FEU INSTITUTE OF TECHNOLOGY

COLLEGE OF COMPUTER STUDIES

IT0035L
(APPLIED OPERATING SYSTEMS LABORATORY)

EXERCISE

2

LINUX INSTALLATION AND ENVIRONMENT FAMILIARIZATION

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Members (if Group):	**Name** / **Role**
Section:	TN21
Professor:	Ms. Elisa Malasaga

I. PROGRAM OUTCOME/S (PO) ADDRESSED BY THE LABORATORY EXERCISE

- Ability to demonstrate understanding and proficiency of IT specialization [PO: I]
- Ability to use and apply current technical concepts and practices in the core information technologies; human computer interaction, information management, programming, networking and web systems and technologies. [PO: J]

II. COURSE LEARNING OUTCOME/S (CLO) ADDRESSED BY THE LABORATORY EXERCISE

- Demonstrate an understanding of Disk Operating System (DOS) and LINUX history and concepts. [CLO: 1]
- Perform file and directory creation and manipulation using DOS commands; LINUX installation in virtual machine, file and directory creation and manipulation, and system administration using LINUX commands. [CLO: 2]

III. INTENDED LEARNING OUTCOME/S (ILO) OF THE LABORATORY EXERCISE

At the end of this exercise, students must be able to:

- Able to perform file and directory creation, and move between directories using LINUX commands

IV. BACKGROUND INFORMATION

CentOS

CentOS (/ˈsɛntɒs/, from Community Enterprise Operating System) is a Linux distribution that provides a free, enterprise-class, community-supported computing platform functionally compatible with its upstream source, Red Hat Enterprise Linux (RHEL). In January 2014, CentOS announced the official joining with Red Hat while staying independent from RHEL, under a new CentOS governing board.

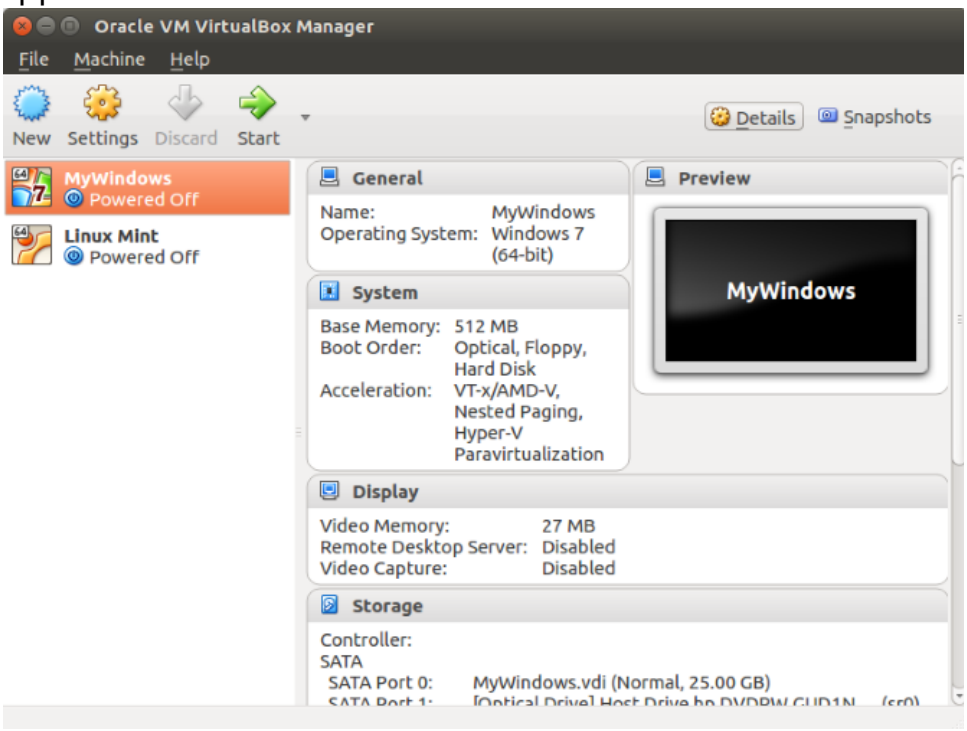
What is a virtual machine?

A virtual machine (VM) is an operating system (OS) or application environment that is installed on software, which imitates dedicated hardware. The end user has the same experience on a virtual machine as they would have on dedicated hardware.

VirtualBox

Offering versatile virtualization, VirtualBox can create a virtual machine with virtually any operating system (except those intended for ARM devices). It also

offers software and hard assisted virtualization, storing virtual machines as disk images. This makes them easy to backup or migrate to other PCs or VM applications.



VirtualBox is particularly good at running 32-bit and 64-bit Linux distros, as well as Windows. It's even possible to run OS X on VirtualBox.

