 # OS : DAY-01 QUIZ

Q. Computer is a _____ which performs different functions efficiently and accurately.
A. hardware
B. machine
C. digital device
D. all of the above
Answer: D

Q. Which of the following is not a hardware?
A. Processor
B. Keyboard
C. Device Driver
D. Magnetic Disk
E. None of the above
Answer: C

Q. An OS is a _____
A. system software
B. resource manager
C. resource allocator
D. all of the above
Answer: D

Q. What are the functions of computer?
A. data storage
B. data processing
C. data movement
D. control
E. all of the above
Answer: E

Q. Which of the following is a system program?
A. compiler
B. linker
C. loader
D. assembler
E. all of the above
F. none of the above
Answer: C

SunBeam

Q. _____ converts high level programming language code into a low level programming language code.
A. An assembler
B. Compiler
C. Preprocessor
D. Linker
Answer: B

Q. Output of the linker is _____
A. an object code
B. an executable code
C. an intermediate code
D. an assembly language code
Answer: B

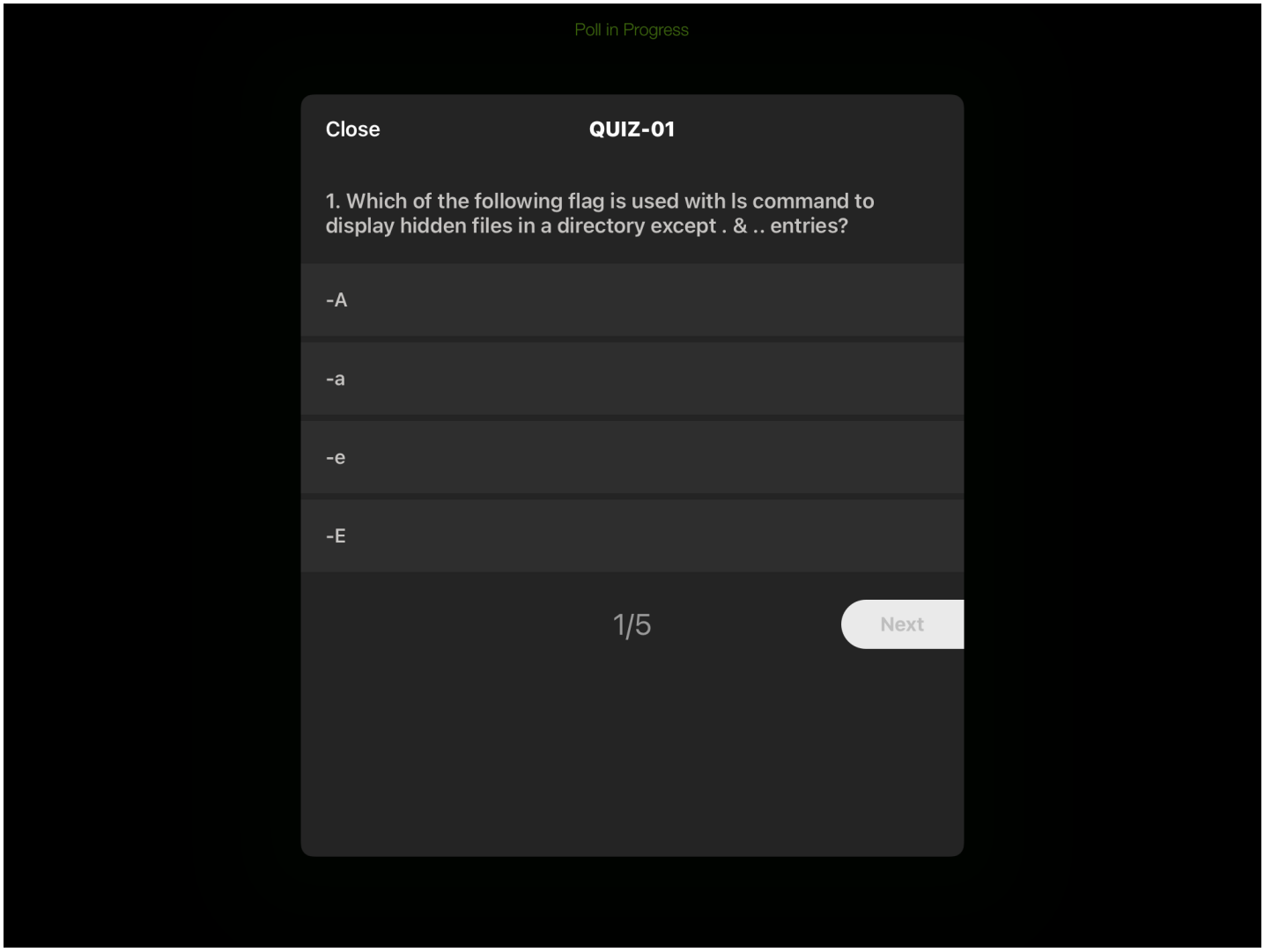
Q. Which of the following program provides graphical user interface in Windows Operating System?
A. cmd.exe
B. explorer.exe
C. command.com
D. all of the above
E. none of the above
Answer: B

