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CORRECT ANSWER SOLVED BY HADI
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(Final Term Past Paper)

MADE AND SOLVED BY TEAM HADI

WARNING: Team HADI is not responsible for any mistake or wrong answer. All students reading and using this document may check and confirm the answers at their own.



WhatsApp: 03087122922



FACEBOOK ID: <https://www.facebook.com/hadipastpapers/>

Best of luck!



1 KB or 1 kilobyte is equivalent to -----

Answer (Please select your correct option)

- 10 bytes
- 1000 bytes
- 1024 bytes
- 10000 bytes



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A -----system collects physically separate, possibly heterogeneous, systems into a single coherent system, providing the user with access to the various resources that the system maintains

A distributed system collects physically separate, possibly heterogeneous, systems into a single coherent system, providing the user with access to the various resources that the system maintains.

Answer (Please select your correct option)

Distributed

correct

Real-time

Single user

Time-sharing



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Preemptive -----scheduling is sometimes called **shortest-remaining-time-first** scheduling.

Preemptive SJF scheduling is sometimes called shortestremaining-time-first scheduling.

page 83

Answer (Please select your correct option)

- First-Come-First-Served (FCFS)
- Round-Robin
- Sorted Job First (SJF) correct
- Priority



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The semaphore empty is initialized to the value -----; the semaphore full is initialized to the value -----.

The semaphore empty is initialized to the value n; the semaphore full is initialized to the value 0.

page 116

Answer (Please select your correct option)

0,n

n,0

n,n

0,0

correct



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A -----is a region of code where shared resources are accessed.

Whereas resource sharing is one of the major advantages of threads

page 70

Answer (Please select your correct option)

- deadlock
- critical region
- process
- thread

correct



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In ----- technique, memory is divided into several fixed-size partitions.

Multiprogramming with Fixed Tasks (MFT)

In this technique, memory is divided into several fixed-size partitions.

page 160

Answer (Please select your correct option)

- Swapping
- Overlays
- Multiprogramming with Fixed Tasks (MFT)
- Multiprogramming with Variable Tasks (MVT)

correct



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Every -----generated by the CPU is divided into two parts: a page number (p) and a page offset (d).

Every logical address generated by the CPU is divided into two parts: a page number (p) and a page offset (d).

page 164

Answer (Please select your correct option)

- Page
- Process address space
- Physical address
- Logical address

correct



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If validation bit is 0, it indicates a/an ----- state of segment.

Validation bit : if the validation bit is 0, it indicates an illegal segment

Answer (Please select your correct option)

- protected
- shared
- legal
- illegal

correct



page 178

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_____ is based on the locality of reference concept— the least frequently used page is not in the current locality

This algorithm is based on the locality of reference concept— the least frequently used page is not in the current locality. LFU

page 204

Answer (Please select your correct option)

Least Frequently Used algorithm

correct

Page Buffering Algorithm

None of the given options

Most Frequently Used algorithm



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In _____ allocation scheme number of frames allocated to a process is proportional to its size .

Proportional Allocation

Number of frames allocated to a process is proportional to its size in this scheme.

Answer (Please select your correct option)

None of the given options

Fixed Allocation

Proportional Allocation

Priority Allocation



page 205

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In case of thrashing if CPU utilization is too low the operating system _____ the degree of multiprogramming

if CPU utilization is too low, the operating system increases the degree of multiprogramming by introducing one or more new processes to the system.

page 208

Answer (Please select your correct option)

 Increases

correct

 Decreases Increases or Decreases None of the given options

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_____ enable processes to communicate with each other

FIFO enable processes to communicate with each other.

page 218

Answer (Please select your correct option)

- Directory
- FIFO
- Link File
- Ordinary File

correct



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When a _____ link is created, a directory entry for the existing file is created

When a hard link is created, a directory entry for the existing file is created—there is still only one file.

page 225

Answer (Please select your correct option)

- Soft
- Hard correct
- Soft or Hard
- Soft or Hard



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In _____, each file is a linked list of disk blocks: blocks may be scattered anywhere on the disk.

