



# Linux For User

Day3\_linuxUSER.md



# What was our last class about?

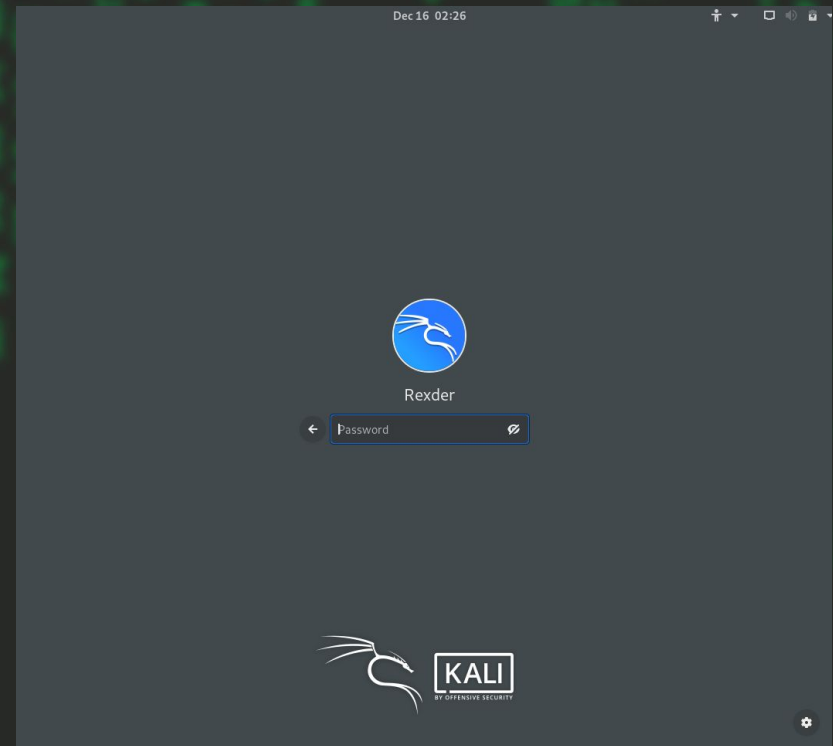
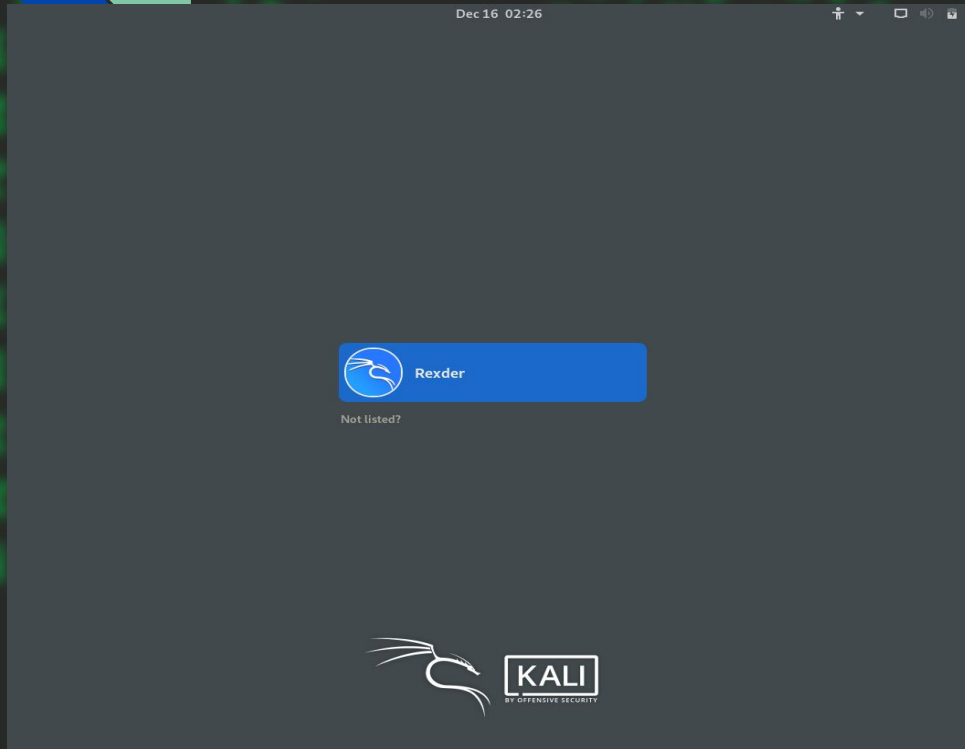
- Topics
- Concepts
- Assignments



## Overview of kali linux

- Specifically, i will going to show you with “kali linux” with gnome but you can have any kinda, BUT Debian is recommended.
- Previously known as Backtrack