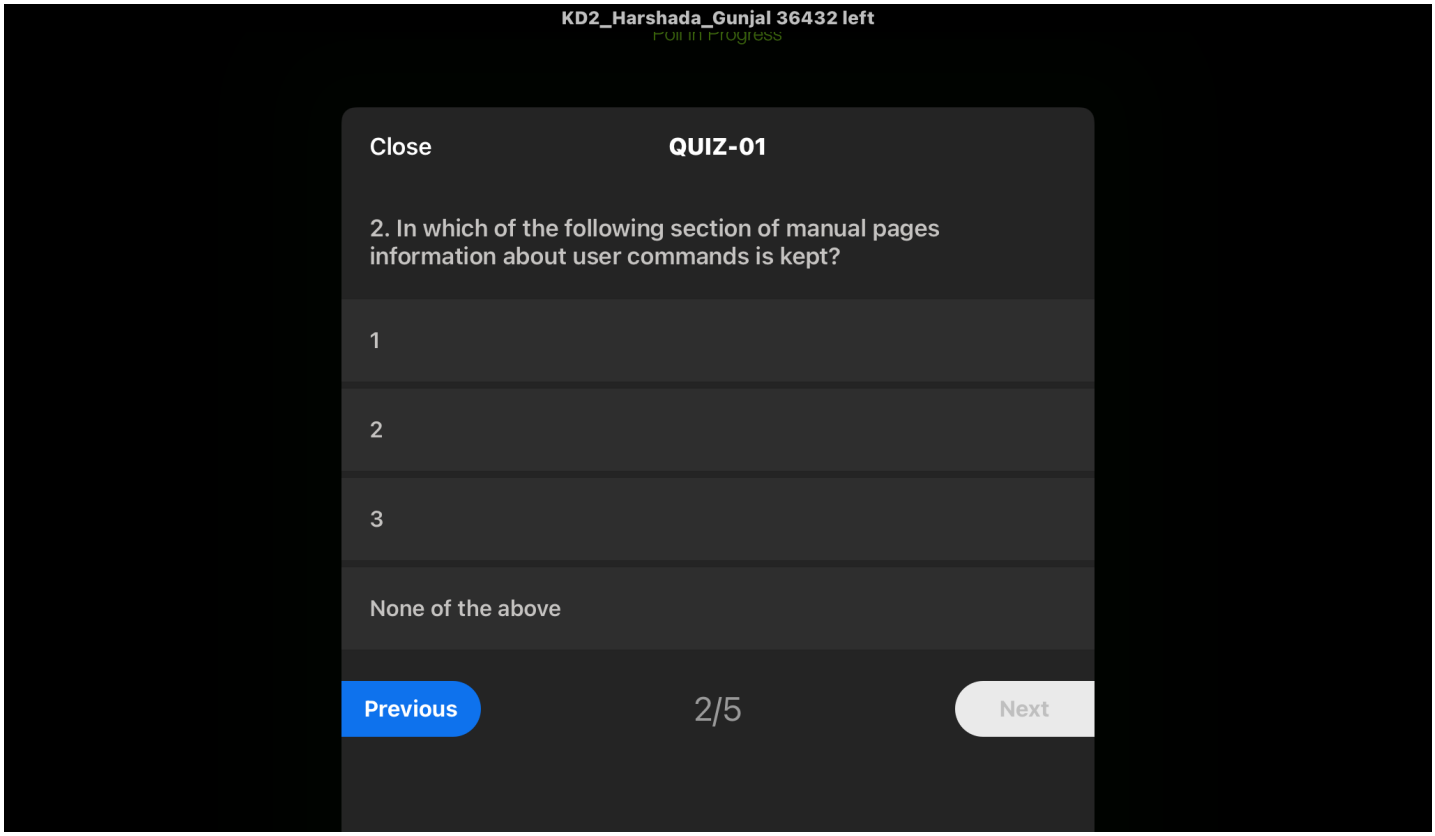
Q. Which of the following program is a system program?
A. Interrupt Handler
B. Device Driver
C. Loader
D. All of the above
E. None of the above
Answer: D

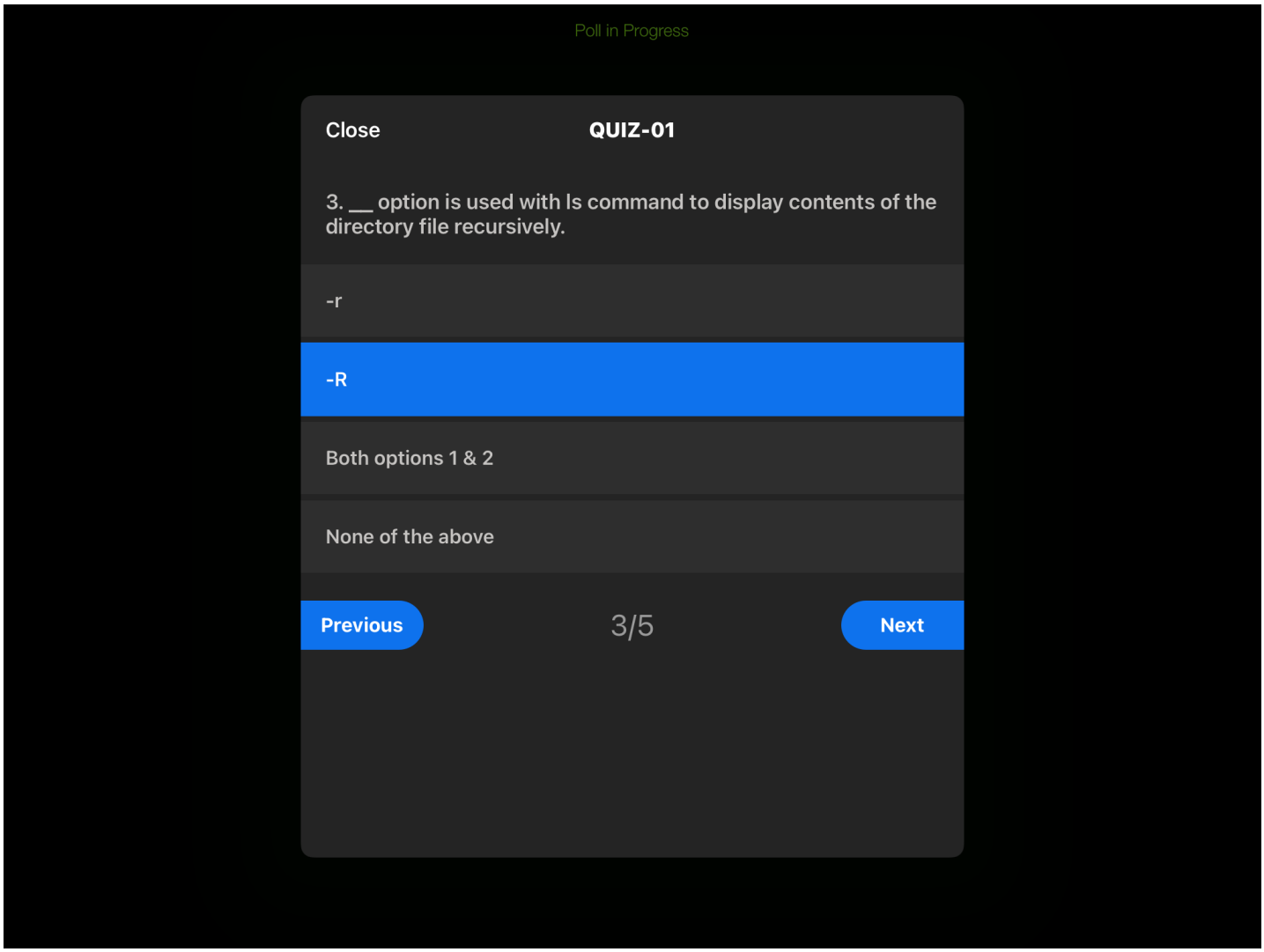
Q. Which of the following is a process?
A. program.i
B. program.o
C. program.s
D. program.out
E. None of the above
F. All of the above
Answer: E

