

Fundamentals of UNIX Labs Workbook
LAB 1.4.3 – UNIX Computing Environment
(Estimated time: 30 min.)

Objectives:

- Demonstrate an understanding of the following:
 - Basic computer hardware components
 - Computer operating systems
 - UNIX varieties and history
 - The Solaris operating environment
- Investigate the use of UNIX at an organization or institution
- Research UNIX-powered web sites

Background:

This lab exercise will review UNIX computing environment terminology and help to reinforce concepts introduced in chapter 1. You will also investigate the use of UNIX at your institution or another organization and research web sites to see what organizations are using Solaris UNIX.

Tools / Preparation:

- 1) Before starting this lab be sure to review Chapter 1: The UNIX Computing Environment and the chapter quiz.
- 2) You or your instructor will need to contact a person, such as an Information Technology staff member, who is knowledgeable about your network. This person should be able to tell you what servers and network operating systems are in use in your institution (or another organization) to find if and where UNIX is being used.
- 3) A computer with a browser and access to the Internet will be needed.

Web Site Resources:

- [Sun Microsystems Solaris](http://www.sun.com/solaris) – <http://www.sun.com/solaris>

Notes:

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Worksheet Exercises

1. Identify the four main hardware components of a computer:
 - a)
 - b)
 - c)
 - d)

2. In the blank spaces, write one of these three terms: **kernel**, **shell**, or **file system**.
 - a) The _____ represents the user interface, which translates requests into actions.
 - b) The _____ manages and allocates resources among users.
 - c) The _____ provides command interpretation.
 - d) The _____ organizes and stores data in a hierarchical structure.
 - e) The _____ performs memory management.
 - f) The _____ components are files and directories.
 - g) The _____ controls disks, tapes, printers, terminals, communication lines, and other devices.

3. What are four benefits of the UNIX operating system (answers will vary)?
 - a)
 - b)
 - c)
 - d)

4. List the three major components of the UNIX operating system.
 - a)
 - b)
 - c)

5. The kernel manages what three things?
 - a)
 - b)
 - c)

6. What are the names of the three main UNIX shells and the prompt for each?
 - a)
 - b)
 - c)

7. The file system is made up of what components?
 - a)
 - b)
 - c)

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Worksheet Exercises

8. List the various Desktop operating systems in use at your institution and indicate the number of workstations installed. Check with your instructor or an Information Technology staff member to find out. (Answers will vary).

Operating System Name and Version	Hardware Manufacturer	Number of Desktops Installed

9. Check with your instructor or an Information Technology staff member to find out if and where **UNIX servers** are used in your institution or another organization. List the **UNIX version**, **hardware manufacturer** and **function** the servers perform. (Answers will vary).

UNIX Version	Hardware Manufacturer	Server Function

10. A number of Fortune 500 companies run Solaris to power their websites and run their networks. Conduct a web search and list 5 of those companies.