Linked Allocation

Each file is a linked list of disk blocks: blocks may be scattered anywhere on the disk.

page 235

Answer (Please select your correct option)

Indexed Allocation

Contiguous Allocation

Linked Allocation

None of the given options

correct



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Shared libraries and kernel modules are stored in _____ directory

/lib Shared libraries and kernel modules are stored in this directory

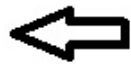
Answer (Please select your correct option)

/bin

/dev

/boot

/lib



page 23

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The problem of Deadlocks can be solved by _____ method(s).

Answer (Please select your correct option)

- Deadlock prevention
- Deadlock avoidance
- Allowing deadlock and recovery
- All of the given

correct



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In _____ page replacement algorithm oldest frame is replaced with another.

page 119

Answer (Please select your correct option)

- LIFO
- FIFO
- LRU
- Optimal

correct



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In Resource Allocation Graph, a _____ $P_i \rightarrow R_j$ indicates that process P_i may request resource R_j at some time in the future.

Resource Allocation Graph Algorithm

In addition to the request and assignment edges explained in the previous lectures, we introduce a new type of edge called a claim edge to resource allocation graphs. A claim edge $P_i \rightarrow R_j$ indicates that process P_i may request resource R_j at some time in the future.

page 136

Answer (Please select your correct option)

Claim edge

correct

Request edge

Assignment edge

Allocation edge



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Assume a logical address space of 16 pages of 1024 words, each mapped into a physical memory of 32 frames. Each word consists of 2 bytes. What will be the total number of bits required for **p** (page number)?

Assume a logical address space of 16 pages of 1024 words, each mapped into a physical memory of 32 frames. No. of bits needed for $p = \text{ceiling}[\log_2 16] \text{ bits} = 4 \text{ bits}$

page 166

Answer (Please select your correct option)

 4 bits

correct

 8 bits 16 bits 32 bits

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In the Scan algorithm the disk _____ starts at one end of the disk, and moves toward the other end, servicing requests as it reaches each cylinder, until it gets to the other end of the disk.

Scan
In the Scan algorithm the disk arm starts at one end of the disk, and moves toward the other end, servicing requests as it reaches each cylinder, until it gets to the other end of the disk.

Answer (Please select your correct option)

- arm correct
- cylinder
- head
- non of these



page 245

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Segmentation is a memory management scheme that supports _____.

Segmentation is a memory management scheme that supports programmer's view of memory.

page 176

Answer (Please select your correct option)

- Programmer's view of memory correct
- System's view of memory
- Hardware's view of memory
- None of the given



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_____ is a variation of fork system call in several Unix operating system used for Virtual Memory.

vfork()
Several versions of UNIX provide a variation of the fork() system call—vfork() (for virtual memory fork).

Answer (Please select your correct option)

- vfork () correct
- wfork ()
- avfork ()
- bfork ()



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The bottom layer in the layered approach of Operating System is-----

page 20

Answer (Please select your correct option)

User interface

Hardware

correct

Kernel

None of the given options



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Named pipes give a -----flow of data by default

46 page

Answer (Please select your correct option)

- half-duplex (one-way)
- full duplex(both-ways)
- both half-duplex and full duplex
- none of the given options

correct



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In _____ frame allocation scheme free frames are equally divided among processes

Fixed allocation
In this scheme free frames are equally divided among processes

page 205

Answer (Please select your correct option)

- Fixed
- Proportional
- Priority
- All of the given



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Question No : 26 of 52

----- automatically holds for printers and other non-sharables

Answer (Please select your correct option)

Hold and wait

correct

Circular wait

Mutual exclusion

No preemption:



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----- is a single program that produces an object file

Answer (Please select your correct option)

- Linker
- Compiler
- Loader
- Text editor

correct



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-----keeps in memory only those instructions and data that are needed at any given time.

