COMP3500: Security Attacks Analysis and Mitigation Strategies

CIT, SIPS

Semester 1, 2022

Assignment 1: 32 marks, Due 1st April 2022 23:59

As a general guide, answers for each question may be around half page for 2 marks question, 1 page for 4 marks question and one and half page for 6 marks question.

Note: It is a good practise to clearly state if you are making any assumptions before answering each question. It is also important to give reasoning to justify your answers.

1. **[6 marks]** Discuss any three reasons for increasing trend of cyber security attacks in the current Internet.

2. **[6 marks]** Briefly describe the Cigital risk management framework.

3. **[6 marks]** What approach would you recommend for applying Cigital risk management for an online healthcare company which is using password-based authentication for the staff and patients for accessing the healthcare services.

4. **[6 marks]** Explain cross site scripting attacks, time of check and time of use race condition attacks and compare between these attacks.

5. **[8 marks]** Ransomware
    a. [2 marks] Explain WanaCry ransomware.
    b. [2 marks] What was the impact of the attack.
    c. [2 marks] Are there any lessons to be learned from this attack?
    d. [2 marks] Discuss if have you noticed any changes in the recent ransomware attack behaviour compared to WanaCry.

Submission

All assignments must be submitted via Canvas (Assessment tab for COMP3500). If you submit more than once, then only the latest will be graded. Your submission should be one file containing:

A PDF file which contains your Full Name, Student number and answers to all questions.

The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

Plagiarism

A plagiarised assignment will receive a ZERO mark (and be penalised according to the university rules).