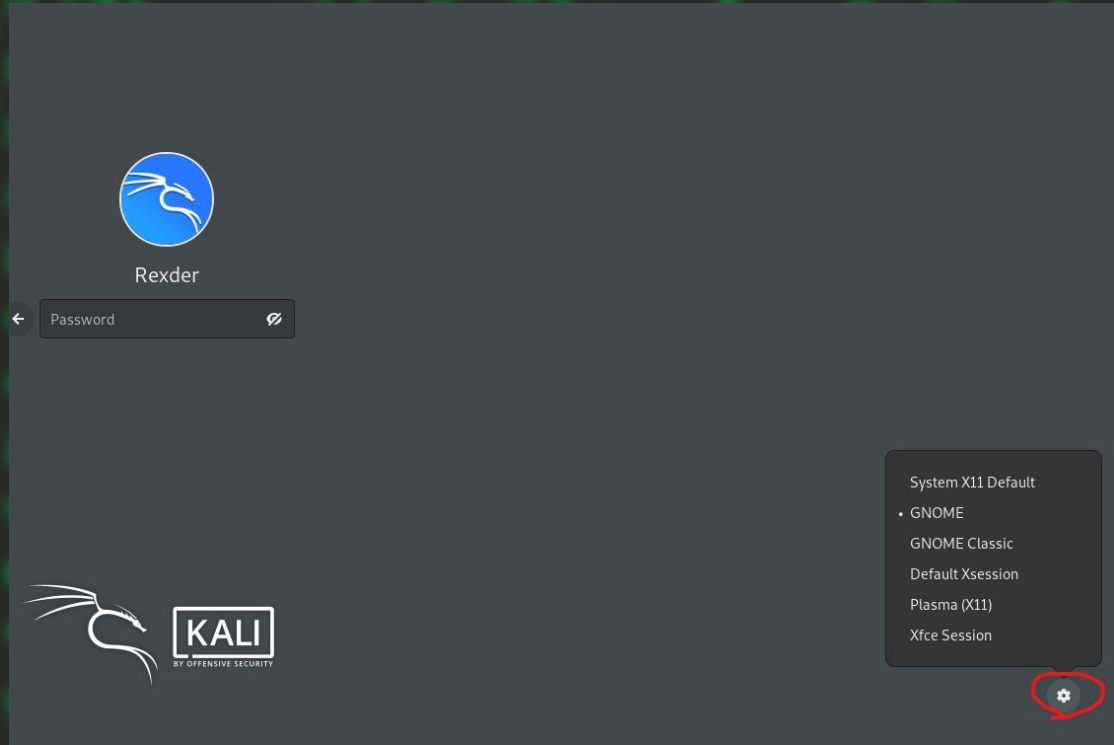
# Login



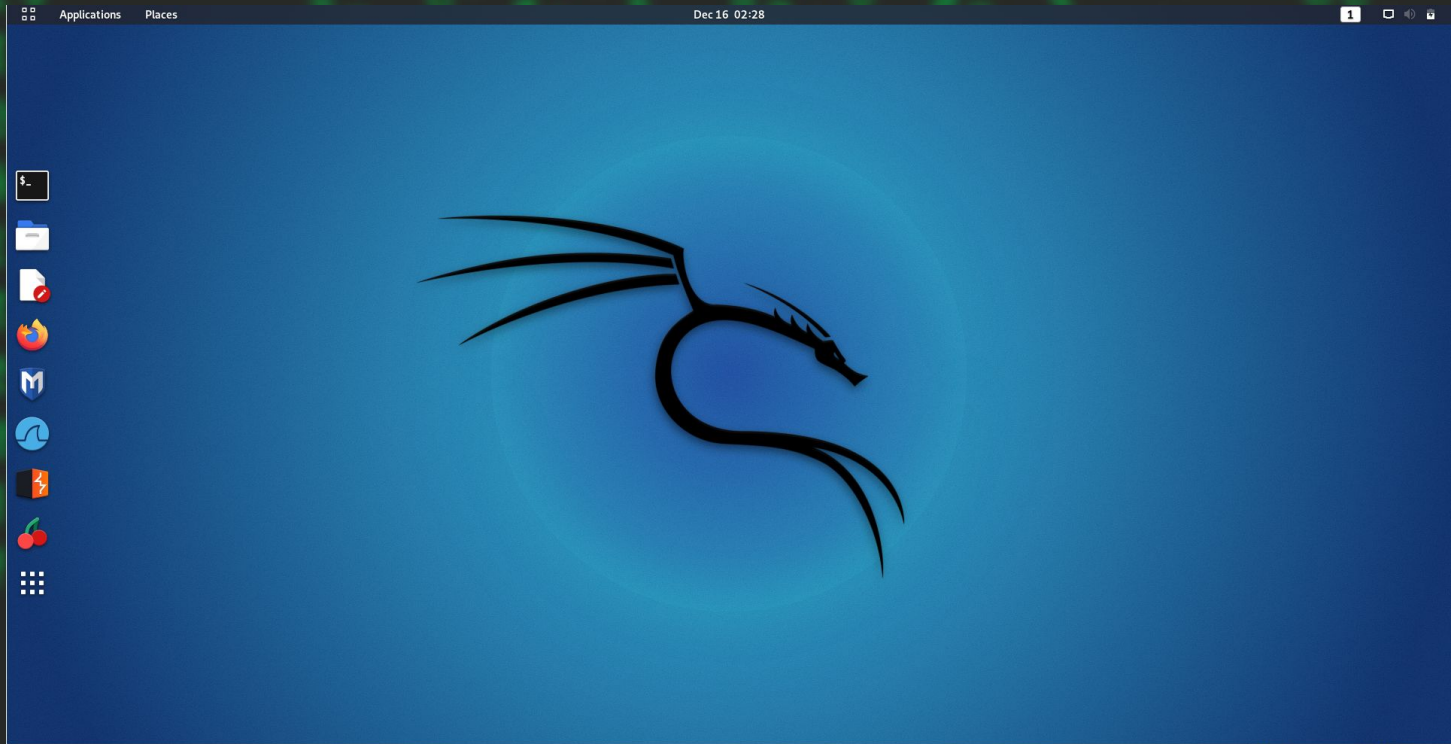


## Cont ...

- You can switch between your Desktop environment



# Main screen - Gnome

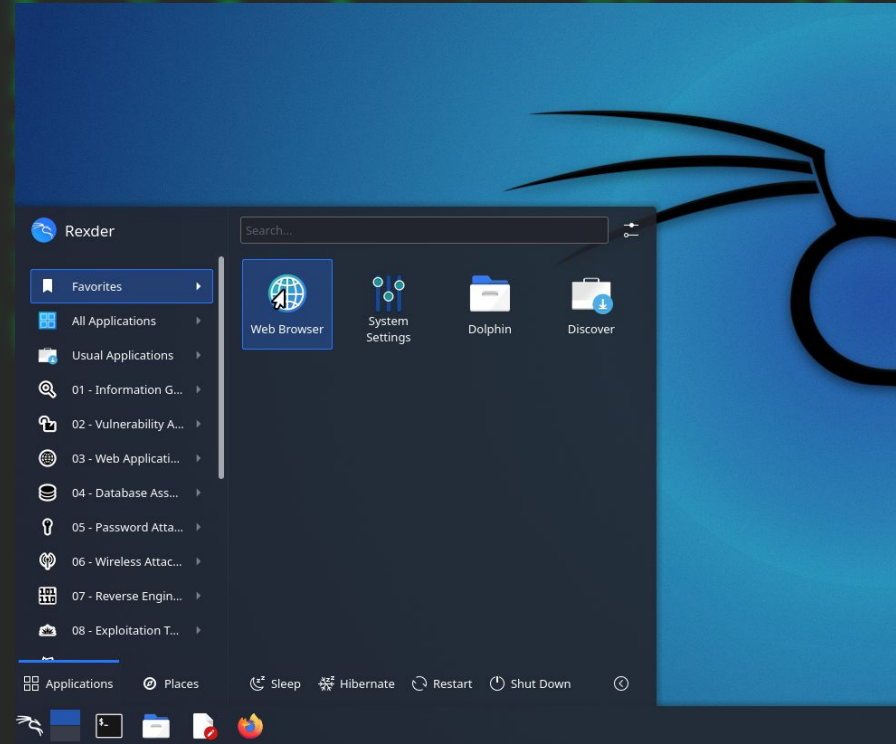
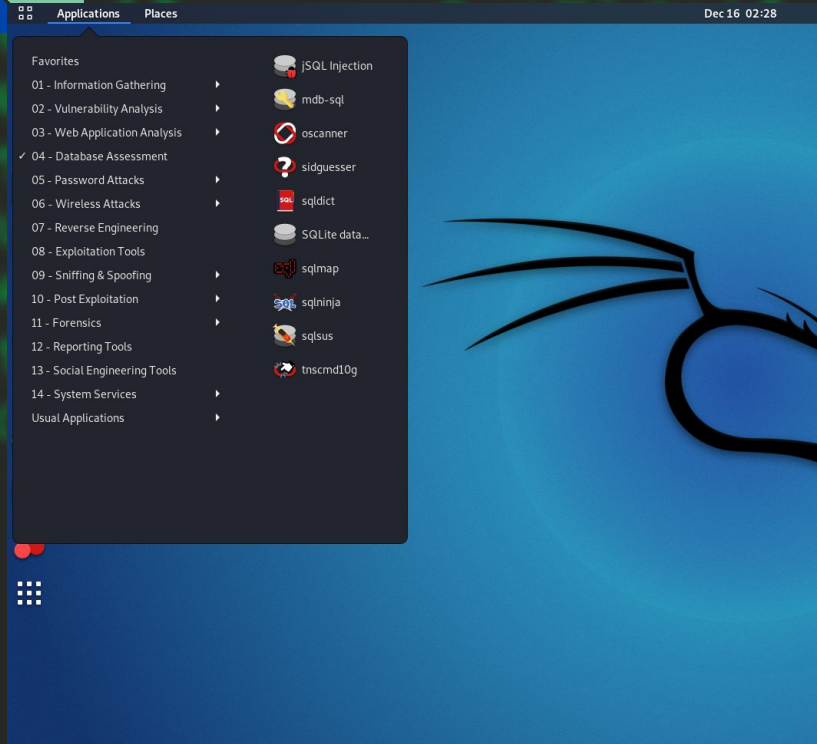


## Cont... - KDE plasma





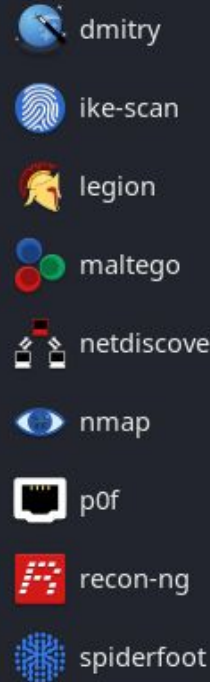
# Menu





# 1) Information gathering

- Tools for information gathering, in system, network, host



## 2) Vulnerability Analysis

- **Tools for Finding Vulnerabilities**



legion



lynis



nikto




nmap



unix-prives...

### 3) Web Application Analysis

- **Tools for Finding Vulnerabilities and exploits on websites.**

 burpsuite

 commix


 httrack

 paros

 skipfish

 sqlmap

 webScarab

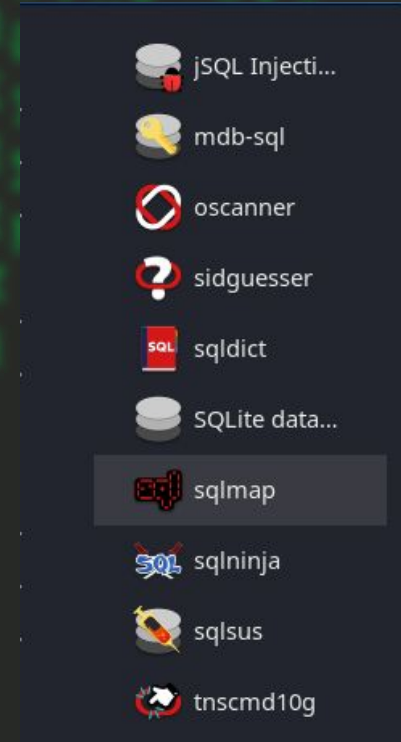
 wpScan

 ZAP



## 4) Database Assessment

- Tools for Finding Vulnerabilities and exploits on Databases.





