

Unit - 1 Introduction to Security Management

Security

It is the quality or state of being secure.

- Protection from adversaries - those who would do harm, intentionally or otherwise - is the ultimate objective of security.
- National security, for example is a multilayered system that protects the sovereignty of a state, its assets, its resources, and its people.
- Achieving security requires a balance between the need for protection and the need for access.

Multiple layers of Security in place to protect its operations:

- Physical security
- Personal Security
- Operations Security
- Communications Security
- Network Security
- Information Security

Critical Characteristics of Information

- **Confidentiality**, it is the property that information is not made available or disclosed to unauthorized individuals, entities, or processes.
- **Integrity**, it is the assurance that the information is accurate and complete.
- **Availability**, it is the assurance that the information is accessible to authorized users.
- **Non-repud**, it is the assurance that the information is authentic and that its origin can be verified.

Information unavailability can occur due to:

- Denial of Service (DoS) attacks

Information Security Governance Outcomes

The five goals of information security governance are:

- Strategic alignment of information security with business strategy to support organizational objectives.
- Risk Management by executing appropriate measures to manage and mitigate threats to information resources.
- Resource Management by using information security knowledge and infrastructure efficiently and effectively.

- Performance measurement by measuring, monitoring and reporting information security governance metrics to ensure that organizational objectives are achieved.

Roles and Responsibility:

Roles	Responsibility
Enterprise Staff/Employees	Implement Policy, Report Security vulnerabilities and breaches
Mid Level Manager	implement/audit/enforce/compliance, communicate policies
Cheif Security Officer, Chief Information officer, Chief Risk Officer	Develop policies, communicate policies, monitor compliance, report to board of directors
Board of Directors	Approve policies, monitor compliance, report to shareholders

Information Security Policy:

- Information security policy A set of rules that protects an organization's information assets.
- Policy A set of principles or courses of action from an organization's senior management that is used to guide the organization toward its goals.
- Practices wihtin the context of information security, exemplary actions that an organiztion takes to support its policies.
- Procedures within the context of information security, a set of steps an organisations staakeholder must follow to perform a specified action or accomplish a specific task.
- Standard The normal, targeted level of performance for a practice or procedure.

Example Statement:

Problem Statement: Third Year students must complete CBCS activity between 9 am to 6 pm

Policy: Students must complete CBCS activity between 9 am to 6 pm

Practice:

- Students must open the correct website to complete the CBCS activity.
- Students must complete the CBCS activity within the time limit.
- Students must be using their own login credentials to complete the CBCS activity.
- Students must be using a password that is at least 8 characters long.
- Students must not share their login credentials with others.
- Students must complete the CBCS for their own year of study.
- Students must select only one panel for the CBCS activity.
- Students must not complete the CBCS activity for other years of study.

Procedure:

- Students must open the CBCS website.
- Students must login using their own credentials.
- Students must navigate to the CBCS application page on the website.

- Students must complete the CBCS activity within the time limit.
- Students will be presented with a list of panels to choose from.
- Students must logout of the CBCS website after the completion of the process.

Standard:

- Students must be logging into the correct website to complete the process.
- Students must be using their own login credentials to complete the process.
- Students must be using a password that is at least 8 characters long.
- Students must not share their login credentials with others.
- Students will be presented with a choice of 6 courses to choose from.
- Students must complete the CBCS activity within the time limit of 9 am to 6 pm.