Mini Operating System

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***Abstract-* This report documents the functionalities of a mini operating system which was made as the final project of the Operating Systems course. A shell interface along with its basic functionalities has been implemented in the mini operating system.**

***Keywords-* Operating System**, **shell, commands, files, directories, session.**

# INTRODUCTION[[1]](#footnote-1)

## Definition

An operating system is a program that acts as an interface between the user and the computer hardware and controls the execution of all kinds of programs. A vital component of the system software in a computer system. [1]

## Functions

* Memory Management
* Process Management
* Device Management
* File Management
* Security

# concept of single level directory structure

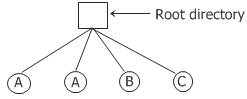
A directory that contains all the files is the simplest form of the directory system and is also called as root directory.

This system was common in the earlier PCs as there was only one user.

The first supercomputer of the world named CDC 6600 also had only a single directory for all the files and was also used by multiple users concurrently. This system was only made to keep every software design simple.

The figure given below shows an example of this system.

single level directory system



# BASIC SHELL COMMANDS

|  |
| --- |
| cat - display or concatenate files |
| cd - change directory |
| chmod - change the permissions on a file or directory |
| compress - compress a file |
| cp - copy a file |
| date - display the current date and time |
| diff - display differences between text files |
| echo - echo arguments to the standard output |
| file - determine the type of a file |
| find - find files of a specified name or type |
| finger - display information about a user |
| ftp - file transfer program |
| grep - searches files for a specified string or expression |
| kill - kill a process |
| lpr - print out a file |
| ls - list names of files in a directory |
| man - display an on-line manual page |
| mkdir - make a directory |
| more - scan through a text file page by page |
| mv - move or rename files or directories |
| nice - change the priority at which a job is being run |
| passwd - change your password |
| ps - list processes |
| pwd - display the name of your current directory |
| quota - disk quota and usage |
| rm - remove files or directories |
| rmdir - remove a directory |
| sort - sort and collate lines |
| talk - talk to another user |

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# References

1. https://en.wikipedia.org/wiki/Operating\_system

1. [↑](#footnote-ref-1)