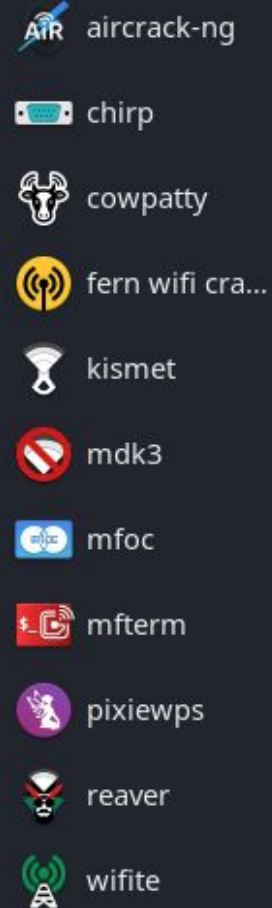
## 5) Password Attacks

- Tools for exploiting Passwords for login, websites, application, windows..



## 6) Wireless Attacks

- Tools for exploiting Wireless Systems like wifi, bluetooth..



## 7) Reverse Engineering

- Tools for exploiting Softwares, Mobile Applications and any binary files



apktool



bytecode-vi...



clang



clang++



dex2jar



edb-debug...



ghidra



jadx-gui



jasnoob



NASM shell



ollydbg



radare2



## 8) Exploitation Tools

- Tools for exploiting Softwares, Mobile ,Computers ,websites and any things



armitage



beef xss fra...



metasploit f...



msf payloa...



searchsploit



social engin...



sqlmap



termineter



## 9) Sniffing & Spoofing

- Tools for Listening or hijacking networks



driftnet



ettercap-gr...



hamster



macchanger



mitmproxy



netsniff-ng



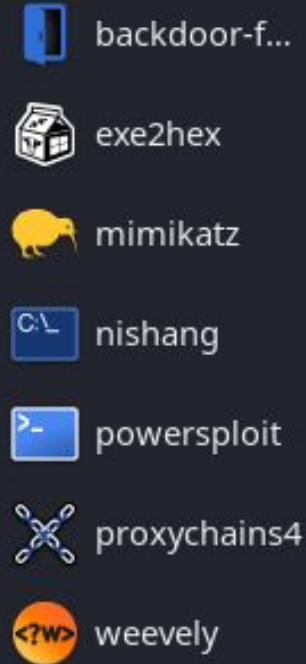
responder



wireshark

## 10) POST exploitation

- **Tools for Maintaining our access. Used after exploiting a system**



## 11) Forensics

- Tools for Doing researches and investigate a Cyber Attacks.



autopsy



binwalk



bulk\_extrac...



chkrootkit



foremost



galleta



hashdeep

## 12) Reporting tools

- **Tools for Report preparation. After some forensic you will get data and you will write report and these tools will help you.**





## 13) Social Engineering tools

- Tools Used for Social Engineering attacks



## 14) System Services

- Buttons used to start some services.



beef start



beef stop



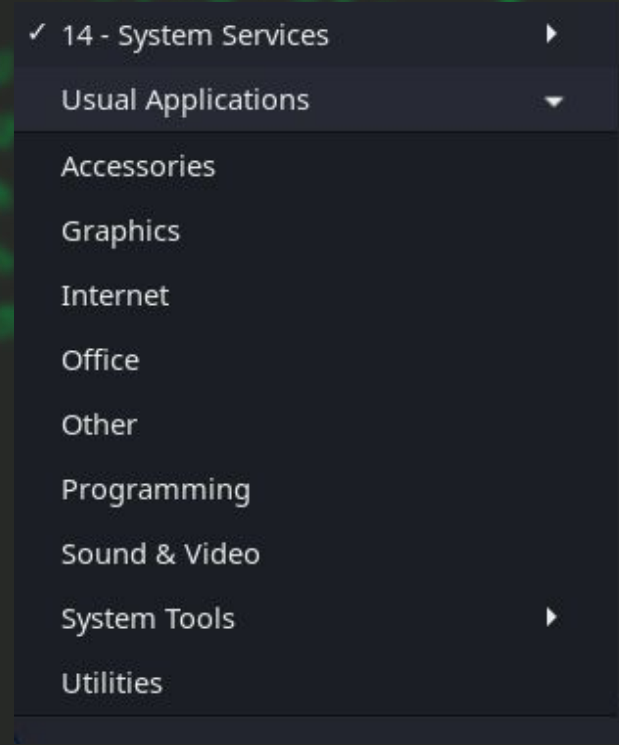
dradis start



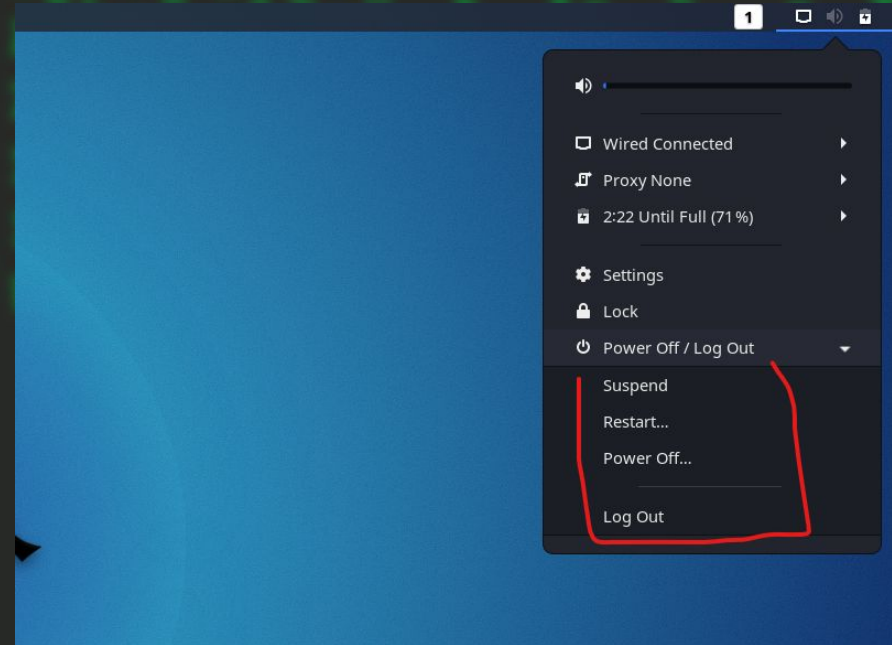
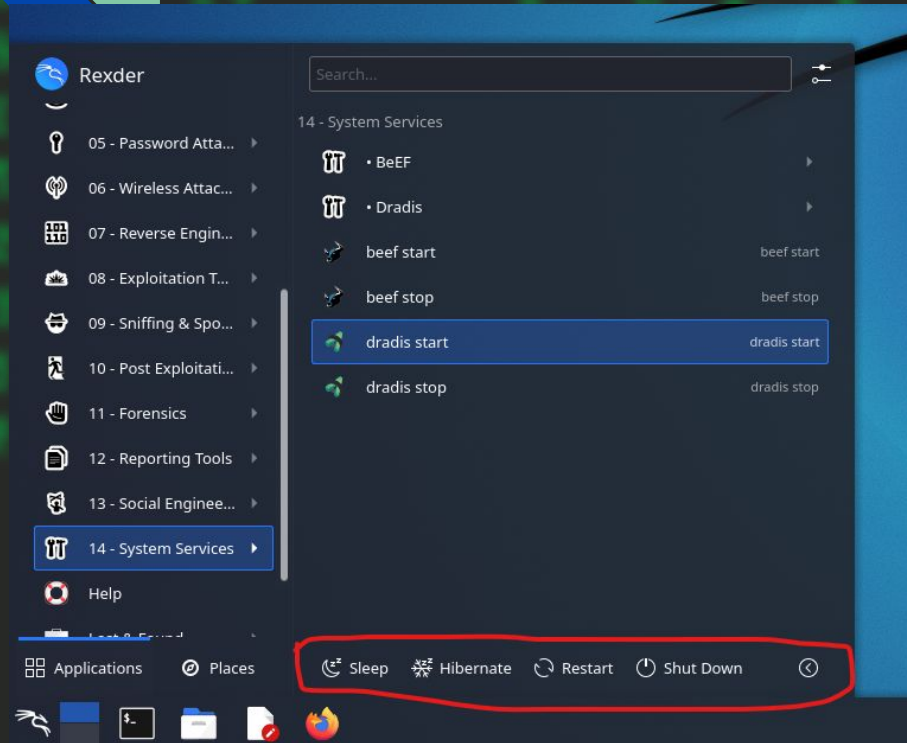
dradis stop