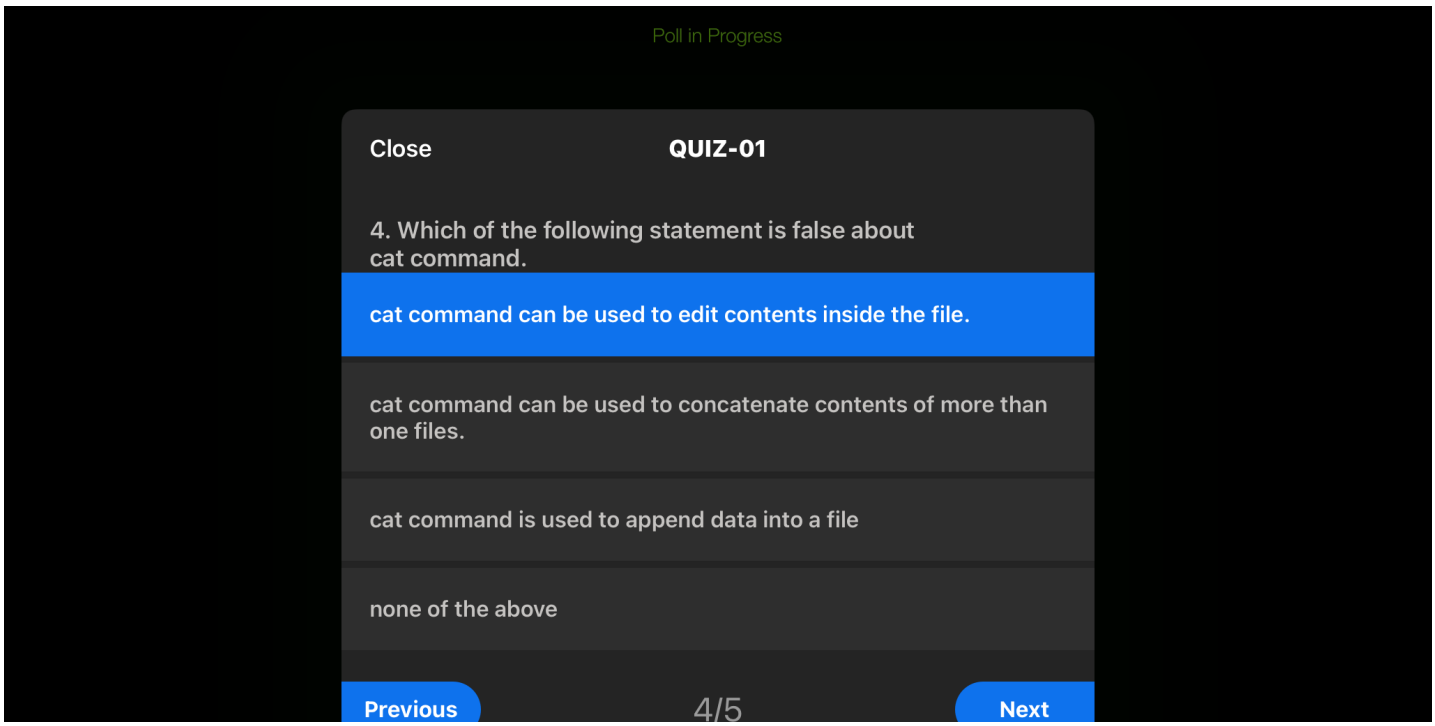
SunBeam

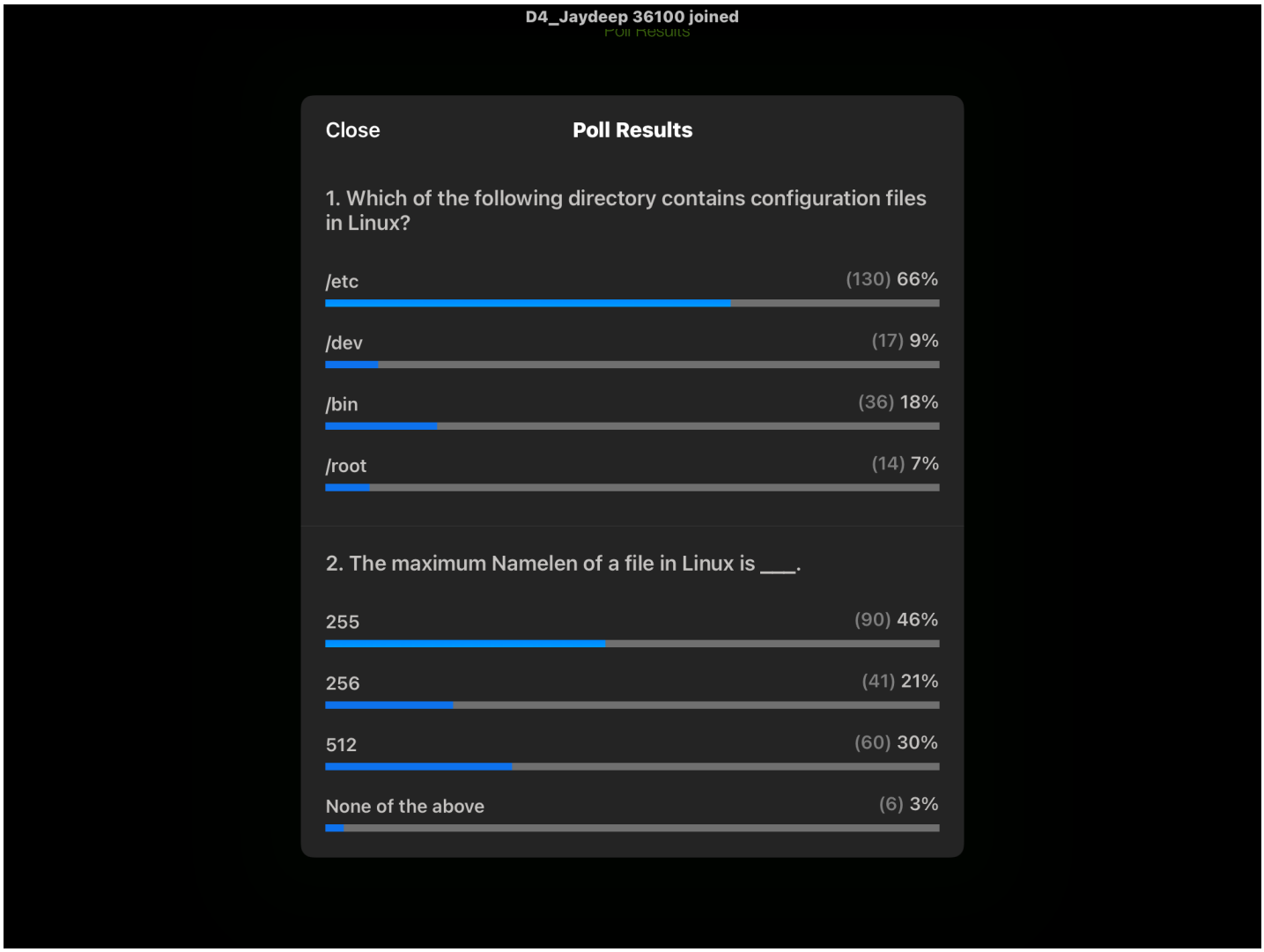
OS MCQ

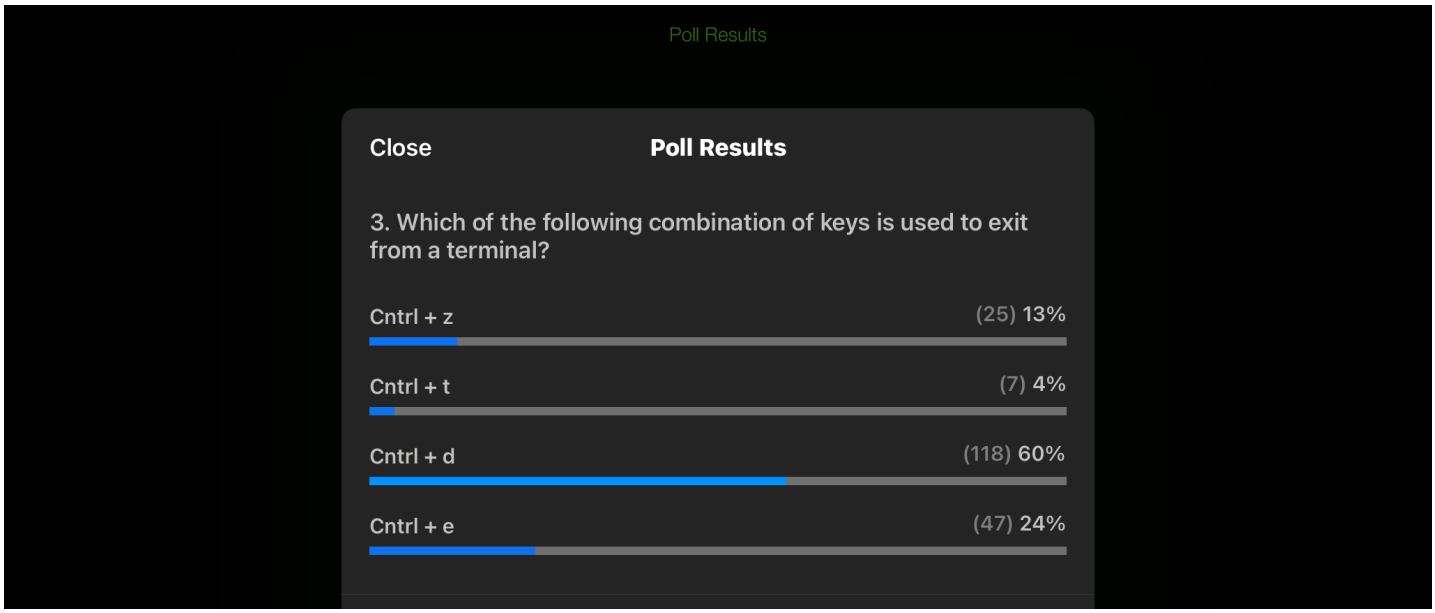

Poll in Progress
Close
QUIZ-01
1. Which of the following flag is used with ls command to display hidden files in a directory except . & .. entries?
-A
-a
-e
-E
1/5
Next


KD2_Harshada_Gunjal 36432 left
Poll in Progress
Close
QUIZ-01
2. In which of the following section of manual pages information about user commands is kept?
1
2
3
None of the above
Previous
2/5
Next


Poll in Progress
Close
QUIZ-01
3. __ option is used with ls command to display contents of the directory file recursively.
-r
-R
Both options 1 & 2
None of the above
Previous
3/5
Next


Poll in Progress
Close
QUIZ-01
4. Which of the following statement is false about cat command.
cat command can be used to edit contents inside the file.
cat command can be used to concatenate contents of more than one files.
cat command is used to append data into a file
