

## GLOSSARY OF TERMS

| Term                                                                   | Description                                                                                                                                                                                | First time<br>page used |
|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| Operating System (OS)                                                  | The software that controls hardware resources and provides services to applications.                                                                                                       | 7                       |
| Linux                                                                  | The open source OS kernel that sits at the heart of countless distributions such as Fedora, Kali Linux, and Rocky Linux.                                                                   | 9                       |
| Fedora                                                                 | An innovative rolling release general purpose Linux distribution, often used for development and is known to be cutting edge.                                                              | 10                      |
| Kali Linux                                                             | A Linux operating system particularly developed for tending to penetration testing and cyber security, and used heavily by ethical hackers.                                                | 11                      |
| Rocky Linux                                                            | A community-supported, enterprise-grade operating system, built as a successor to CentOS, that provides extended support and compatibility.                                                | 11                      |
| Virtual Machine (VM)                                                   | An enterprise-friendly community supported operating system based on CentOS with a focus on long-term support and compatibility.                                                           | 23                      |
| Virtualization                                                         | The capability to run several virtual systems on one physical machine.                                                                                                                     | 23                      |
| TOPSIS(Technique for Order Preference by Similarity to Ideal Solution) | A multi criteria decision making method to rank alternatives based on the closeness to ideal solution. For this study, it uses the Direct Rating method to assign weights to the criteria. | 18                      |
| Direct Rating                                                          | Very subjective approach to weighting criteria based on relevance in a real situation.                                                                                                     | 18                      |
| Tools Compatibility                                                    | The support for software and dependencies required by practicum modules that an OS is able to provide.                                                                                     | 31                      |
| Default System                                                         | The extent to which an OS is ready to be used immediately after installation and without major configuration.                                                                              | 31                      |

## Configuration

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|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| User Experience (UX)           | : How intuitive and easy to use an OS is for students and instructors in practicum.                                                                               | 31 |
| Performance & Stability        | : Measures dependability of the OS on various workloads and conditions.                                                                                           | 31 |
| Virtual Box                    | : An Oracle product, it is a free/open source hosted hypervisor for x86 virtualization. This enables the user to use multiple OS at the same time on one machine. | 23 |
| Virtualization                 | : The act of making a virtual edition of computing resources, including operating systems, servers, storage devices, and networks.                                | 23 |
| GUI (Graphical User Interface) | : An interface that allows computer users to use graphical images and icons instead of typing commands.                                                           | 8  |
| CLI (Command Line Interface)   | : The process of enabling a virtual representation of computer resources like operating systems, servers, storage devices and networks.                           | 8  |
| DNF (Dandified Yum)            | : The next generation of Yellowdog Updater, Modified (YUM), a software package manager for RPM-based distributions such as Fedora and Rocky Linux.                | 42 |