12.2 Laboratory Exercise

In this laboratory exercise, the student will be introduced to organizational structures, team selection, and simple data classification policy.

Organizational Management Tasks Applied at Competitions

12.2.1 Specifications

This laboratory exercise will not require any technology. Rather, perform the exercises on your own, or with a partner(s).

12.2.2 Learning Objectives

- Understanding Organizational Structures

- Levels of Data Classification

- Selecting an Effective Project Team

12.2.3 Mapping to NIST Nice Framework

This laboratory exercise is intended to increase the student's skills in business management. At cyber defense competitions, organizing a team and operating an organization is scored in addition to the technical tasks. This includes organizing the team, creating a data classification program, and selecting an effective team. This laboratory exercise maps to the following KSAs from the NIST NICE Framework:

- Cybersecurity and Privacy Principles (K0004)

- Cyber Threats and Vulnerabilities (K0005)

- Organization's Information Classification Program (K0287)

- Apply Cybersecurity and Privacy Principles to Organizational Requirements (S0367)

- Apply Cybersecurity and Privacy Principles to Organizational Requirements (A0123)

12.2.4 Necessary Background and Expected Completion Time

This laboratory exercise does not have any necessary background. Reading documents on organizational structure types may be helpful as well as understanding basic data classification concepts. Because the exercises are open ended, expected completion time will be omitted. If being conducted in a course or other time-constrained environment, adjust the amount of time allocated for each challenge.

12.2.5 Challenges

1. *Using an Effective Organizational Structure*

   Organizational structures can help determine how individuals within an organization interact with each other, as well as how teams are managed. Four common organizational structures are the **functional top-down, divisional, matrix,** and **flat** structures.

   For this task, do some research about the four organizational structures above, read the descriptions of two mock organizations seen in table 12.1, and determine which organizational structure fits best for the two.

2. *Creating an Comprehensive Data Classification Program*

   Information classification is necessary for organizations which handle sensitive data. Your organization currently has no information classification program, but has various levels of sensitive documents.

   For this task, create an information classification program for your organization. Explain

MeCorp Energy	At MeCorp, we believe giving our employees autonomy. The classic hierarchical structure, that's not what we stand for. Our organization has sponsors for various projects, and project managers. Our project managers choose various other employees to work on their projects. Employees may be working on multiple projects at any given time. Project managers individually organize their teams how they see fit, assigning team leads to provide granularity of the organization.
XYZ Technologies	At XYZ Technologies we stand by the traditional managerial methods. Our executives sit atop the organization. Senior and junior management follow. Below management we have our project leads then manage individual teams. This method allows us to follow a direct chain of command with decisions bubbling up to an appropriate level.

Table 12.1: *Sample Organization Mission Statements*

the levels of classification as well as how the different levels of information should be managed.

3. *Choosing the Right Team*

An organization needs to ensure that the right team is selected to meet its needs. A strong team needs a variety of individuals who possess strengths in different areas, technical and non-technical, managerial and non-managerial. In reality, it is very rare that an organization will hire a full team at one time; however, for the purposes of this exercise, you will be performing the task of selecting a full team.

For this task, read the required personnel traits seen in table 12.2. Your mock organization will have a budget of $400,000 to hire the required personnel. You will also be given a list of candidates, each candidate having a certain level of strength in multiple categories, and the cost of hiring said employee. Use these information to select the most qualified team to fit the organization's needs while staying under budget.

The traits that each individual possesses are Leadership, Independence, Teamwork, Technical, Soft Skills.

Requirements:

This team needs needs a strong project manager, this individual needs to have high leadership and teamwork traits. The team also needs at least two programmers. Our pro-

grammers need strong technical ability as well as the ability to work well as a team for some projects but also develop independently for others. Our team would like to be able to reach out to potential clients with an individual who bridges the gap between technical and non-technical. This individual will need to have very strong soft skills but be well versed technically as well. Teamwork is important to this team, we want to have a very strong team culture.

Name	Cost	Leadership	Independence	Teamwork	Technical	Soft Skill
Joseph	$170,000	6	7	6	10	3
Marianne	$70,000	7	6	5	8	3
Tessa	$75,000	8	4	6	5	5
Chris	$65,000	5	5	6	7	5
Gordon	$80,000	7	4	5	6	7
Trey	$150,000	10	5	7	6	6
Jordan	$40,000	3	4	3	6	5
Shawn	$30,000	2	4	6	3	9
Harold	$45,000	4	4	4	7	7
Brittney	$200,000	10	8	9	8	8
Jayci	$70,000	3	5	6	9	4
Brooke	$60,000	6	4	7	6	8

Table 12.2: *Prospective Employee Traits*