

```
1
2
3  Linux 'OS' {
4
5      [Summary and
6      consolidation Workshop]
7
8
9      < Presentation by Aria Shakoo
10     Dr. Hamed Malek
11     Fall 1403    >
12 }
13
14
```

1 'What will we see?';

2

3

4

What is an OS

5

Describing Linux OS

6

What is UBUNTU?

7

What is UBUNTU based on ?

8

What is Shell?

9

A review of Linux important commands

10

Review of Bash script files

11

12

13

14

Table Of 'Contents' {

01 OS

< Review of operating
systems >

02 Commands

< Listing linux commands
and their use >

03 Bash Scripting

< How to make a script file
and code in it >

}

```
1      01 {
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5
6      [OS]
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11
12     }
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```

Concepts < /1 > {



< OS : Is software that manages computer hardware and software resources, providing common services for computer programs. >

}

Concepts < /2 > {



< It acts as an intermediary between users and the computer hardware, ensuring efficient execution of tasks.>

}

Concepts < /3 > {



< Ubuntu is a user-friendly Linux distribution
based on Debian >

}

Concepts < /4 > {



< Debian is a stable and secure Linux distribution
composed entirely of free and open-source software,
known for its robustness.>

}

Shell ; {

/bin: Essential user commands (binaries) available for all users
/boot: Files necessary for booting the system, including the Linux kernel.
/etc: Configuration files for the system and installed applications.
/home: Userhome directories where personal files and settings are stored.
/lib: Shared libraries required by system programs.
/usr: User-related programs and files; generally larger applications and utilities
/var: Variable data such as logs, mail, and temporary files

}

Types of 'Permissions' {

Read

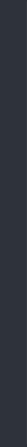
Write

Execute

}

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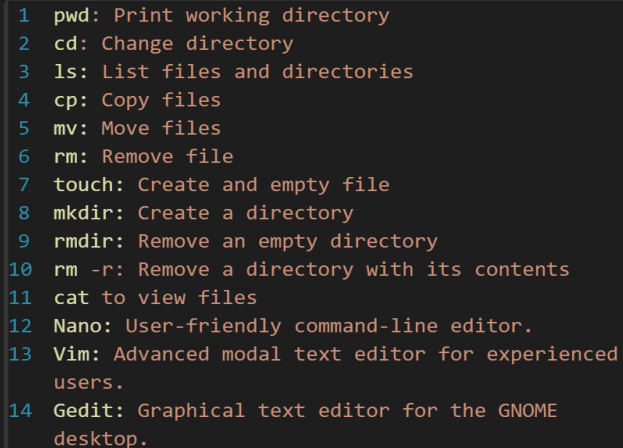
02 {



}

[Commands]

List of commands; {



```
1 pwd: Print working directory
2 cd: Change directory
3 ls: List files and directories
4 cp: Copy files
5 mv: Move files
6 rm: Remove file
7 touch: Create and empty file
8 mkdir: Create a directory
9 rmdir: Remove an empty directory
10 rm -r: Remove a directory with its contents
11 cat to view files
12 Nano: User-friendly command-line editor.
13 Vim: Advanced modal text editor for experienced
    users.
14 Gedit: Graphical text editor for the GNOME
    desktop.
```

03 Bash Script files {

|
}



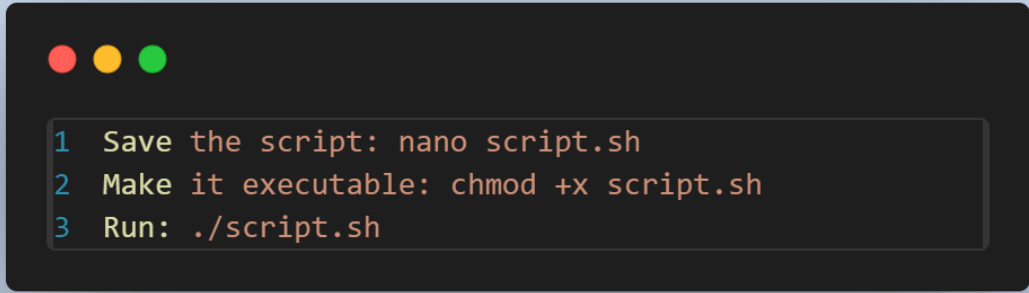
Bash Script files {

You need to include
#!/bin/bash
at the start of the
file!

}



How to save and run; {



A terminal window with a dark background and three colored window control buttons (red, yellow, green) in the top left corner. Inside the terminal, there is a list of three instructions, each preceded by a blue number. The instructions are: 1. Save the script: nano script.sh, 2. Make it executable: chmod +x script.sh, and 3. Run: ./script.sh.

```
1 Save the script: nano script.sh
2 Make it executable: chmod +x script.sh
3 Run: ./script.sh
```

}

Definition of 'Parameters' {

Variables are assigned using
"without spaces"

Reference variables
with \$

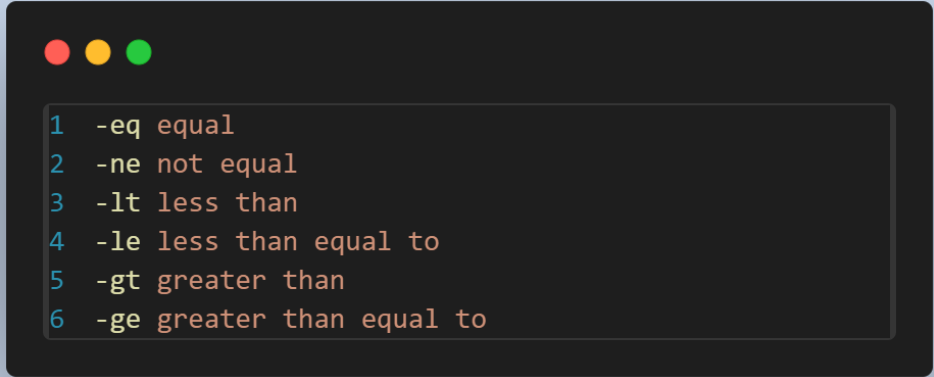
Use expr or \$(())
for calculations

}

Condition expressions ; {

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}



```
1 -eq equal  
2 -ne not equal  
3 -lt less than  
4 -le less than equal to  
5 -gt greater than  
6 -ge greater than equal to
```

```
1 Thanks; {
```

```
2  
3  
4  
5 'Do you have any questions?'
```

```
6  
7  
8  
9  
10  
11  
12  
13 }  
14
```