## 15) Usually used applications

- **Softwares for some basic purposes**



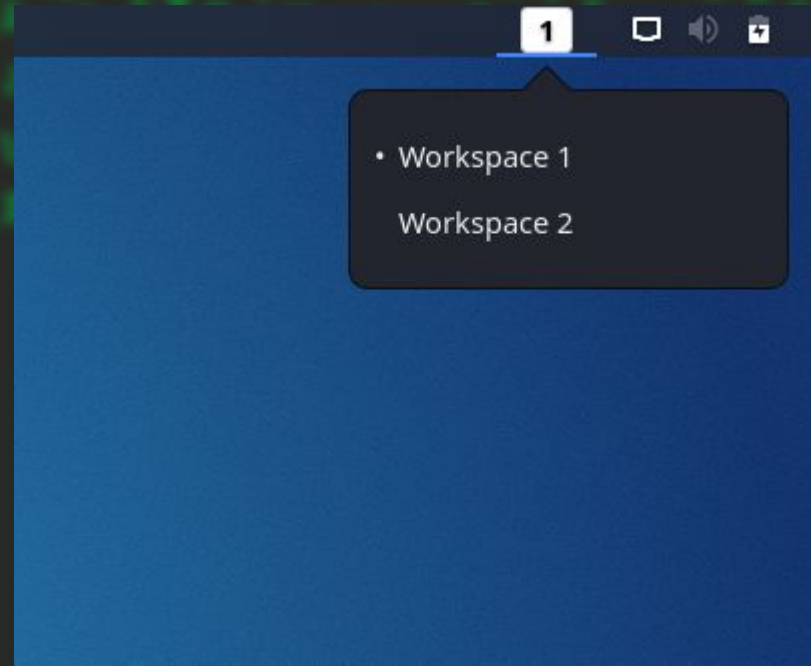
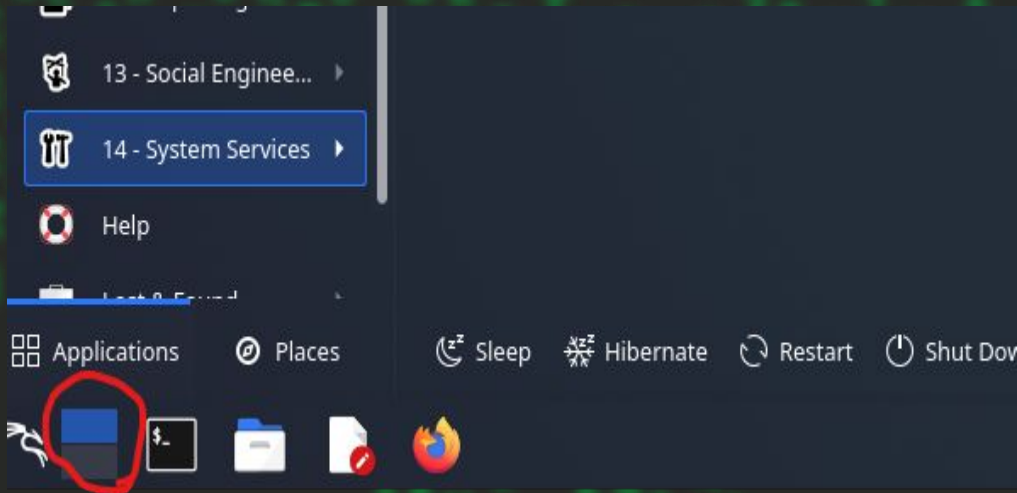
# Shutdown,lock,restart



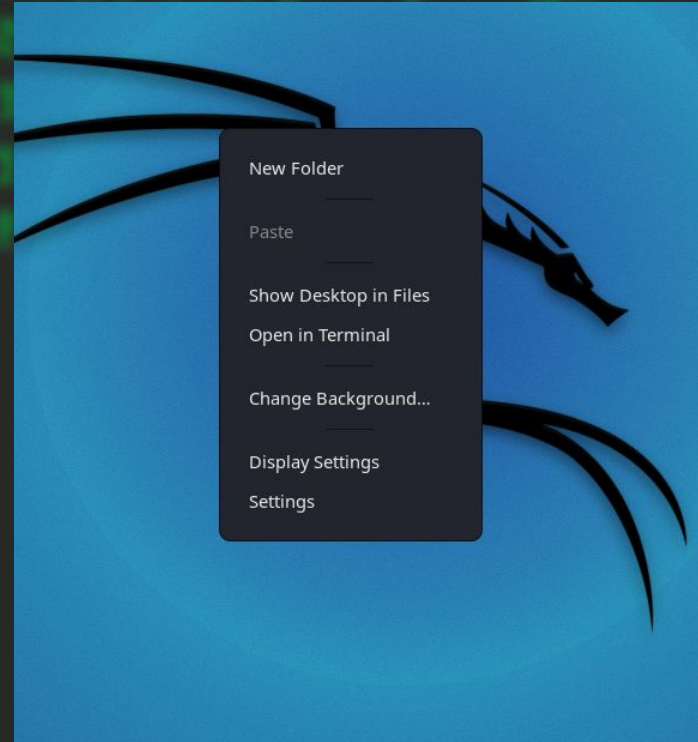
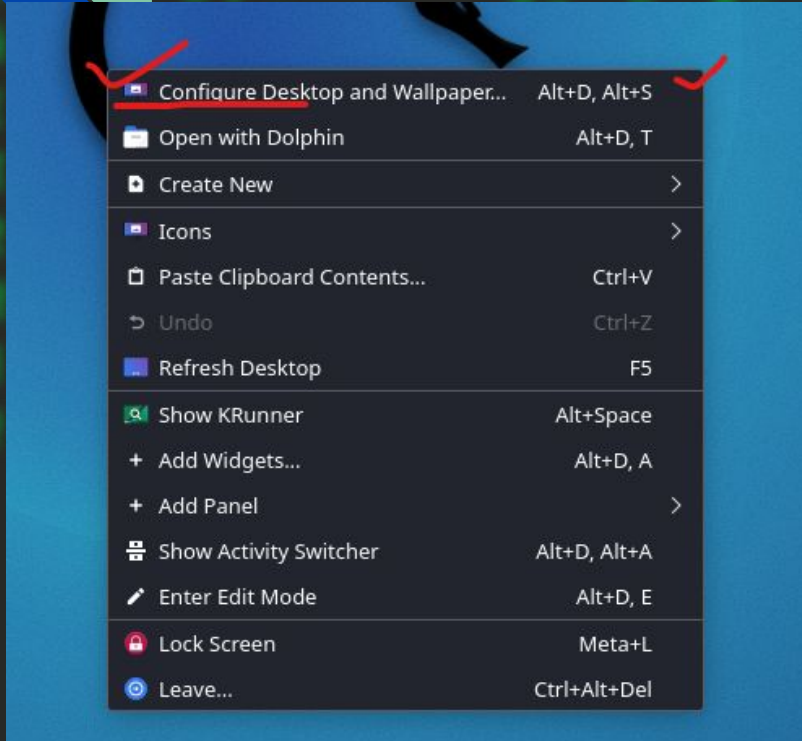


# Workspace manager

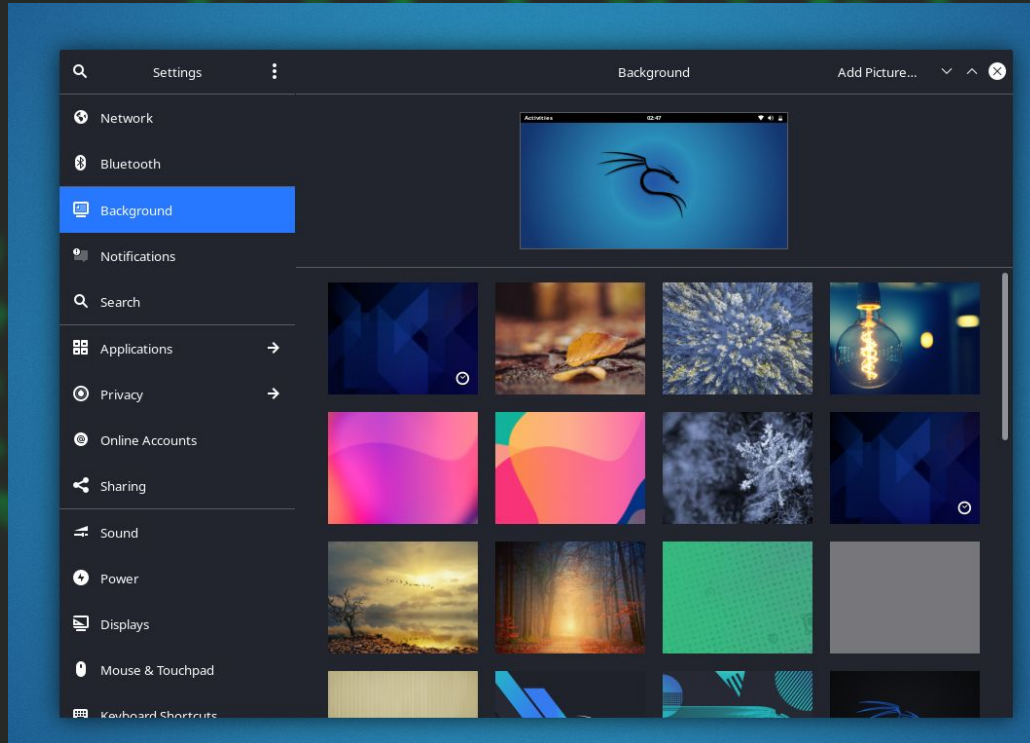
Used to Classify our works on different windows



