**ASSIGNMENT 1 FRONT SHEET**

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| **Qualification** | **BTEC Level 5 HND Diploma in Computing** | | |
| **Unit number and title** | Unit 5: Security | | |
| **Submission date** | 13th June 2023 | **Date Received 1st submission** | 10th June 2023 |
| **Re-submission Date** |  | **Date Received 2nd submission** |  |
| **Student Name** | Ngan Ha | **Student ID** | GCH100234 |
| **Class** | GCH1105 | **Assessor name** | Michael Omar |
| **Student declaration**  I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice. | | | |
|  |  | **Student’s signature** |  |

**Grading grid**

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| P1 | P2 | P3 | P4 | M1 | M2 | D1 |
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| **❒ Summative Feedback: ❒ Resubmission Feedback:** | | |
| **Grade:** | **Assessor Signature:** | **Date:** |
| **Lecturer Signature:** | | |

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# Introduction

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths in mathematics and programming, and he is also aware of his weaknesses in communication. The applicant is committed to overcoming his weaknesses, and he has registered for communication classes to improve his communication skills.

## Task 1 - Identify types of security threat to organizations. Give an example of a recently publicized security breach and discuss its consequences (P1)

## Define threats

Any circumstance or event with the potential to adversely impact organizational operations (including mission, functions, image, or reputation), organizational assets, or individuals through an information system via unauthorized access, destruction, disclosure, modification of information, and/or denial of service. Also, the potential for a threat-source to successfully exploit a particular information system vulnerability. (NIST, 2023)

## Identify threats agents to organizations

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## List type of threats that organizations will face

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths in mathematics and programming, and he is also aware of his weaknesses in communication. The applicant is committed to overcoming

## What are the recent security breaches? List and give examples with dates

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## Discuss the consequences of this breach

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths in mathematics and programming, and he is also aware of his weaknesses in communication. The applicant is committed to overcoming

### Suggest solutions to organizations

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths in mathematics and programming, and he is also aware of his weaknesses in communication. The applicant is committed to overcoming.

## Task 2 - Describe at least 3 organizational security procedures (P2)

### Discuss 3 security procedures that an organization uses to improve or provide organizations security.

* Human resource policy
  + What human policy is
* Incidence response policy
  + Incidence response
* Due care policy
  + What is due care.

## Task 3 - Identify the potential impact to IT security of incorrect configuration of firewall policies and IDS (P3)

### Discuss briefly firewalls and policies, their usage and advantages in a network

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths in mathematics and programming, and he is also aware of his weaknesses in communication. The applicant is committed to overcoming.

### How does a firewall provide security to a network?

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths in mathematics and programming, and he is also aware of his weaknesses in communication. The applicant is committed to overcoming.

### Show with diagrams the example of how firewall works

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### Define IDS, its usage, and show it with diagrams examples

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### Write down the potential impact (Threat-Risk) of a firewall and IDS if they are incorrectly configured in a network

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths in mathematics and programming, and he is also aware of his weaknesses in communication. The applicant is committed to overcoming.

## Task 4 - Show, using an example for each, how implementing a DMZ, static IP and NAT in a network can improve Network Security (P4)

### Define and discuss with the aid of diagram DMZ. Focus on its usage and security function as advantage

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths in mathematics and programming, and he is also aware of his weaknesses in communication. The applicant is committed to overcoming.

### Define and discuss with the aid of diagram static IP. Focus on its usage and security function as advantage

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths in mathematics and programming, and he is also aware of his weaknesses in communication. The applicant is committed to overcoming.

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Table 1: security lists

### Define and discuss with the aid of diagram NAT. Focus on its usage and security function as advantage

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths in mathematics and programming, and he is also aware of his weaknesses in communication. The applicant is committed to overcoming.



Figure 1: Dynamic security; Source Internet

## Subheading.

This is my sub heading above.

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths in mathematics and programming, and he is also aware of his weaknesses in communication. The applicant is committed to overcoming his weaknesses, and he has registered for communication classes to improve his communication

### Sub 3 heading

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths in

# Conclusion

The applicant has a strong academic background in computer science. He has also taken several courses related to data science, including machine learning. The applicant has demonstrated his ability to learn new concepts quickly and apply them to real-world problems, especially in machine learning. He has also shown that he is able to work independently and as part of a team. The applicant has a clear and realistic understanding of his strengths and weaknesses. He is aware of his strengths

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