements

- User Interface and Data Presentation Layer
  - Web site
  - Login page
  - Using HTML/CSS/PHP/JS Framework

### System Requirements

- Game Logic:
  - PHP
  - 0 **JS**
- Data Storage
  - MySQL Database

# Major Components of the Proposed System

- Hardware
  - Virtual Hosted Linux Server
  - Windows Development Computer
- Software
  - Text Editors
  - Database Management GUI

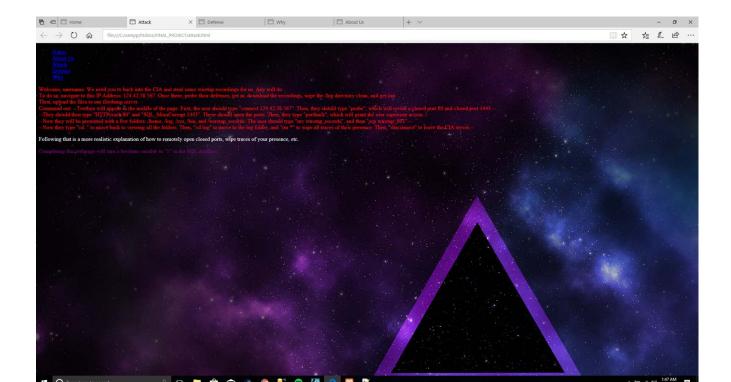
### Software Programming Tools

- phpMyAdmin
- Notepad++

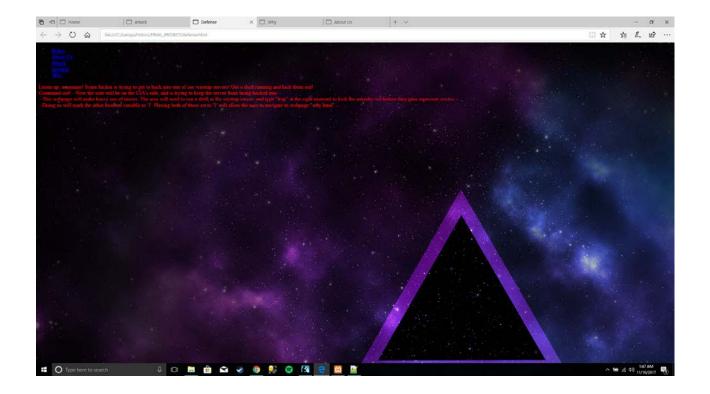
### User Interface: Home.html

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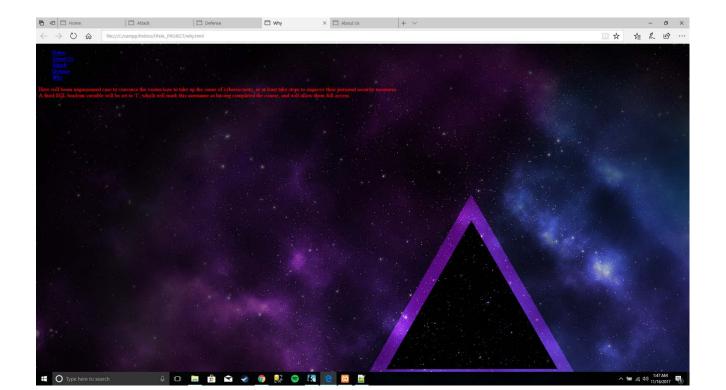
### User Interface: Attack.html



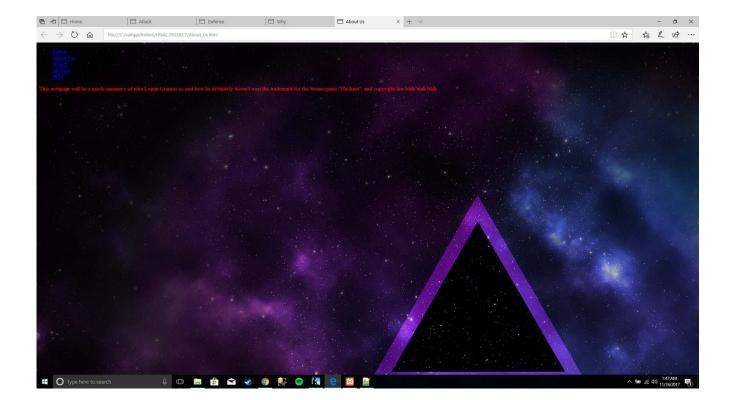
### User Interface: Defense.html



### User Interface: Why.html



### User Interface: About\_Us.html



### MySQL Database/Table Creation Process

	ocalh	ost/p	phpmyadmin/db_sql.php?db=hacknetdatabase	localh	ost/phpmyadmin/db_sql.php?db=hacknetdatabase
Π		←	🗊 Server: 127.0.0.1 » 🍵 Database: hacknetdatabase	n	← ☐Server: 127.0.0.1 » 🕤 Database: hacknetdatabase » 📷 Table: Users
		k	f Structure 🗐 SQL 🔍 Search 🗊 Query 🚍 Export 📮 Import 🧳	1	🔄 Browse 🥻 Structure 📋 SQL 🔍 Search 👫 Insert 🚍 Export
- a	Ð		Run SQL query/queries on database hacknetdatabase: 🔞	- @	Show query box
					✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.4942 seconds.)
,			1 CREATE TABLE Users   2 (Id   3 Username   VARCHAR(30) NOT NULL UNIQUE,	Э	ALTER TABLE Users ADD ProgressInt INT NOT NULL DEFAULT 0
			4 PASSWORD VARCHAR(100) NOT NULL, 5 Created_At DATETIME DEFAULT CURRENT_TIMESTAMP		
			6 );		✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0012 seconds.)
2	ocalh	ost/p	hpmyadmin/db_sql.php?db=hacknetdatabase		SELECT * FROM Users
Π		←	🗐 Server: 127.0.0.1 » 🍵 Database: hacknetdatabase » 🐻 Table: Users		
			Browse 🧗 Structure 📄 SQL 🔍 Search 👫 Insert 🚍 Export		Id Username PASSWORD Created_At ProgressInt
G	Ð	Sh	how query box		
		~	MySQL returned an empty result set (i.e. zero rows). (Query took 0.0015 seconds.)		1
•		SE	ELECT * FROM Users		
		ld	Username PASSWORD Created At		



- Set up Database Tables
  - $\circ$  1/2-2 Hour(s)
  - o **11/30/2017**
- Finish and Debug Hacking Game (php/JS?)
  - 2-4 Hours
  - o **12/03/2017**
- Clean up UI
  - $\circ$  3-5 Hours
  - o **12/06/2017**



#### • Test Functionality

- 5-10 Hours
- o **12/09/2017**