# Desktop Properties



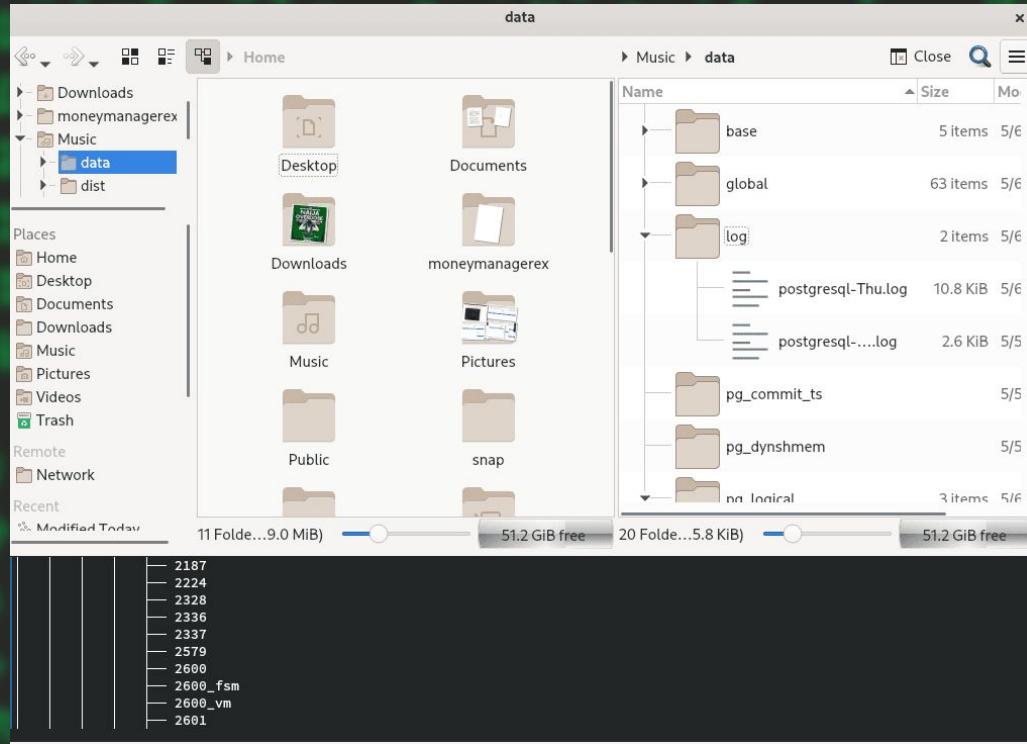
# Background Changes





# Folder managers

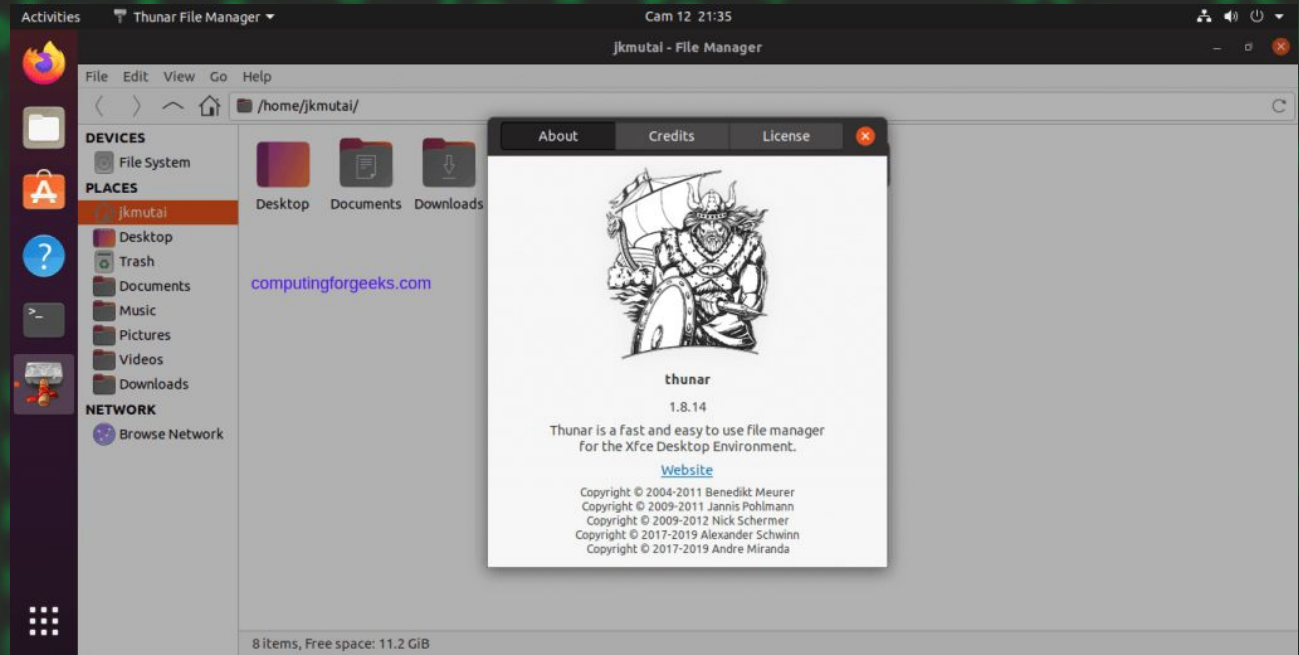
## 1) Dolphin





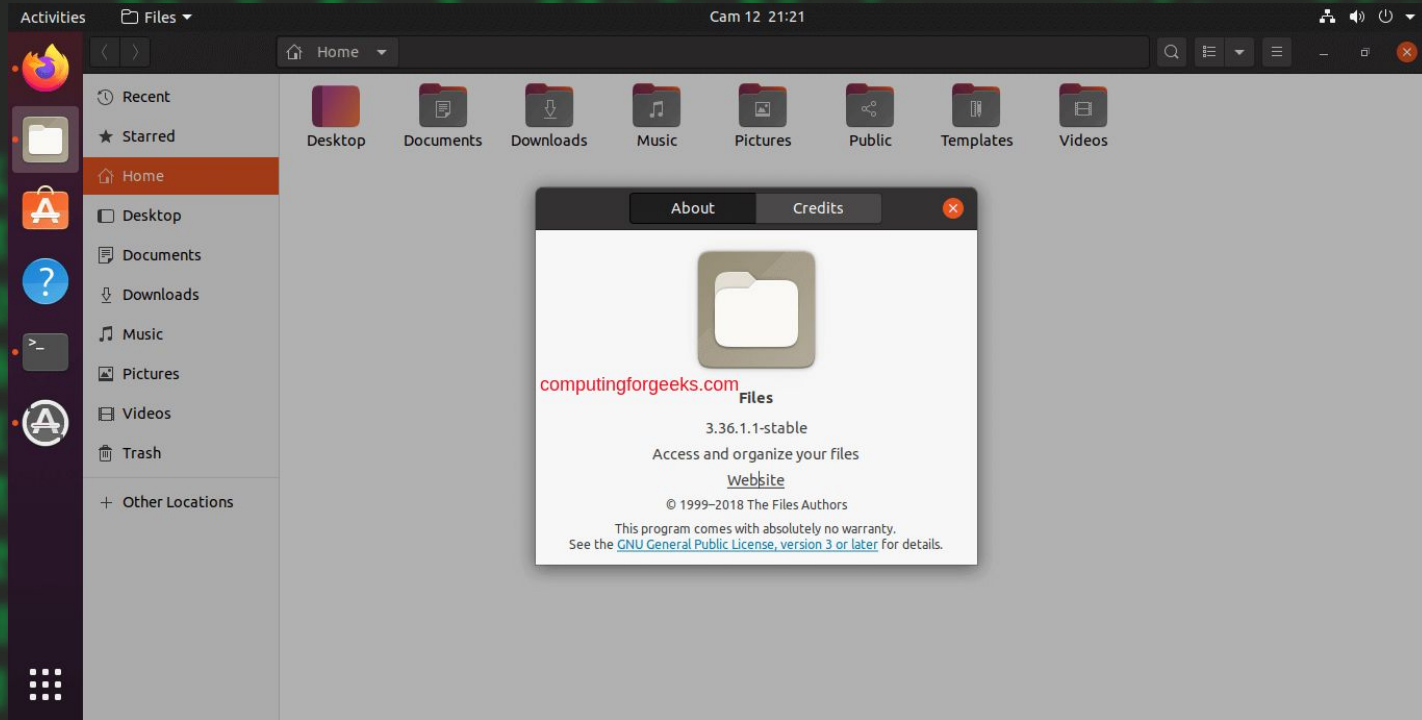
# Folder managers

## 2) Thunar



# Folder managers

## 3) Nautilus



# On window it is NOT FREE

[Home](#) / [Utilities & tools](#) / Shrestha Files Pro X - File Explorer for Windows



