

About CySim:

CySim is a cyber sports complex that is being created with the goal of hosting cyber security scrimmages, trainings and individual tutorials. We have developed the web application for CySim that will allow users to utilize the system and improve their security readiness while also receiving real time feedback.

Why CySim?

Help train and provide real world experience to the next generation of cybersecurity specialists.

Target Audience:

Employees
Students
Organizations
Cyber Competitions

Our Approach:

Our team designed and developed a working web application that will be used for CySim. This is where the users will login, access teams, view the scoreboard, tutorials and scenarios. This is connected to a database where all the information is being stored.

Impact:

CySim has the potential to completely change the way companies and students prepare for cybersecurity threats. This will allow for employees and students to build skills necessary to tackle real world cyber security events, by being able to access, plan and counteract events in place.

Design Implementation:

Backend:

.NET Core Framework
MS SQL

Frontend:

JQuery
Bootstrap

Methodology:

We choose to do the MVC pattern so that we could easily control endpoints, views, and models

Features

Tutorials

CySim Team Register ScoreBoard Tutorial Scenario Machine - Hello test_admin@cymsim.com! Logout

Welcome to the Tutorials Page

Some general background on the Tutorial Page:

- Below you will see the respective tutorials for your team. If you are red you will have access to red tutorials, if blue you will have access to blue tutorials.
- There is four total tables for tutorials. Two red and two blue, the two red are for tutorials as well as gametype, and blue is for tutorials and gametype too.
- Admin is able to create, edit and delete tutorials as well as assign them to respective teams.
- You will be able to click the hyperlinked lines for each tutorial, this will allow you to download the pages and view them to better understand CySim.

Access Tutorial Documents

[Add a Tutorial](#)

Red Team Tutorials

File Name	Description	Actions
NMAP.pdf	Tutorial on Nmap	Edit Delete
Metra-Tutorial.docx	Metasploit Tutorial	Edit Delete

Red Team GameTypes

File Name	Description	Actions
RedTeamGameType1.pdf	Red Team GameType 1	Edit Delete
RedTeamGameType2.pdf	Red Team GameType 2	Edit Delete

Blue Team Tutorials

File Name	Description	Actions
LDAP.docx	Tutorial on Setting up LDAP	Edit Delete

Blue Team GameTypes

File Name	Description	Actions
BlueTeamGameType1.pdf	Blue Team GameType 1	Edit Delete
BlueTeamGameType2.pdf	Blue Team GameType 2	Edit Delete
BlueTeamGameType3.pdf	Blue Team GameType 3	Edit Delete



Team Registration

Some things to know before you register for a team



- If you do not see a team that you wish to join then you will be able to create your own
 - The creator of a team is also able to edit and delete the team that they create
- If you see a team that you wish to join then you will be able to click join on that team
- Each team has the ability to have up to 6 players so choose wisely

Red Teams

[Add a New Team](#)

Profile Picture	Team Name	Available Spots	Users	Controls
	Vipers	6		Edit Delete
	Vultures	6		Edit Delete

Blue Teams

Profile Picture	Team Name	Available Spots	Users	Controls
	The Goats	6		Edit Delete
	Eagles	6		Edit Delete

Results:

Our team was able to implement 10 out of the 14 pages needed for the application. In these 10 pages we were also able to implement all of the backend requirements needed for each page.

Conclusion:

We were able to learn about the .Net Core framework and how to effectively develop as a team with different OS types. We also learned how useful an application like this can be for younger generations as it will be a one stop shop to learn all of the upto date cyber security challenges.