Web Security Project

# Assignment

This is a group research and presentation project focused on a particular topic in web security. Begin by choosing a groups of 3-4 members. You will work together to research one of the following topics:

***SQL Injections***

***XSS Attacks***

***Authentication***

***Internet Worms/Malware/Ransomware***

***Database Security/Data Breaches***

***Social Engineering***

***Broken Access Controls***

***Vulnerabilities***

***Cryptography***

***Session Management***

You may also choose your own topic in web security, provided you discuss it with the professor before hand.

It is expected that all groups choose a different topic. If you are slow to choose a topic, you may have to pick another. E-mail the professor with your chosen topic ASAP.

## 1. Research

After choosing your topic, you should do research. Use textbooks from O’Reilly Safari and reputable online resources.

You should focus your research on the following areas based on threat modelling:

-What are the types of threats related to the issue

-How do hackers use the threat to attack a website (how is the attack performed)

-What type of damage can the threat do to a company

-Find news related to the topic and how it may have affected a company i.e. cybercrime reports

-What are countermeasures to help protect a company from the issues

## 2. Research Document

Create a word document for your research results. Begin by defining and describing the topic in detail, in your own words. Then write about your findings. You will be graded on spelling, grammar, and clarity. Be sure to cite anything that you found from a site or textbook, this project will require you adhere to academic integrity standards.

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## 3. Threat Modelling

For the final part, imagine you are working for a company and in charge of threat modelling. Describe an example website of your choice, then choose a potential threat related to your topic and model it as seen in class. This will require you to discuss the following: the features of the site that can be attacked by the threat (i.e. the user login function), the type of attack, the assets involved, the impact of an attack on the company and the countermeasures.

Note the site here does not need to be real, this part of the paper requires you to use your imagination and knowledge of the threat to describe a potential scenario.

## 4. Presentation

Take the most important points from your research document and summarize them as PowerPoint slides. You will then present your paper to the class. The presentation should be 10-15 minutes and no longer than 20. Each member of the group should present a significant portion and grades will be given for professionalism.

# Submission Instructions

* This assignment is to be completed as a group
* You will upload a set of PPT slides and your research document
* Your assignment must be submitted to eConestoga by the date/time stated in your Instructional Plan.
* Include a cover page with the following information:
  + Your full name
  + Student number
  + Course number