## Shrestha Files Pro X - File Explorer for Windows

JPT Games and Apps

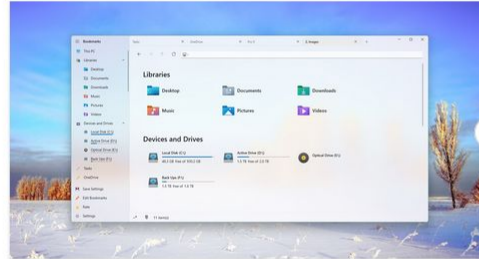
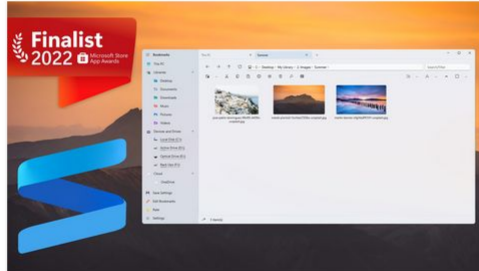
☆☆☆☆☆ 0 | [Utilities & tools](#)

[Get in Store app](#)

~~USD\$9.99~~ USD\$7.99

0

[SAVE USD\\$2.00](#)



### Details

Release Year: 2020

Available in 43 languages

### Published by

JPT Games and Apps

[Contact information](#)

### Terms

[Privacy policy](#)

### Developer and IT

[App badge](#)

[Endpoint Manager](#)

### Description

[Note: The app uses .NET Runtime 6. This updated app does not support Windows 10 S.]


Shrestha Files is a finalist in Microsoft Store App Award 2022 in the File Management Category!

Welcome to Shrestha Files Pro X - the neXt version of Shrestha Files Pro! Shrestha Files Pro X offers the convenience of tabs and dual pane with a



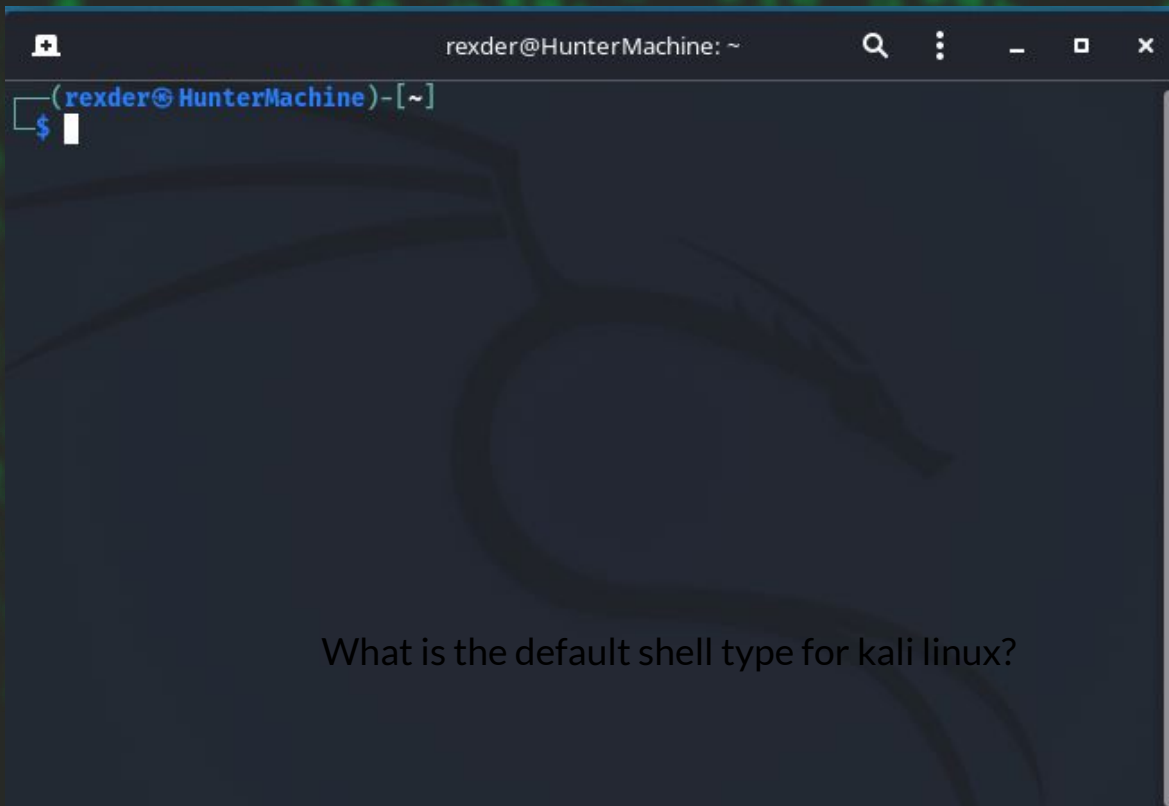
3+

# Linux Commands

- Linux Systems uses shell. The shell help us to Communicate with the kernel and helps to execute codes.
- This is the shells icon --> The icon is a blue square with a white border. Inside the square, there is a white prompt character consisting of a dollar sign followed by a hyphen (\$-).
- Shell also called "Terminal"



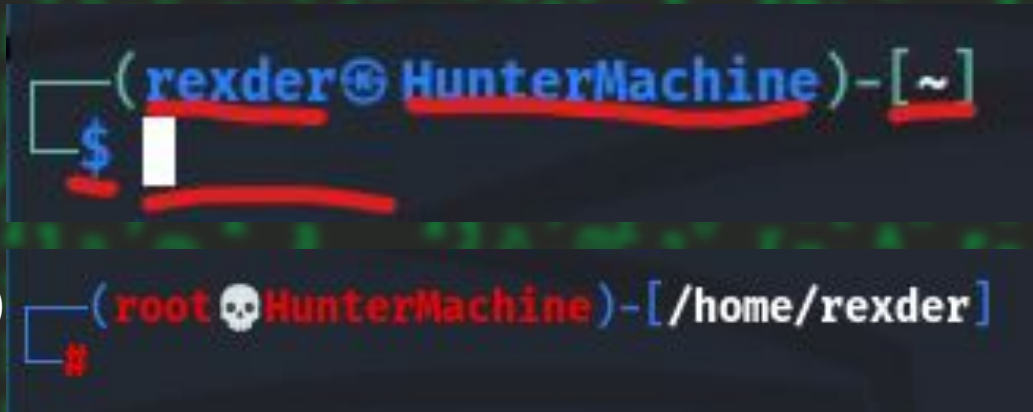
# The shell 🥰



What is the default shell type for kali linux?

## Cont...

- The terminal have 5 parts.
  - **Username** = rexder
  - **Hostname** = HunterMachine
  - **Current Directory** = PATH
  - **Priviledge** = \$-(user) , #-(root)
  - **Command place** = \_
- Home directory is ~
- Local directory with .
- All directory \*



The image contains two terminal window screenshots. The top screenshot shows a user prompt: `(rexder@HunterMachine)-[~]` with a blue dollar sign (\$) and a white cursor. The bottom screenshot shows a root prompt: `(root@HunterMachine)-[/home/rexder]` with a red hash symbol (#) and a red skull icon.

Directory = folder



# Linux Command Basics

- On linux there are over 100 commands. But we will see the main and the useful only.
- Also those commands have their own options and arguments.

```
(rexder@HunterMachine)-[~]  
$ command --option argument
```



What is command

“Small programs that  
do one task well”





# ls / List Directory

## SYNOPSIS

ls [OPTION]... [FILE]...

## DESCRIPTION

List information about the FILES (the current directory by default).

```
(rexder@HunterMachine)-[~]  
$ ls  
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos
```

cont...

