Cybersecurity Pentest Project

A. Introduction

You have been inducted into a security lab as a trainee. The course of the next two months, you will be given training in cybersecurity skills, and then put your skills to the test to see if you are fit to join the team. You are given a span of 5 weeks to learn the fundamentals of penetration testing, common vulnerabilities, exploits and cybersecurity in general. At the end of the training period, your skills will be assessed in conducting a penetration test against two machines.

B. Mission

Perform training orientation at the company and then conduct two pentest tasks:

1. Gather a group of 4 teammates under the supervision of the same tutor. Appoint a leader who will oversee the group activities and report to the tutor.
2. Complete the 25 Days of Cyber Security (https://tryhackme.com/room/learncyberin25days) in 5 weeks (25 working days).
3. Complete the additional training rooms provided in the video lectures.
4. Report your progress via weekly submissions.
5. Submit all deliverables of your pentesting solutions before the deadline.
6. Present your pentesting solutions on uploaded videos on Youtube.

C. Deadlines

Weekly deliverables should be submitted by Sunday of the following week, as Monday is considered the start of the work week. E.g. Your task for Week 2 begins on 13 June 2022, then the deadline for Week 2 submission is on 19 June 2022 11.59pm. Details of deadlines for the training weeks are given Table 1.

Final deliverable of the pentest reports should be provided within 24 hours of the penetration test. You will be given two machines to conduct your pentesting efforts in 12 hours. Once that allocated time is over, you will be required to write up your pentest efforts and present a video for it. E.g. if the pen test is on 26 July 2022, the deadline for the pentest report and video presentation will be 11.59pm 27 July 2022.

D. Grouping

Here are the rules for assignment grouping:

1. Each assignment group must contain either **3 members** or **4 members, not more nor less**.

2. All assignment group members must come **from the same tutorial group**.
3. A google sheet will be provided with each tutorial group having a different tab. Register your assignment groups under your corresponding tutorial group tab.
4. Stragglers will be assigned by coordinator at the end of week 2.
5. Group management will be coordinated by the group leader, who reports directly to the tutor of each tutorial group and coordinates the weekly task schedule between members. Collaboration and cooperation is encouraged to tackle the challenges together as a group. Submission, however, is individual.
6. For any disputes arising, precedence will fall on the group leader's testimony. If the group leader is found to be at fault, it will require the testimony of ALL other group members. The tutor of each group will arbitrate any conflicts of assignment groups under the tutorial group they oversee. The tutor's verdict is final.

By the end of Week 2, all students should have become a member of a group.

E. Deliverables

Each group is to deliver and submit the following for the project:

1. Weekly Submissions

Completion of the weekly submissions on Google Form, which will be provided as assessments on Google Classroom. The schedule is as follows:

Week	Days	Deadline
2	1-5	19 June 2022
3	6-10	26 June 2022
4	11-15	3 July 2022
5	16-20	17 July 2022
6	21-24	24 July 2022

Table 1: Weeks, Tasks and Deadlines

2. Pentest Reports

Each group is to prepare **TWO** formal written reports that documents everything about your pentest efforts conducted at the final week. A sample will be uploaded on Classroom for you to follow.
Deadline for both reports: 11.59pm of the next day after the Penetration Test

3. Presentation

For each weekly submission, each group will be required to make a 10 minute video explaining all the days completed for that particular week. The video has to be uploaded on Youtube and the link shared on the weekly submission form.

F. Lectures

Lectures are entirely asynchronous. Watch the videos put up, try out the rooms described in the videos, then transfer your answers to the Lecture Attendance quiz before the deadline.

Attendance will be given based on submission. Marks are not allocated for lecture, only for attendance purposes.

G. Tutorials and Progress Monitoring

1. Progress will be measured by submission of weekly progress submissions on Google Form. Delays for Week 2 will not be penalised, but starting on Week 3 will be penalised 1 mark a day up two days, and on the third day the form will be shut off.
2. Open the corresponding Google Form on the classroom and answer the questions within for each week's assessment.
3. Marks will be provided according to the answers given for each question in the weekly submission. Submission is individual, but the writeup file and video link can be shared ONLY WITHIN THE SAME GROUP.

H. Final Assessment

1. On week 7, each group will be provided with two machines to pentest, each within a 12 hour period.
2. The 12 hour period is only time to pentest the machines and capture the flags.
3. An additional 24 hours will be given AFTER the pentest deadline to create the writeup, post it on github as well as the explanation video.
4. The pentests, writeups and video creation are considered a GROUP activity.
5. However, submission and grading is individual. Group members may share writeup git links and video links.

I. Deliverables Submission Instructions

1. Double check that all questions are answered on Google Form.
2. Upload the group's writeup file to the group leader's GIT repository. Insert the link on Google Form.
3. Upload your group's explanation video to Youtube and insert the link on Google Form.
4. Make sure you receive the receipt upon submission. Otherwise, please email me (jjchin@mmu.edu.my) to confirm your submission.
5. Assessments will be created on Google Classroom, which will contain a Google Form for you to attach your answers.

J. Evaluation Marks

Evaluation marks for this project will be given as such:

Learn Cyber in 25 Days Training: 50 Marks

Week	Google Form	Write Up	Total
2	8	2	10
3	8	2	10
4	8	2	10
5	8	2	10
6	8	2	10

Total Marks	40	10	50

Table 2: Project Training Marks

PenTest 1 and 2: 50 marks

Pentest	Capture Flags	Presentation	Write Up	Total
1	15	5	5	25
2	15	5	5	25
Total Marks	30	10	10	50

Table 3: Pentesting Marks

Plagiarism

For this project, plagiarism means the following:

1. Turning in a work that, from the examiner's point of view, you do not sufficiently understand.
2. Turning in someone else's work (whether partly or fully) as your own.
3. To use another's work (whether partly or fully) without crediting the source.
4. Any means of cheating.

The only solutions you are allowed to share are with your own group members. Sharing solutions between groups is considered plagiarism.

Plagiarism is a serious offence. Ignorance is not an excuse.

Zero marks will be the penalty for a particular assessment submission if students are found to be sharing answers/solutions/writeups/presentations with members outside of their own assignment groups.

----- End of Project Guidelines -----