none of the above
Previous
4/5
Next


D4_Jaydeep 36100 joined
Poll Results
Close
Poll Results
1. Which of the following directory contains configuration files in Linux?
/etc (130) 66%
/dev (17) 9%
/bin (36) 18%
/root (14) 7%
2. The maximum Namelen of a file in Linux is ___.
255 (90) 46%
256 (41) 21%
512 (60) 30%
None of the above (6) 3%


Poll Results
Close
Poll Results
3. Which of the following combination of keys is used to exit from a terminal?
Cntrl + z (25) 13%
Cntrl + t (7) 4%
Cntrl + d (118) 60%
Cntrl + e (47) 24%

4. User passwords are stored in _____

/root/password	(64) 32%
/etc/password	(72) 37%
/etc/passwd	(39) 20%
/root/passwd	(22) 11%

Poll Results

Close **Poll Results**

5. Which of the following flag is used with uname command to display hardware platform

-p	(52) 26%
-h	(47) 24%
-i	(58) 29%
-o	(40) 20%

6. What is the command to change login shell

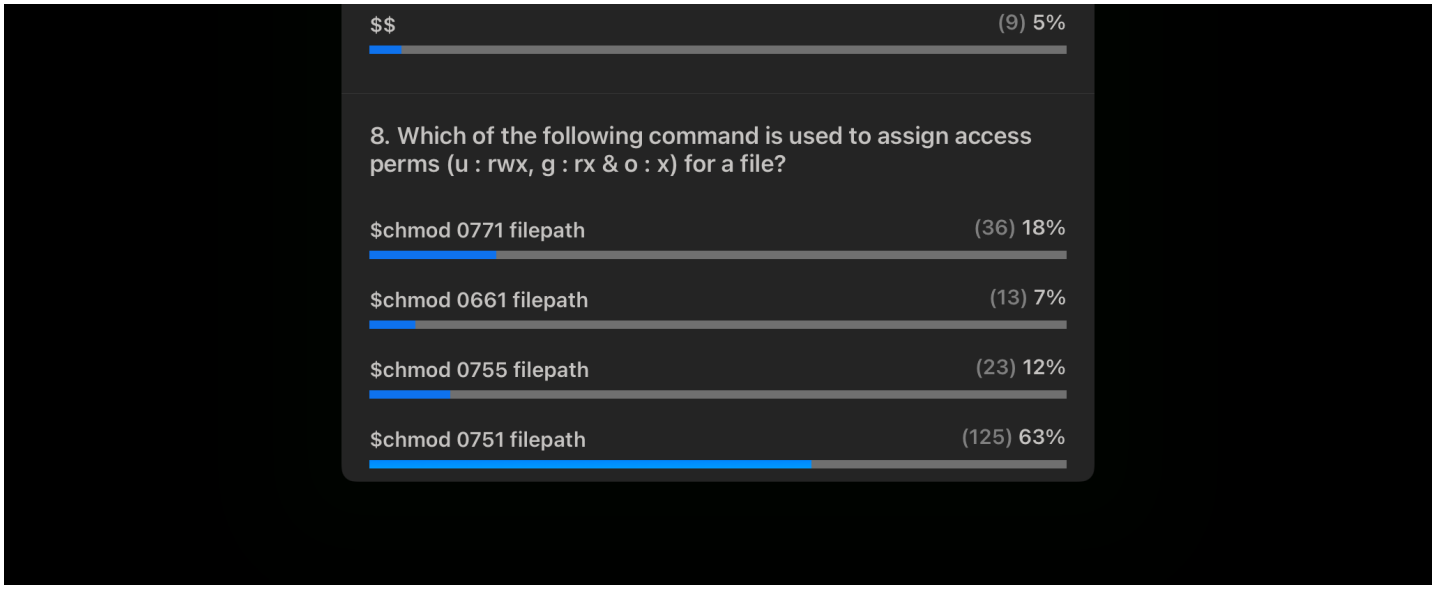
csh	(28) 14%
chsh	(65) 33%
ssh	(46) 23%
All of the above	(58) 29%