- ls -l
- ls -a
- ls filename
- ls -R => recursive

You can combine them, ls -Rla

Linux hidden files start with dot.

```
(rexder@HunterMachine)-[~]  
$ ls -l  
total 32  
drwxr-xr-x 2 rexder rexder 4096 Dec 16 02:32 Desktop  
drwxr-xr-x 2 rexder rexder 4096 Dec 6 03:03 Documents  
drwxr-xr-x 4 rexder rexder 4096 Dec 9 08:08 Downloads  
drwxr-xr-x 2 rexder rexder 4096 Dec 6 03:03 Music  
drwxr-xr-x 2 rexder rexder 4096 Dec 15 02:21 Pictures  
drwxr-xr-x 2 rexder rexder 4096 Dec 6 03:03 Public  
drwxr-xr-x 2 rexder rexder 4096 Dec 6 03:03 Templates  
drwxr-xr-x 2 rexder rexder 4096 Dec 6 03:03 Videos
```

```
(rexder@HunterMachine)-[~]  
$ ls -a  
.  
..  
.bash_logout  
.bashrc  
.bashrc.original  
.cache  
.config  
Desktop  
Documents  
Downloads  
.face  
.face.icon  
.gtkrc-2.0  
.kde  
.local  
.mozilla  
Music  
Pictures  
.profile  
Public  
Templates  
.vboxclient-clipboard.pid  
.vboxclient-display-svga-x11.pid  
.vboxclient-draganddrop.pid  
.vboxclient-seamless.pid  
Videos  
.zsh_history  
.zshrc
```



# cd / Change Directory

## SYNOPSIS

**cd [directory]**

## DESCRIPTION

It is used to change current working directory.

```
(rexder@HunterMachine)-[~]  
$ cd Downloads  
  
(rexder@HunterMachine)-[~/Downloads]  
$
```





## cont...

- `cd /` => root
- `cd` => home
- `cd ..` => 1x Back
- `cd ../..` => 2x Back
- `cd foldername`

If folder name have space you have to add the name inside “folder name”

`cd “folder name”`

```
(rexder@HunterMachine)-[~]  
$ cd /  
  
(rexder@HunterMachine)-[/]  
$ cd ..  
  
(rexder@HunterMachine)-[/]  
$ cd home  
  
(rexder@HunterMachine)-[/home]  
$
```



# Pwd / print working directory

## SYNOPSIS

`pwd [-options]`

## DESCRIPTION

It prints the path of the working directory, starting from the root.

Example after typing `pwd`:

`/home/omar/Desktop/OSLab`

```
PWD(1)                                User Commands                                PWD(1)

NAME
    pwd - print name of current/working directory

SYNOPSIS
    pwd [OPTION]...

DESCRIPTION
    Print the full filename of the current working directory.

    -L, --logical
        use PWD from environment, even if it contains symlinks

    -P, --physical
        avoid all symlinks

    --help
        display this help and exit

    --version
        output version information and exit
```

```
(rexder@HunterMachine)-[~/Documents]
$ pwd
/home/rexder/Documents
```



# echo

## SYNOPSIS

**echo** [option] [string]

## DESCRIPTION

**echo** command in linux is used to display line of text/string that are passed as an argument . This is a built in command that is mostly used in shell scripts and batch files to output status text to the screen or a file.

```
(rexder@HunterMachine)-[/home]  
$ echo "Hello Geeztech Security Testers."  
Hello Geeztech Security Testers.
```



cont...

- You can write texts into files.
  - `echo text > file.txt`
- You can add texts(append)
  - `echo text >> file.txt`

```
(rexder@HunterMachine)-[~]  
$ echo "Hello Geeztech Security Testers." > geez.txt  
  
(rexder@HunterMachine)-[~]  
$ ls  
Desktop    Downloads  Music      Public     Videos  
Documents  geez.txt   Pictures   Templates
```





# cat / head / tail / less

## SYNOPSIS

cat [FILE]...

## DESCRIPTION

Used to show the content of a file

```
(rexder@HunterMachine)-[~]  
$ cat geez.txt  
Hello Geeztech Security Testers.
```





# touch

## SYNOPSIS

`touch [FILE1] [FILE2] [FILE3]`

## DESCRIPTION

Creates any kind of Files with the name you gave it. With empty inside.

```
(rexder@HunterMachine)-[~]
$ ls
Desktop  Downloads  Music  Public  Videos
Documents  geez.txt  Pictures  Templates

(rexder@HunterMachine)-[~]
$ touch Day3.md

(rexder@HunterMachine)-[~]
$ ls
Day3.md  Documents  geez.txt  Pictures  Templates
Desktop  Downloads  Music     Public    Videos
```

# Mkdir / make directory

## SYNOPSIS

```
mkdir [FOLDER-NAME1]
[FOLDER-NAME2] [FOLDER-NAME3]
```

## DESCRIPTION

Creates Folder with the name u gave it.

- DON'T forget to add the " " when you are using folders with space between them.

```
(rexder@HunterMachine)-[~]
$ ls
Desktop  Downloads  Music  Public  Videos
Documents  geez.txt  Pictures  Templates

(rexder@HunterMachine)-[~]
$ mkdir GeezTech

(rexder@HunterMachine)-[~]
$ ls
Desktop  Downloads  geez.txt  Pictures  Templates
Documents  GeezTech  Music  Public  Videos
```

```
(rexder@HunterMachine)-[~]
$ ls
Desktop  Downloads  Music  Public  Videos
Documents  geez.txt  Pictures  Templates

(rexder@HunterMachine)-[~]
$ mkdir "Geez Tech"

(rexder@HunterMachine)-[~]
$ ls
Desktop  Downloads  geez.txt  Pictures  Templates
Documents  'Geez Tech'  Music  Public  Videos
```



# clear

## SYNOPSIS

clear

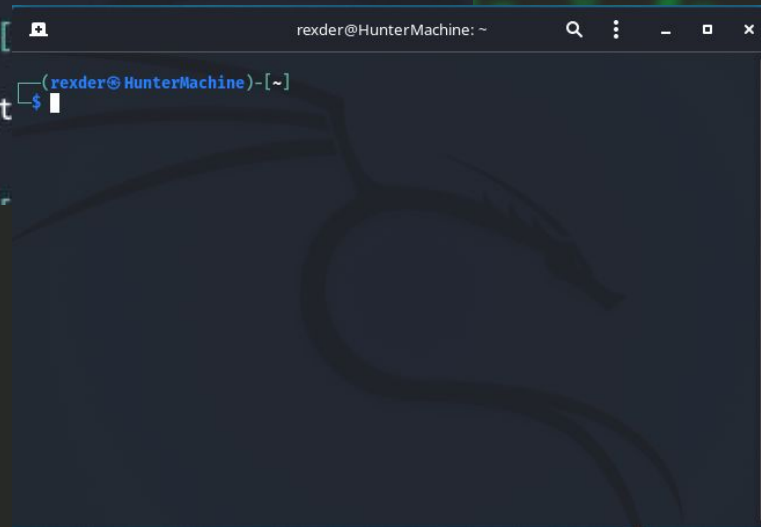
## DESCRIPTION

Clears your screen.

```
(rexder@HunterMachine)-[~]  
$ ls  
Desktop  Downloads  Music      Public      Videos  
Documents geez.txt   Pictures   Templates
```

```
(rexder@HunterMachine)-[~]  
$ touch Day3.md
```

```
(rexder@HunterMachine)-[~]  
$ ls  
Day3.md  Documents  geez.txt  
Desktop  Downloads  Music
```







# rm / remove

## SYNOPSIS

rm [FILE1][FILE2][FILE3]

## DESCRIPTION

Remove file.

```
(rexder@HunterMachine)-[~]
$ ls
Day3.md  Documents  geez.txt  Pictures  Templates
Desktop  Downloads  Music     Public    Videos

(rexder@HunterMachine)-[~]
$ rm Day3.md

(rexder@HunterMachine)-[~]
$ ls
Desktop  Downloads  Music  Public  Videos
Documents  geez.txt  Pictures  Templates
```





cont...

