

LAB 1

Course Code: CSC 2209

Course Title: Operating Systems



Dept. of Computer Science
Faculty of Science and Technology

Lecturer No:	01	Week No:	01	Semester:	
Lecturer:	<i>Name & email</i>				

Lecture Outline



1. What is Shell and it's types
2. kernel Version
3. Current Directory
4. Is Command
5. Directory Creation
6. Directory Change
7. Empty File Creation

What Is a Shell?

- ❑ A shell is a program that provides an interface between a user and an operating system (OS) kernel. An OS starts a shell for each user when the user logs in or opens a terminal or console window.
- ❑ Also known as – terminal, console
- ❑ Also known as Command Line Interface (CLI)

Types of shells

- ❑ In **UNIX/Linux** there are two major types of shells:
- ❑ The **Bourne shell**. If you are using a Bourne-type shell, the default prompt is the **\$** character.
- ❑ The **C shell**. If you are using a C-type shell, the default prompt is the **%** character.
- ❑ There are again various subcategories for Bourne Shell which are listed as follows:
 - ❑ Bourne shell (**sh**)
 - ❑ Korn shell (**ksh**)
 - ❑ Bourne Again shell (**bash**)
 - ❑ POSIX shell (**sh**)
- ❑ The different C-type shells follow:
 - ❑ C shell (**csh**)
 - ❑ TENEX/TOPS C shell (**tcsh**)

Kernel Version

- ☐ Open the **Terminal**.
- ☐ Enter `uname -r` this will show you what **kernel version you have**.
- ☐ **Architecture (32bit or 64bit)**
- ☐ This is useful if you want to determine which architecture are you running, 86, 64 or 32 bit.
- ☐ Open the **Terminal**.
- ☐ Enter `uname -m` this will show you what **architecture you are running**.

Current Directory

- ❑ Your shell has a **current directory** — the directory in which you are currently working
 - Commands like 'ls' use the current directory if none is specified
 - Use the **pwd** (print working directory) command to see what your current directory is:
\$ **pwd**
/home/fred

ls command

- ❑ **ls** is one of the most used basic linux commands, used to **print contents of a directory**, by default it lists contents of current working directory(**pwd**).

How to create a directory

- ❑ To create a directory in UNIX or Linux using the **mkdir** command pass the name of directory to the mkdir command.
- ❑ The mkdir command makes new, empty, directories
Syntax: \$ **mkdir directory_name**
Example: \$ **mkdir OS1**

How to create multiple directories

- ☐ To create multiple directories in UNIX or Linux using the `mkdir` command pass the names of directories to be created to the `mkdir` command. The names of directories should be separated by spaces.
- ☐ `mkdir foo bar baz`
- ☐ `ls`
- ☐ `foo bar baz`

Change directory

- ❑ Change the current directory with **cd**:
 - ❑ Syntax: **\$ cd /folder/subfolder**
 - ❑ **Syntax \$ cd dir_name/ path_name**
 - ❑ Example: **\$ cd /desktop/os**
- ❑ You can check changed directory using **pwd**
- ❑ **\$ pwd**
 - ❑ **/desktop/os**
- ❑ Use **cd** without specifying a path to get back to your home directory

Current, Parent, and Hidden Directories

- ☐ The special `.` and `..` directories don't show up when you do `ls`
They are **hidden directories**,
 - `.` means current directory
 - `..` means parent directory
- ☐ Directories name starting with `.` are considered 'hidden'
- ☐ Make `ls` display all files and directories, even the hidden ones, by giving it the `-a` (all) option:
`$ ls -a`
 - `.`
 - `..`
- ☐ To go to parent directory we can use `$ cd ..`

How to Create an Empty File

- ❑ The following `touch` command creates an empty (zero byte) new file called test.
- ❑
- ❑ Syntax: `touch file_name`
- ❑ `>> touch test.txt`



Books

- ❑ Unix Shell Programming
 - ❑ Written by Yashavant P. Kanetkar