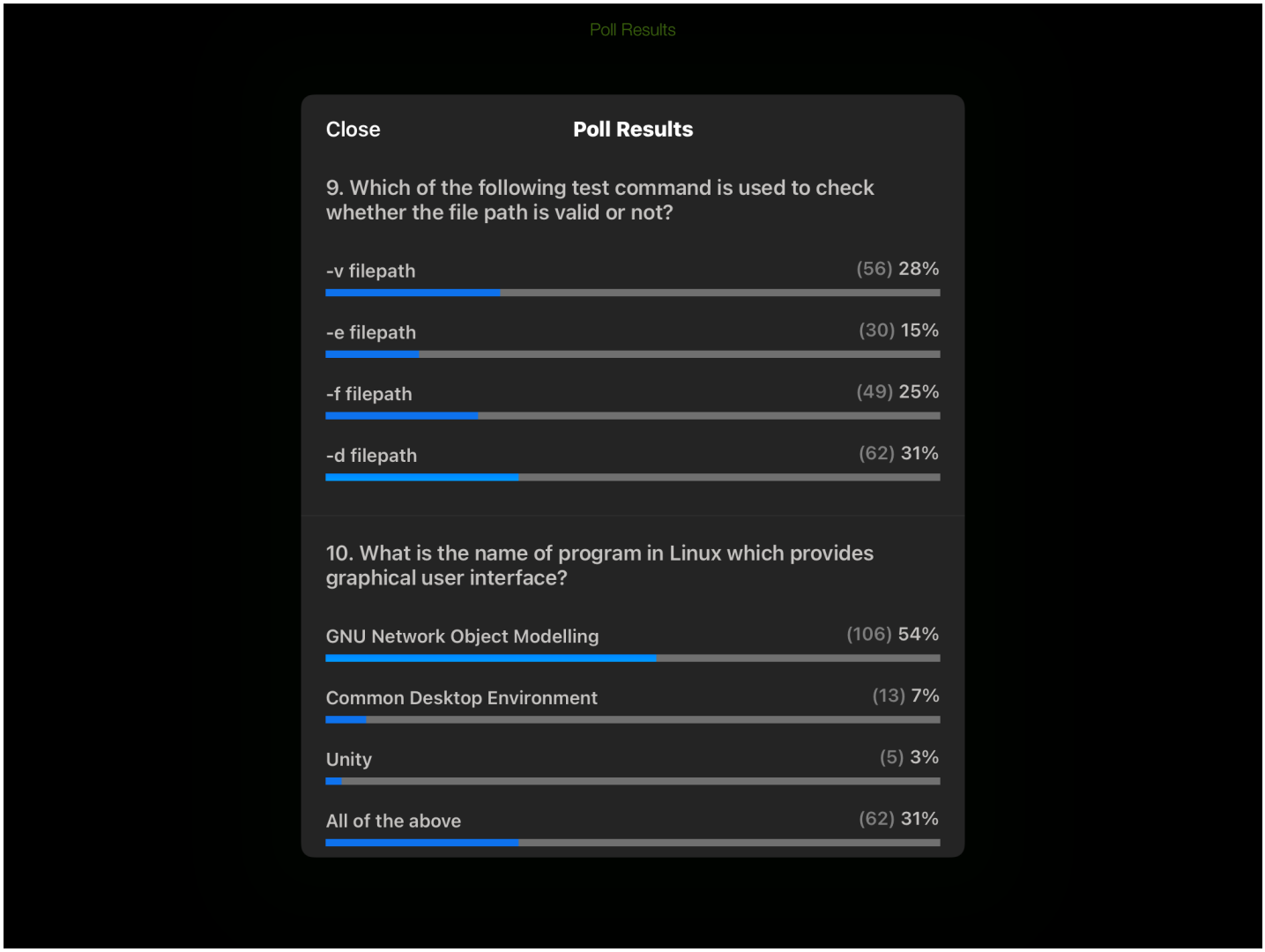
Poll Results

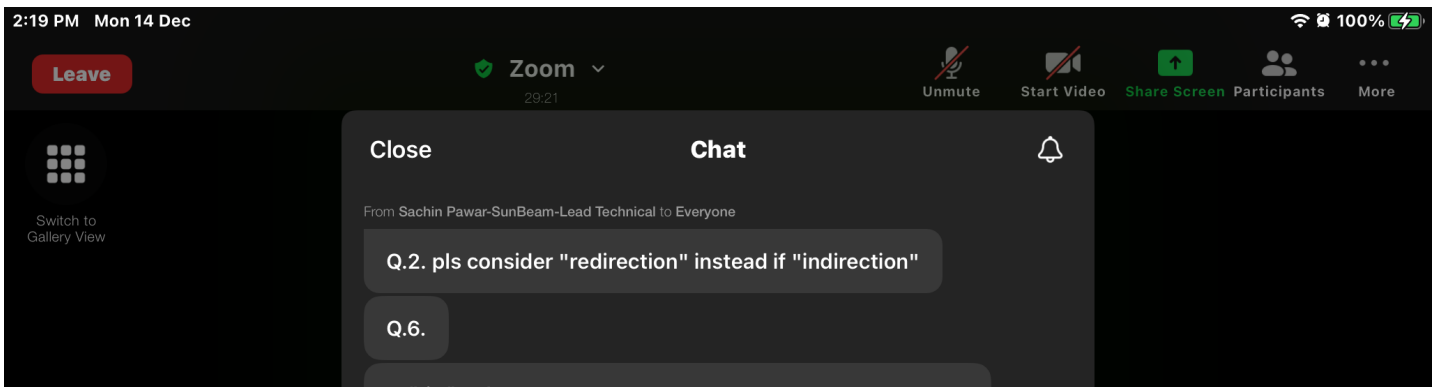
Close **Poll Results**

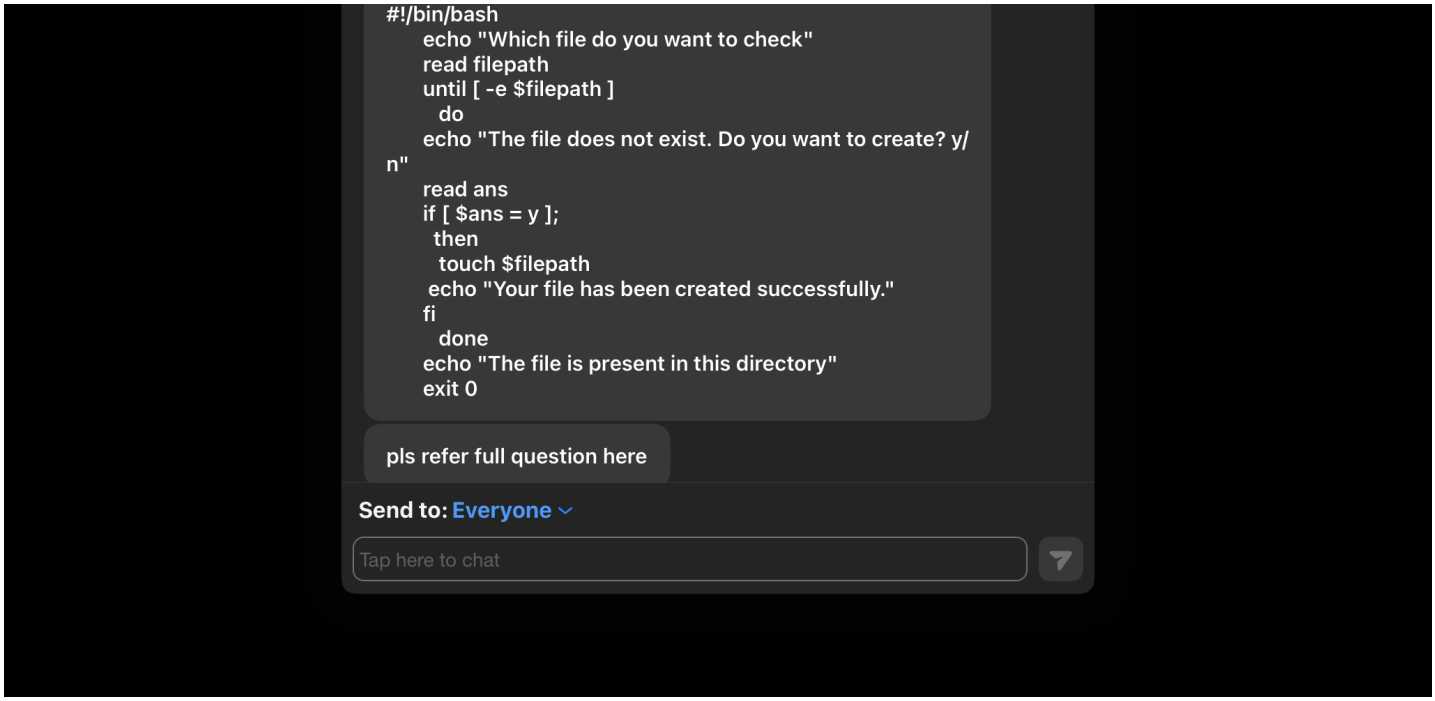
7. Which variable is used to get exit status of last executed command?

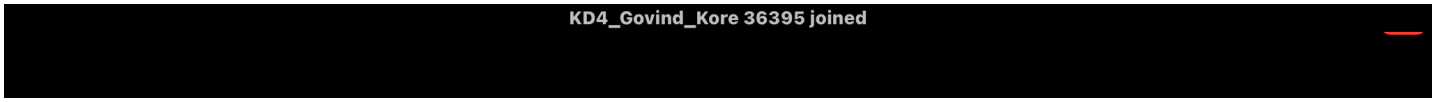
#*	(5) 3%
$*	(17) 9%
$?	(166) 84%


$$ (9) 5%
8. Which of the following command is used to assign access perms (u : rwx, g : rx & o : x) for a file?
$chmod 0771 filepath (36) 18%
$chmod 0661 filepath (13) 7%
$chmod 0755 filepath (23) 12%
$chmod 0751 filepath (125) 63%


Poll Results
Close
Poll Results
9. Which of the following test command is used to check whether the file path is valid or not?
-v filepath (56) 28%
-e filepath (30) 15%
-f filepath (49) 25%
-d filepath (62) 31%
10. What is the name of program in Linux which provides graphical user interface?
GNU Network Object Modelling (106) 54%
Common Desktop Environment (13) 7%
Unity (5) 3%
All of the above (62) 31%


2:19 PM Mon 14 Dec
100%
Leave
Zoom
29:21
Unmute
Start Video
Share Screen
Participants
More
Switch to Gallery View
Close
Chat
From Sachin Pawar-SunBeam-Lead Technical to Everyone
Q.2. pls consider "redirection" instead if "indirection"
Q.6.


#!/bin/bash
echo "Which file do you want to check"
read filepath
until [-e $filepath]