- `rm -r` => recursive(4 folders)
- `rm -i` => for prompt(ask)
- `rm -f` => force delete

```
(rexder@HunterMachine)-[~]  
$ ls  
Desktop      Downloads    geez.txt     Pictures     Templates  
Documents    'Geez Tech' Music        Public       Videos  
  
(rexder@HunterMachine)-[~]  
$ rm -rf 'Geez Tech'  
  
(rexder@HunterMachine)-[~]  
$ rm -i geez.txt  
rm: remove regular file 'geez.txt'? yes
```

You can use them in combination  
too like, `rm -rf 'filename'`



# Cp| mv / copy,move

## SYNOPSIS

cp [oldFILEplace] [newfilePlace]

Mv [oldFILEplace] [newfilePlace]

## DESCRIPTION

Copy/move files & folders.

```
(rexder@HunterMachine)-[~]
$ ls
Desktop    Downloads  Music      Public     Videos
Documents  geez.txt   Pictures   Templates

(rexder@HunterMachine)-[~]
$ cp geez.txt Documents

(rexder@HunterMachine)-[~]
$ cd Documents

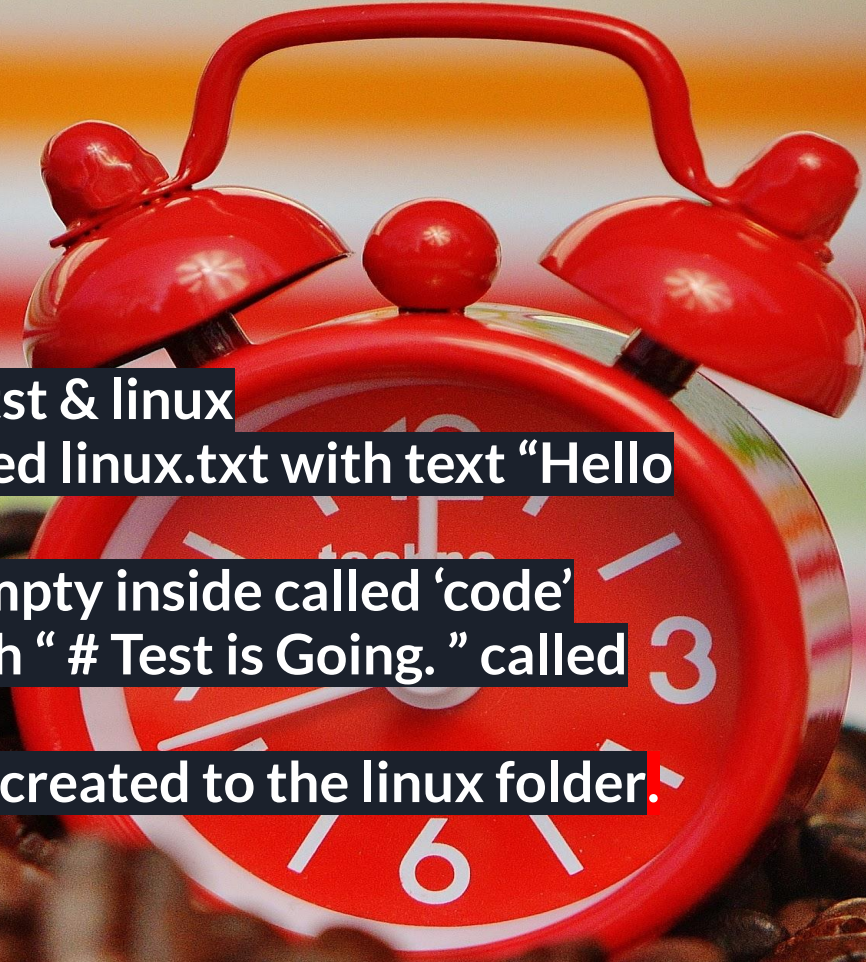
(rexder@HunterMachine)-[~/Documents]
$ ls
geez.txt
```





# Breaktime

## TASKS:

- 1) Create 2 Folders called gtst & linux
  - 2) Open gtst, create file called linux.txt with text “Hello this is my first text”
  - 3) create python file with empty inside called ‘code’
  - 4) create markdown file with “ # Test is Going. ” called ‘hacker’
  - 5) Move the python file you created to the linux folder!
- 

# grep - global search for regular expression

- **grep [options] pattern [files]**

- The grep filter searches a file for a particular pattern of characters, and displays all lines that contain that pattern. The pattern that is searched in the file is referred to as the regular expression (grep stands for global search for regular expression and print out).

```
(rexder@HunterMachine)-[~]  
$ ls  
Day3.md Desktop Downloads Music Public Videos  
Day4.md Documents grep_test.txt Pictures Templates  
  
(rexder@HunterMachine)-[~]  
$ grep "my" grep_test.txt  
hello my friend my name is nathan , my friend is good boy.
```



# cont...

- `grep -i "search" file`
  - - case insensitive
- `grep -c "search" file`
  - - count numbers
- `grep -l "search" *`
  - - displays filename
- `grep -R "search" foldername`
  - - search text in folders
- `grep -v 'term' filename`
  - To display without this term
- `grep -n "term" file`
  - To display the term find number

```
.22dec5d0ed88b6ab50:3:> GET /shareholders-login// HTTP/1.1
```

```
(rexder@HunterMachine)-[~]
$ ls
Day3.md  debdabe.txt  Documents  grep_test.txt  Pictures  Templates  Videos
Day4.md  Desktop      Downloads  Music           Public    topsecret.txt

(rexder@HunterMachine)-[~]
$ grep -i "hello" *
debdabe.txt:HELLO Ethiopia
grep: Desktop: Is a directory
grep: Documents: Is a directory
grep: Downloads: Is a directory
grep_test.txt:hello my friend my name is nathan , my friend is good boy.
grep: Music: Is a directory
grep: Pictures: Is a directory
grep: Public: Is a directory
grep: Templates: Is a directory
topsecret.txt:hello there
grep: Videos: Is a directory
```

```
(rexder@HunterMachine)-[~]
$ ls
Day3.md  debdabe.txt  Documents  grep_test.txt  Pictures  Templates  Videos
Day4.md  Desktop      Downloads  Music           Public    topsecret.txt

(rexder@HunterMachine)-[~]
$ grep -R "hello" *
grep_test.txt:hello my friend my name is nathan , my friend is good boy.
topsecret.txt:hello there
```



# Wc - word count

## SYNOPSIS

**wc** [OPTION]... [FILE]...

## DESCRIPTION

It is used to find out **number of lines**, **word count**, **byte** and **characters count** in the files specified in the file arguments.

Line(-l)   word(-w)   byte(-c)

```
(rexder@HunterMachine)-[~]  
$ wc grep_test.txt  
1 13 59 grep_test.txt
```

```
(rexder@HunterMachine)-[~]  
$ cat grep_test.txt  
hello my friend my name is nathan , my friend is good boy.
```

```
(rexder@HunterMachine)-[~]  
$ wc -l grep_test.txt  
1 grep_test.txt
```



# Multiple Command Executions

- You can run/ execute multiple commands in 1 line.
- using 3 methods:
  - And ( && )
  - Or ( || )
  - Pipeing( | )





## AND ( && )

On AND operation All commands you entered will be executed. If both are working without error

```
(rexder@HunterMachine)-[~]  
$ touch Day3.md && echo "Multi-lineing"  
Multi-lineing  
  
(rexder@HunterMachine)-[~]  
$ ls  
Day3.md  Documents  Music      Public      Videos  
Desktop  Downloads  Pictures   Templates
```

```
(rexder@HunterMachine)-[~]  
$ touh test && echo "not working"  
Command 'touh' not found, did you mean:  
  command 'touch' from deb coreutils  
Try: sudo apt install <deb name>
```





## OR (||)

On OR operation the command will be executed. If it have error or not

```
(rexder@HunterMachine)-[~]  
$ touch Day4.md || echo "Multi-lineing"  
  
(rexder@HunterMachine)-[~]  
$ ls  
Day3.md  Desktop  Downloads  Pictures  Templates  
Day4.md  Documents Music      Public    Videos
```

```
(rexder@HunterMachine)-[~]  
$ touh test || echo "not working"  
Command 'touh' not found, did you mean:  
  command 'touch' from deb coreutils  
Try: sudo apt install <deb name>  
not working
```



## Piping ( | )

On pipe, will help you run commands by using the output of the 1st command as the input for the next one.

```
(rexder@HunterMachine)-[~]  
$ cat grep_test.txt | grep "hello"  
hello my friend my name is nathan , my friend is good boy.
```

```
(rexder@HunterMachine)-[~]  
$ cat grep_test.txt  
hello my friend my name is nathan , my friend is good boy.
```

```
(rexder@HunterMachine)-[~]  
$ cat grep_test.txt | wc -l  
1
```



## EXERCISE 2

1) Create A text file with name paragraph.txt

“ Hello my name is <Yourname>, i got this course of linux and said hello, and am tring to learn linux. I love linux, so i said HELLO world “

2) How many times did the word hello written ?

3) how many byte is the size of this text

4) how many words are there?





# Class is Over!

## Assignment

- 1) Write notes on github
- 2) Do the exercises again those are the most basic and most essential once.
- 3) Read about sed,awk and tee commands