

Cybersecurity – Assignment 2

Module: Cybersecurity

Assignment no: 2

Total marks: 100

Weightage: 30%

Submission deadline: 12th May 2024 (EoD)

Instructions:

- Submit your report in PDF format. The link will be provided on the blackboard.
 - The word count is 3000 words.
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Question 1:

Pick a Native and a Hybrid mobile application of your choice and perform the threat modeling. Identify the controls to mitigate the attacks and protect the Target assets.

20 marks

Question 2:

Describe reverse engineering and tampering in Android and iOS platforms with examples. Why do we need it and what are the types of tempering? How the reverse engineering can be performed on Android and iOS platforms (steps).

Perform reverse engineering on one of the sample APK files available on the link which is provided in the reverse engineering lab.

(15+25) 40 marks

Question 3:

- a. Describe the types of mobile security testing (pen testing, static, and dynamic) and name the tools (penetration as well as vulnerability testing) for mobile applications.
- b. Define sandbox and list the sandbox tools for Android and iOS platforms.

10 marks

Question 4:

Describe the concepts of rooting and jailbreaking in the mobile environment. What is their purpose, and where they can be used (which mobile platform Android/iOS)? Mention the steps briefly to apply the rooting and jailbreaking.

10 marks

Question 5:

Complete the lab on ZAP and Web Goat (including SQL injection and XSS) and submit your report. Complete also all the tasks given in these labs.

20 marks