do
echo "The file does not exist. Do you want to create? y/
n"
read ans
if [$ans = y];
then
touch $filepath
echo "Your file has been created successfully."
fi
done
echo "The file is present in this directory"
exit 0
pls refer full question here
Send to: Everyone
Tap here to chat


KD4_Govind_Kore 36395 joined

 # QUIZ-03

Q. Which command is used to extract specific columns from the file?
A. cat
B. cut
C. grep
D. paste
Answer: B

Q. Which of the following is not a valid indirection operator?
A. >
B. 0>
C. 2>
D. <
Answer: B

Q. Which of the following command is used to display the directory attributes rather than its contents?
A. ls -l -d
B. ls -l
C. ls -x
D. ls -F
Answer: A

Q. Which of the following is not a communication command
A. write
B. mesg
C. mail
D. grep
Answer: D

Q. Which command puts a script to sleep until a signal is recieved?
A. sleep
B. suspend
C. disown
D. break
Answer: B

Q. What is the output of following command?

```
#!/bin/bash
echo "Which file do you want to check"
read filepath
until [ -e $filepath ]
 do
echo "The file does not exist. Do you want to create? y/n"
read ans
```

SunBeam

```
if [ $ans = y ];
then
 touch $filepath
 echo "Your file has been created successfully."
fi
 done
echo "The file is present in this directory"
exit 0
```

