

Experiment 1

Aim: Introduction to Linux OS (Ubuntu 16.04 LTS)
Terminal & its basic

Theory

What is Linux?

- Linux is a kernel created by Linus Torvalds as an open source project.
- This term is often used for OS's that uses the same kernel.
- Examples: Fedora, Linux mint, Ubuntu, Arch.

What is Linux Shell or terminal?

- Shell is a program that allows the user to access the terminal.
- Terminal is used to run command.

Linux Commands:

1. pwd : print working directory
2. ls : list all files in current directory
3. nano : run the program nano that is a Unix command line text editor tool
4. cd : Change directory
5. mkdir : make directory
6. rm : remove file
7. rmdir : remove directory

8. touch: used to make a file
9. man: opens linux manual
10. mv: move file/directory
11. echo: print a string
12. cp: copy file
13. sudo: super user do
14. cat: reads file sequentially and writing them to standard output
15. wait: add a sleep.
16. help: add display all help text
17. time: display current time
18. apt-get: used to install program
19. tar: tape archiving.
20. chmod: change modification permissions
21. shutdown: shutdown the system
22. kill: kill a program
23. reboot: restart a pthre system
24. du: disk usage
25. logoff: log out from logged in user
26. alias: set a shortcut
27. exit: exit from a program
28. netping: checks the ping for an IP
29. sleep: sleep the program
30. ifconfig: display network interface configuration for Unix like OS

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Experiment 2

Aim: WAP Implement CPU scheduling using First come First serve (FCFS)

Theory

FCFS: It is a scheduling system that only sees the arrival order of each process & Evaluates each process & then goes to the next process

CPU

Burst time: The time required by the process

Waiting Time: The time each process needs to wait before running

Turn Around Time: The time needed from the process needed from entering to finishing

Code

Output

Number of process : 2

Normal Burst Time :

5

5

5 10
5 15

Sno.	Burst Time	Waiting Time	Turn Around Time
1	5	0	5
2	5	5	10

Avg Turn Around 6.0
Avg Wait Time 2.0

CODE

class Process():

```
def __init__(self, burstTime):  
    self.burstTime = burstTime  
    self.waitingTime = 0  
    self.turnAroundTime = 0
```

def evaluate(processes):

```
time = 0  
for i in range(len(processes)):  
    if i == 0:  
        processes[i].waitingTime = time  
    processes[i].turnAroundTime = processes[i].waitingTime +  
        processes[i].burstTime  
    time = time + processes[i].burstTime
```

def display(processes):

```
print("Sno. BurstTime WaitingTime TurnAroundTime")
```

```
a = 0
```

```
for process in processes:
```

```
a = a + 1
```

```
print(" {3} {3} {3} {3} ".format(a, process.burstTime,  
    process.waitingTime,  
    process.turnAroundTime))
```

def avgTTWT(processes):

```
avgwt = 0
```

```
avgtt = 0
```

```
for process in processes:
```

```
    avgwt = avgwt + process.waitTime
```

```
    avgtt = avgtt + process.turnAroundTime
```

```
print("Avg WT: {} \n Avg TT: {} ")
```

```
y.name__ = "main__";
```

```
Print("Enter number of processes : ") .
```

```
number = int(input()) .
```

```
processes = []
```

```
for i in range(number):
```

```
    processes.append(Process(int(input())))
```

```
evaluate(processes)
```

```
display(processes)
```

```
avg TTWT(processes)
```