The idea of overlays is to keep in memory only those instructions and data that are needed at any given time.

Answer (Please select your correct option)

- Paging
- Swapping
- Overlays
- Fragmentation



correct

page 157

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The address generated by the CPU, after any indexing or other addressing-mode arithmetic, is called a -----address, and the address it gets translated to by the MMU is called a -----address.

Answer (Please select your correct option)

- Virtual, physical correct
- Hexadecimal, Binary,
- Valid, invalid
- Physical, Virtual

page 153



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_____ is/are a memory management scheme that supports programmer's view of memory.

page 176

Answer (Please select your correct option)

Paging

Segmentation

All of the given options

Demand Paging

correct



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A new process is created by the----- system call



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Answer (Please select your correct option)

exit

fork

wait

exec

correct

midterm solve

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The ----- are used for communication between related or unrelated processes on the same system or unrelated processes on different systems.

BSD Socket: The BSD sockets are used for communication between related or unrelated processes on the same system or unrelated processes on different systems,

Answer (Please select your correct option)

None of the given

SSD socket

DSD socket

BSD sockets

Correct answer solved by Hadi

correct



page 50

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_____ wastes CPU cycles and hence a problem in real multiprogramming system.

Busy waiting wastes CPU cycles that some other process may be able to use productively.

page 111

Answer (Please select your correct option)

- Busy waiting correct
- Semaphore
- Critical section
- Mutex



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High-level synchronization construct that allows the safe sharing of an abstract data type among concurrent processes is called a -----

Answer (Please select your correct option)

Read/Write Lock

Swap

Semaphore

Monitor



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In system, the user space contains one process at a time because only one process is executing at a given time.

In case of a batch system, the user space contains one process at a time because only one process is executing at a given time.

page 5

Answer (Please select your correct option)

- Multi programmed
- Batch correct
- Time-sharing system
- None of the given



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Which one of the following is the correct syntax to copy file1 to file2?

Answer (Please select your correct option)

cp file2, file1

cp file1/file2

correct

cp file2 file1

cp file1 file2

page 27



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_____ points to the smallest memory address of a process.

limit registers are used
to point to the smallest memory address of a process

159 page

Answer (Please select your correct option)

- Limit register correct
- Base register
- Stack pointer
- None of the given



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A wait operation on a semaphore should not occur within a critical section controlled by that semaphore because

Answer (Please select your correct option)

- A deadlock will occur
- A semaphore is not a shared variable
- A signal on a semaphore is always given from outside the critical section
- None of the given



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_____ page replacement algorithm suffers from Belady's anomaly.

Example for the FIFO page replacement algorithm
The problem with this algorithm is that it suffers from Belady's anomaly:

199

Answer (Please select your correct option)

- LRU
- MRU
- FIFO correct
- LIFO



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_____ is a high speed cache used to hold recently referenced page table entries a part of paged virtual memory

Answer (Please select your correct option)

Translation Look aside buffer

Inverse page table

Segmented page table

All the above

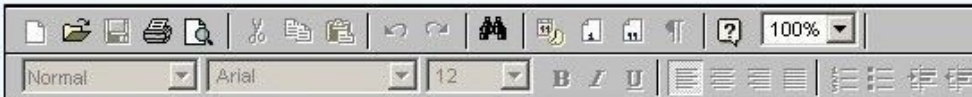


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What do we name to an address that is generated by the CPU?