V. GRADING SYSTEM / RUBRIC (please see separate sheet)

VI. LABORATORY ACTIVITY:

A. Setup

1. Open your Virtual Machine in your respective terminal.
2. Double click CentOS 6.4 from your Public OVAs folder located on your Desktop.
3. Click IMPORT to load your CentOS
4. Double click CentOS 6 from your VirtualBox then wait until the OS is loaded to the VM.
5. Log-in as Student and the password is password

B. Exercises

Now you're ready to begin.

1. Explore the LINUX environment to determine the hardware requirements, bundled software applications, graphical user interface (ease of use and look and feel of the environment) and security features
2. Explore the Windows 10 environment and determine as well the above-mentioned requirements
3. Use the table below in writing down your comparison between LINUX and Windows 10

Answers:

Linux	Windows 10
Minimum Hardware Requirements	
• 32-bit Intel® Pentium® 4 or compatible processor running at 2 GHz or greater. • 512 MB RAM. • Graphics card: NVIDIA® Quadro™ FX 1100, FX1400, FX540 or ATI FireGL™ V3200, V5100. • Disk space: 350 MB for client components. • A DVD-ROM drive.	• Latest OS: Make sure you're running the latest version—either Windows 7 SP1 or Windows 8.1 Update. • Processor: 1 gigahertz (GHz) or faster processor or SoC • RAM: 1 gigabyte (GB) for 32-bit or 2 GB for 64-bit • Hard disk space: 16 GB for 32-bit OS or 20 GB for 64-bit OS • Graphics card: DirectX 9 or later with WDDM 1.0 driver • Display: 800 x 600

Linux	Windows 10
Bundled Software Applications	

. Thunderbird 2. Geary 3. Evolution 4. Firefox or Chrome 5. LibreOffice 6. gscan2pdf 7. KeePass 8. VirtualBox 9. WizNote 10. gdebi 11. XDM or uGet 12. UFW/GUFW 13. Gimp 14. Pinta 15. BleachBit 16. ScudCloud 17. Synaptic 18. DropBox 19. VLC 20. Unity Tweak Tool 21. Sublime 22. Atom 23. Notepadqq 24. Brackets 25. Cheese 26. Gparted 27. CrashPlan 28. Kodi 29. Genymotion 30. Tomahawk 31. GNOME System Monitor 32. Conky 33. Transmission 34. qBittorrent 35. Tixati 36. Steam 37. WINE 38. PlayOnLinux 39. VeraCrypt 40. FileZilla 41. Pidgin 42. Skype 44. Audacity	• 3D Builder • Alarms & Clock • Calculator • Calendar • Camera • Contact Support • Cortana • Get Office • Get Skype • Get Started • Groove Music • Mail • Maps • Microsoft Edge • Microsoft Solitaire Collection • Money • Movies & TV • News • OneNote • People • Phone Companion • Photos • Settings • Sports • Store • Voice Recorder • Weather • Windows Feedback • Xbox •

45. Openshot 46. Handbrake 47. RecordMyDesktop 48. Kazam 49. winFF 50. Nmap	
Linux	**Windows 10**
Graphical User Interface	

Linux	**Windows 10**
Security Features	
For the basic security features, Linux	• Windows Security is your home to

has password authentication, file system discretionary access control, and security auditing. These three fundamental features are necessary to achieve a security evaluation at the C2 level. Most commercial server-level operating systems, including AIX (IBM), Windows NT, and Solaris, have been certified to this C2 level. By expanding the basic standard security features we have: User and group separation File system security Audit trails PAM authentication	manage the tools that protect your device and your data: • Virus & threat protection. Monitor threats to your device, run scans, and get updates to help detect the latest threats. (Some of these options are unavailable if you're running Windows 10 in S mode.) • Account protection. Access sign-in options and account settings, including Windows Hello and dynamic lock. • Firewall & network protection. Manage firewall settings and monitor what's happening with your networks and internet connections. • App & browser control. Update settings for Microsoft Defender SmartScreen to help protect your device against potentially dangerous apps, files, sites, and downloads. You'll have exploit protection and you can customize protection settings for your devices. • Device security. Review built-in security options to help protect your device from attacks by malicious software. • Device performance & health. View status info about your device's performance health, and keep your device clean and up to date with the latest version of Windows 10.

	• Family options. Keep track of your kids' online activity and the devices in your household.

Observation:

Conclusion:

VII. REFERENCES:

- Sobell, M., et al. (2017). *A Practical Guide to Linux Commands, Editors, and Shell Programming, 4th Ed. Addison-Wesley Professional*
- Cobbaut, P. (2016). *Mastering Linux- Networking*
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- Fox, R., (2015). *Linux with operating system concepts*
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- Rosen, R. (2014). *Linux kernel networking: implementation and theory. Apress*