



**Term 2**  
**Grade 12 -Project Task 1**

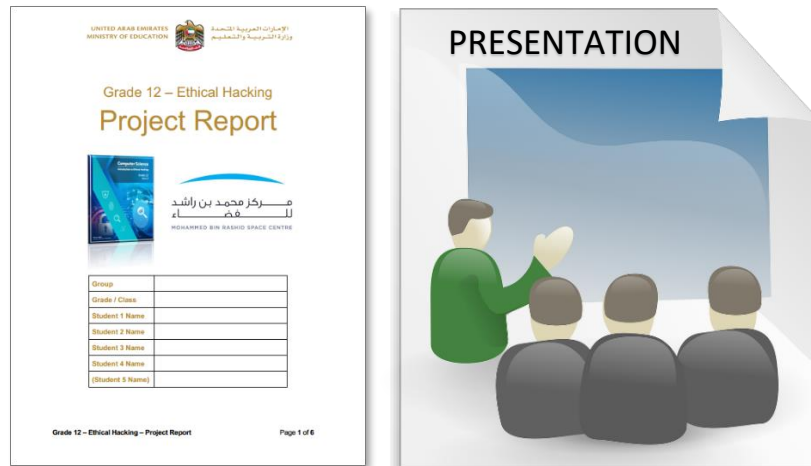
SIS No Name:	1.	Date:	
	2.		
Group:	3.	Grade	
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	(5.)		
Signed	YES	Start Time:	
		Finishing Time:	

**Ethical Hacking**

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Picture 1



Picture 2



## **PROJECT OBJECTIVE**

To understand the concepts covered in the term 2 book “Introduction to Ethical Hacking”, in the context of a real-life business scenario.

The project will be covering all student learning outcomes (SLO’s) in the book “Introduction to Ethical Hacking”

## **EQUIPMENT REQUIREMENTS**

Pen/Pencil, Laptop or Computer, ethiLAB Software (Windows), Paper, Printer

## **PROJECT OVERVIEW**

Information security is protecting information and information systems from unauthorized access, use, disclosure, disruption, modification, or destruction, thus providing confidentiality, integrity, and availability. The goal of UAE information security experts is to protect UAE citizens, businesses, government data and assets from a wide range of threats by ensuring that network devices, the cloud, applications and social media are secure from the challenging threats of cybercrime and hacktivism that are ever present.

UAE’s Vision 2021 aims to make the UAE among the best countries in the world in the quality of airports, ports, road infrastructure, electricity and telecommunications and security.

With this vision in mind, **you will imagine a situation** where the Ministry of Education introduces an **information security team to enhance the security of their school educational system.**

This information security team consists of four different jobs, which comes under the four different roles of:

- **Penetration Tester**
- **Security Engineer**
- **Security Analyst**
- **Information Security Manager**

For this project, you will be taking on each of these roles as a group, and complete the following:

- **3 Project Tasks**
- **A Report**
- **A presentation**



## PROJECT TASK 1

### INTRODUCTION

Ethical hacking involves understanding and looking for weaknesses and vulnerabilities in target systems. Footprinting is the first phase of ethical hacking.

**Project Task 1 focuses on Units 1 & 2 of the Grade 12 book.**

### STUDENT GUIDELINES

In this task you will imagine that you and your group members started working for the information security team, as a **Penetration Tester**.

You are asked to

- report on information security threats and the penetration testing process (**Unit 1**)
- document what ways you would uncover and collect information on the target network (**Unit 2**).
- Work together as a **group**, with even contribution from all group members to complete the task together
- When the question demands explanation, a clear answer to justifying the question must be provided. There is **no word limit** for your documentation.
- The documentation format should follow **font Arial with text size 11 or 12**
- Discuss with your teacher regarding your groups mode of document submission.  
**(hardcopy or softcopy)**



## **TASK OBJECTIVES**

- 1) **A.** Using **Unit 1** of the book as a reference, **identify the different categories of information security threat.**

**B.** Any of these threat categories could attack your educational system. Discuss in your group and pick any **two threat categories** which you feel is the top two that can attack the educational system.

**C.** Define and explain **any two** of these threats which can attack your educational system. Give an example of your own for these two threats.
- 2) **A.** Using **Unit 1 & 2** as a reference, **identify the different phases of the penetration testing process.**

**B.** List the **3 different categories which ethical hackers use** for the footprinting.

**C.** List **any two items of information collected** from each category which the information security team could use in the footprinting phase.

**D.** With this footprinting information, **what might a hacker learn** about the educational system?
- 3) **A.** Using **Unit 2** as a reference, **list the types of footprinting techniques / tools.**

**B.** Any of these types of footprinting techniques/tools could be used by the information security team. Discuss in your group and pick **any 2 techniques/tools** that you feel could be used to to collect information on the educational system.

**C. Describe** how the **techniques/tools** might be used to gather information on the educational system.
- 4) **A. List any 3 ethical hacking footprinting search engine commands that would be useful for your team to gather information**

**B.** Run only the commands using the software ethiLAB for the example website 'futuresmarteducation.com'. Follow the steps below:

  - **Open ethiLAB > Offline Mode > Footprinting > Search Engine > Adawer**
  - Type the commands and execute.
  - Take a screenshot or print screen of each of the results and save.



## Project Task 1 – Work Plan

### Student Guidelines:

No.	Work Steps	Step Completion & Values	Remarks
1) A.	Using <b>Unit 1</b> of the book as a reference, <b>identify the different categories of information security threat..</b>	1) <b>C.</b> Define and explain <b>any two</b> of these threats which can attack your educational system. Give an example of your own for these two threats.  Threat 1: _____  Threat 2: _____	<b>Remarks Example:</b>  We were able to understand and answer this question. But we found some difficulty in explaining the threat.
1) B.	Any of these threat categories could attack your educational system. Discuss in your group and pick any <b>two threat categories</b> which you feel is the top two that can attack the educational system.		

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<p>3) A.</p> <p>3) B.</p>	<p>Using <b>Unit 2</b> as a reference, <b>list the types of footprinting techniques / tools.</b></p> <ul style="list-style-type: none"><li>•</li><li>•</li><li>•</li><li>•</li><li>•</li><li>•</li></ul> <p>Any of these types of footprinting techniques/tools could be used by the information security team. Discuss in your group and pick <b>any 2 techniques/tools</b> that you feel could be used to collect information on the educational system.</p> <p>Footprinting Techniques / Tools : _____</p> <p>1)</p> <p>2)</p>	<p><b>3) C. Describe</b> how the <b>techniques/tools</b> might be used to gather information on the educational system.</p> <p>Techniques / Tools:</p>	
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<p>4) <b>A.</b></p>	<p>List any 3 ethical hacking footprinting search engine commands that would be useful for your team to gather information.</p> <p><b>(ANY THREE FROM THE LIST BELOW)</b></p> <ul style="list-style-type: none"><li>a) List of the publicly exposed configuration files</li> <li>b) List of the publicly exposed log files</li> <li>c) List of the publicly exposed backup and old files</li> <li>d) List of the publicly exposed login pages</li> <li>e) List of the publicly exposed document files</li></ul>	<p>4. <b>B)</b> Running the command on ethiLAB produces the following results:</p> <p><b>(ANY THREE YOUR GROUP HAD SELECTED)</b></p> <ul style="list-style-type: none"><li>a)</li> <li>b)</li> <li>c)</li> <li>d)</li> <li>e)</li></ul>	
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