Answer (Please [click here](#) to Add Answer)



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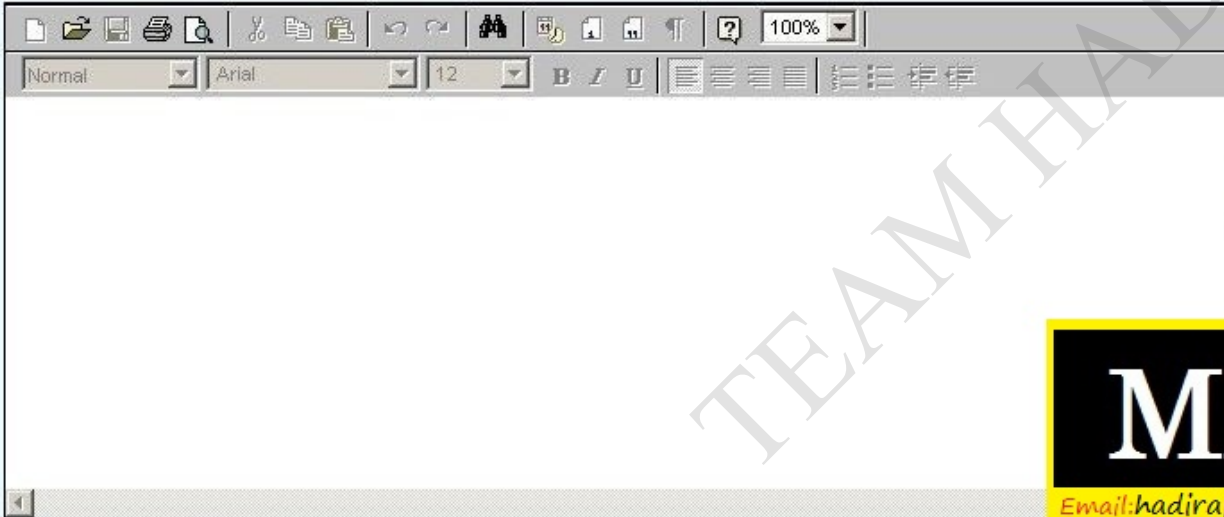
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Which anomaly is involved in FIFO page replacement?

Answer (Please [click here to Add Answer](#))



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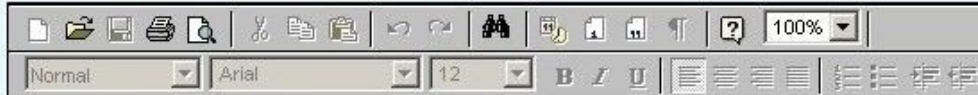
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The problem with using an acyclic-graph structure is ensuring that there are no cycles. What is the solution?

Answer (Please [click here to Add Answer](#))



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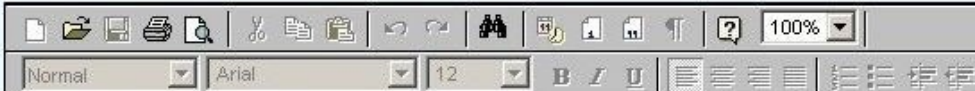
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The main purpose of the computer system is to run different programs, why we run these programs?

Answer (Please [click here to Add Answer](#))



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What is the difference between a physical address and a virtual address?

Answer (Please [click here](#) to Add Answer)



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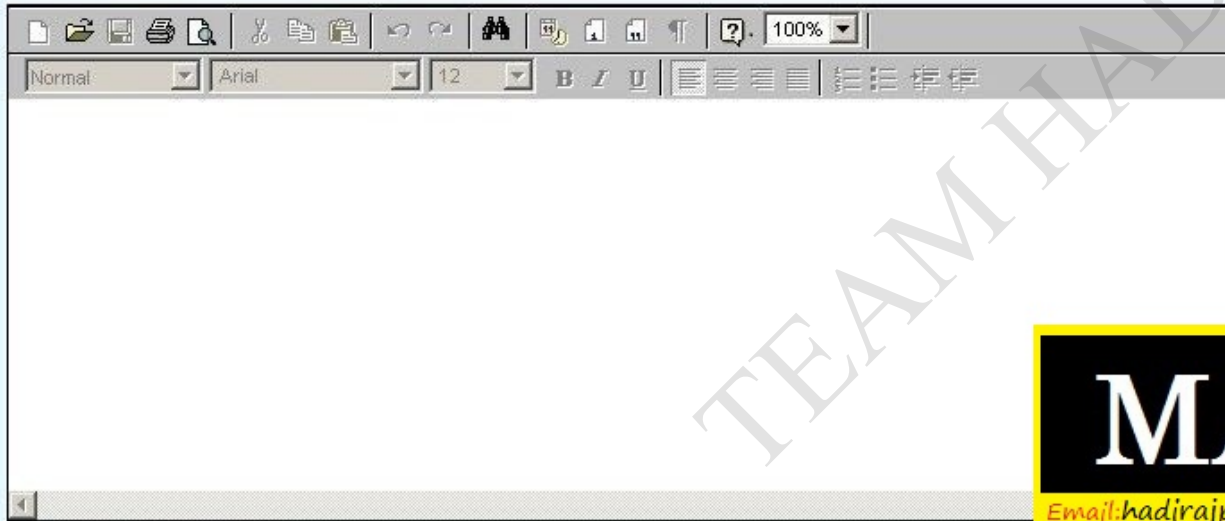
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What is Mounting? Name two types of mounting. Give your answer with respect to File System?