A. it checks the existance of your entered file in the present working directory
B. it creates the file if file does not exists
C. program runs untill you create the file
D. all of the mentioned
Answer: D

Q. Shell script executes _____
A. commands
B. commands with its own programming language syntax
C. other binaries
D. all of the above
E. none of the above
Answer: D

Q. _____ is used to erase entire command line
A. Cntrl + Q
B. Cntrl + C
C. Cntrl + U
D. Cntrl + W
Answer: C

Q. Which of the following operation/s not handled by the Kernel?
A. Management of files on the disk
B. Carrying out data transfer file system and hardware
C. Handling of any interrupts that are issued
D. Acting as an interpreter between hardware and applications
Answer: A

Q. Which of the following directory contains process & kernel information files?
A. /usr/bin
B. /var
C. /mnt
D. /proc
Answer: D

SunBeam

 # QUIZ-04:

Q. Bydefault link count of directory file is ___.
A. 1
B. 2
C. 3
D. None of the above
Answer: B

Q. On failure open() system call returns _____.
A. 0
B. -1
C. NULL
D. smallest non-negative integer
Answer: B

[NULL is a predefined macro whose value is 0 which is typecasted into a void *
#define NULL ((void *)0)]

Q. ln -s command internally makes a call to _____ system call.
A. hard_link()
B. symlink()
C. link()
D. all of the above
E. none of the above
Answer: B

Q. iNode of a file present in the iNode List Block is called as _____.
A. Incore iNode
B. Inmemory iNode
C. Physical iNode
D. Logical iNode
Answer: C
[iNode of a file present onto the disk (iNode List Block/Master File Table) is referred as Disk iNode/Physical iNode, whereas copy of Disk iNode in the main memory is called as Inmemory iNode/Incore iNode/Logical iNode].

Q. Which of the following command is used to display contents of an iNode of a file?
A. stat -i filepath
B. stat -f filepath
C. stat -a filepath
D. stat filepath
Answer: D

SunBeam

Q. In which of the following filesystem disk space allocation method there is no external fragmentation?
A. Contiguos Allocation
B. Linked Allocation
C. Direct Allocation
D. Index Allocation
Answer: D

Q. Which of the following free space management mechanism/s is/are used with contiguos allocation disk space allocation method?
A. bit vector
B. grouping
C. counting
D. linked list
E. Both B & C
Answer: E

Q. Which of the following filesystem do not supports journaling?
A. ext2
B. ext3
C. NTFS
D. JFS
Answer: A

Q. _____ algorithm is used in open() system call to convert filepath into iNode number.
A. iname
B. namei
C. name_convertor
D. ntoi
Answer: B

Q. rm command internally makes call to _____ system call.
A. remove()
B. rm()
C. rmdir()
D. unlink()
Answer: D

SunBeam

 # QUIZ-05:

Q. On success fork() system call returns _____ to child process.
A. pid of parent
B. pid of new process
C. 0
D. -1
E. both pid of child & pid of parent
Answer: B

Q. Which of the following command is used to create a filesystem in Windows?
A. mkfs
B. createfs
C. format
D. all of the above
E. none of the above
Answer: C

Q. _____ is a system program that copies an execution context of process scheduled by the scheduler from its PCB onto the CPU registers.
A. interrupt handler
B. dispatcher
C. cpu scheduler
D. all of the above
Answer: B

Q. What is a daemon process?
A. process whose parent has died
B. process who has completed its execution but still has an entry in the process table
C. process which is running infinitely
D. process which runs automatically without any user interaction
Answer: D

Q. Which of the following disk scheduling algorithm suffers from starvation?
A. FCFS Disk Scheduling Algorithm
B. SSTF Disk Scheduling Algorithm
C. SCAN Disk Scheduling Algorithm
D. C-SCAN Disk Scheduling Algorithm
D. All of the above
E. None of the above
Answer: B

SSTF: in this algo, whichever request is close to the current position of the R/W head OR arm gets accepted and completed first, so there are quite good chance that there may exists such a request which is far away from R/W head, and this request may gets blocked, and this problem is referred as **starvation.**

Q. In which of the following case non-preemptive cpu scheduling takes place?
A. running -> ready
B. ready -> waiting
C. Both options 1 & 2
D. None of the above
Answer: D

SunBeam

Q. Consider a disk with 200 tracks and the queue has random requests from different processes in the order: **55, 58, 39, 18, 90, 160, 150, 38, 184,** Initially arm is at 100. What is an Average Seek length using **FCFS, SSTF, SCAN and C-SCAN** algorithm respecitvely.
A. 55.3, 28.5, 29.8 & 35.6
B. 56.3, 28.5, 30.8 & 35.6
C. 55.3, 27.5, 27.8 & 35.6
D. 55.3, 27.5, 28.8 & 35.6
Answer: C

FCFS: (45+3+19+21+72+70+10+112+146)/9 = 498/9 = 55.3
SSTF: (10+32+3+16+1+20+132+10+24)/9 = 248/9 = 27.5
SCAN:

Q. Suppose the following disk request sequence (track numbers) for a disk with 100 tracks is given: 45, 20, 90, 10, 50, 60, 80 and 70. Assume that the initial position of the R/W head is on track 50. The additional distance that will be traversed by the R/W head when the Shortest Seek Time First (SSTF) algorithm is used compared to the SCAN (Elevator) algorithm (assuming that SCAN algorithm moves towards 100 when it starts execution) is _____ tracks
A. 5
B. 9
C. 10
D. 11
Answer: A

Q. System in which multiple processes can submitted at a time is referred as
A. multi-processing
B. multi-tasking
C. multi-programming
D. multi-threading
Answer: C

Q. On success wait() system call returns ____.
A. 0
B. 1
C. pid of child process
D. pid of parent process
Answer: C

Explanation:
wait() system call is used to avoid zombie state/defunct state
wait() system call:
- puases an execution of parent proces
- it reads an exit status of child process from its PCB and return it to the parent process
- it removes/destroys an entry/PCB of child process from the system i.e. from the process table
and it returns pid of child process to parent process on success.

SunBeam

 # QUIZ-06

1.

```
int main(void){
    printf("main() started !!!\n");
    fork();
    fork();
    fork();
    printf("main() exited !!!\n");
    return 0;
}
```

How many number of times main() exited !!! will print in an output of a above program?

A. 1
B. 3
C. 6
D. 8

Answer: D

Explanation:

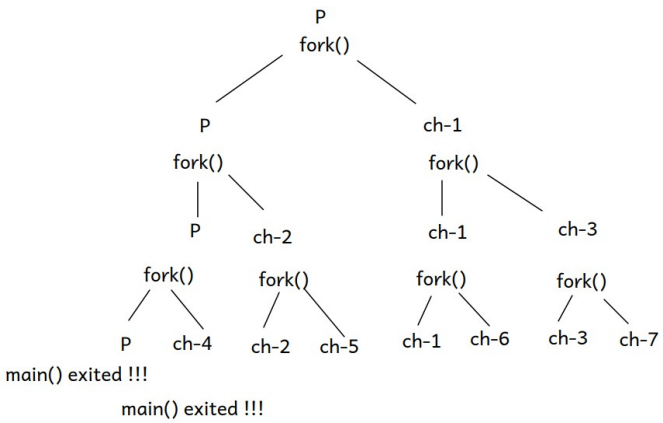
P

fork(): -> ch1

P ch1

fork(): ch2 fork(): ch3
P ch2 ch1 ch3

fork(): fork(): fork(): fork():
P – ch4 ch2 – ch5 ch1 – ch6 ch3 – ch7



inBeam

2. Under Pipe Message Passing IPC mechanism, if processes are non-related then one process can send message to another process by using _____.
A. pipe command (|)
B. pipe() system call
C. both options A & B
D. None of the above
Answer: B
- **related processes:** processes which are of same parent are called as related processes, whereas processes which are of different parents are called as **non-related processes.**
- by using pipe command (|) only related processes can communicates, whereas non-related processes can communicates with each other by using pipe() system call.

3. Which of the following statement is false about an IPC?
A. Shared Memory Model is faster IPC mechanism than Message Passing Model.
B. By using Pipe, Message Queue, Signals IPC mechanisms only processes running on the same system can communicates.
C. In Message Queue IPC mechanism, processes can communicates by directly sending as well recieving message packets to each other.
D. By using Socket IPC mechanism, processes can communicates with each other which are running across the machines.
Answer: C

- An OS maintains message queue, so first message packet/s send by any process gets submitted into the message queue and then it can be sent to the reciever process.

4. Which of the following flag/option is used with ipcs command to display information about active message queues.
A. -m
B. -q
C. -M
D. -s
Answer: B

5. Which of the following is not an IPC system call?
A. shmget()
B. signal()
C. pthread_create()
D. kill()
Answer: C

SunBeam

6. Which of the following CPU scheduling algorithm suffers from starvation?
A. FCFS Scheduling
B. SJF Scheduling
C. Priority Scheduling
D. Both SJF & Priority Scheduling
E. None of the above
Answer: D

7. In FCFS CPU scheduling algorithm, due to an arrival of longer processes before smaller processes, average waiting time gets decreases and overall system performance gets down this drawback is called as _____.
A. Belady's Anamoly
B. Convoy Effect
C. Indefinite Blocking
D. Starvation
Answer: B

8. Which of the following statement is false about Round Robin CPU Scheduling algorithm?
A. RR CPU Scheduling algorithm ensures minimim response time.
B. In a RR CPU Scheduling algorithm there is no starvation.
C. In a RR CPU Scheduling algorithm, if time quantum/time slice is minimum response time also minimum.
D. RR Scheduling algorithm is non-preemptive scheduling algorithm.
Answer: D

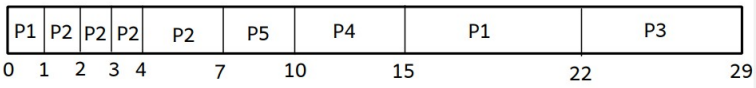
9. What is an average turn-around time for following sample input after applying SRTF (Shortest-Remaining-Time-First) CPU scheduling algorithm? (An arrival time i.e. submission time of processes are different).
Processes - A.T - CPU Burst Time
Input: P1-0-8, P2-1-6, P3-2-7, P4-3-5, P5-4-3
A. 14.8 ms
B. 15 ms
C. 14.6 ms
D. 23 ms
Answer: C

SunBeam

SJF(Preemptive) :"Shortest-Remaining-Time-First"

Processes/Jobs	A.T.	CPU Burst Time
P1	0	8,7,0
P2	1	6,5,4,3,0
P3	2	7
P4	3	5,0
P5	4	3,0

"Gant Chart": bar chart representation CPU allocation for processes in terms of CPU cycle numbers.



W.T. of P1 = 0+14 = 14 ms
W.T. of P2 = 0 = 0 ms
W.T. of P3 = 20 ms
W.T. of P4 = 7 ms
W.T. of P5 = 3 ms

A.W.T. = (14+0+20+7+3)/5 = 8.8 ms

T.A.T. = Waiting Time + Execution Time
T.A.T. of P1 =14 + 8 = 22 ms
T.A.T. of P2 = 0 + 6 = 6 ms
T.A.T. of P3 = 20 + 7 = 27 ms
T.A.T. of P4 = 7 + 5 = 12 ms
T.A.T. of P5 = 3 + 3 = 6 ms

A.T.A.T. = (22+6+27+12+6)/5 = 14.6 ms

W.T. = total amount of time spent by the process in a ready queuen for waiting to get control of the CPU from its time of submission.
T.A.T. = total amount of time required for the process to complete its execution from its time of submission
T.A.T. = W.T + Execution Time

10. Which of the following is not a CPU scheduling criteria?
A. Waiting Time
B. Response Time
C. CPU Burst Time
D. Turn-Around-Time
Answer: C
- there are 5 cpu scheduling criterias:
1. cpu ultilzation (max)
2. throughput: (max) total work done per unit time
3. waiting time (min)
4. respose time (min)
5. turn-around-time (min)

CPU Burst Time/Execution Time: total amount of time spent by the process onto the CPU for completing its execution OR total no. of CPU cycles required for the process to complete its execution.

11. Which of the following statement is false about thread & process?
A. thread is the smallest execution unit of a process.
B. The CPU can execute only one thread of any one process at a time.
C. Process based multi-tasking is efficient than thread based multi-tasking.
D. Process based multi-tasking can be implemented by using fork() and thread based multi-tasking can be achieved by using pthread library function.
Answer: C

SJBeau

12. If resource can acquired by more than one processes at a time then which of the following tool is used for synchronization?
A. binary semaphore
B. mutex object
C. classic semaphore
D. all of the above
Answer: C

13. In which of the following problem data inconsistency occures?
A. Race condition
B. Critical Section Problem
C. Both options 1 & 2
D. None of the above
Answer: C

14. Which of the following statement is false about multi-threading programming?
A. in all modern operating systems bydefault one thread gets created i.e. main thread
B. if any process terminates all the threads of that process also gets terminates
C. first step of multi-threading programming is to register a thread procedure with an OS.
D. all the threads of one process executed by the CPU concurrently.
Answer: C

15. Which of following is not valid multi-threading model in an OS?
A. Many-to-many model
B. Many-to-one model
C. One-to-one model
D. One-to-many model
Answer: D

sunBeam