Answer (Please [click here to Add Answer](#))



The image shows a screenshot of a rich text editor. At the top, there is a toolbar with various icons for text formatting, alignment, and editing. Below the toolbar, there is a text area with a large, faint watermark that reads "TEAM HADI VU". The text area is currently empty.



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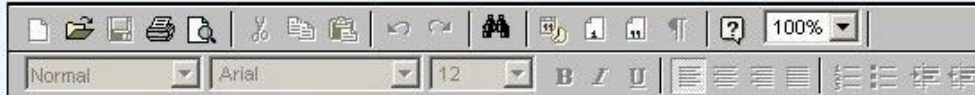
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How vfork system call differs from fork system call?

Answer (Please [click here to Add Answer](#))



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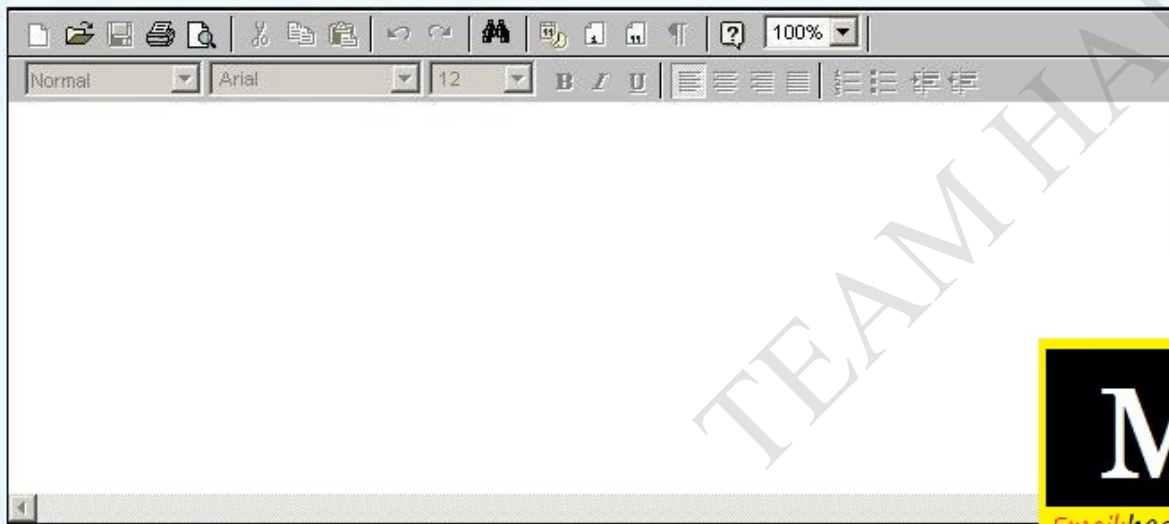
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Consider this algorithm for mutual exclusion.

```
Process 1 {  
while true {  
    while (turn == 1)  
        ; /* do nothing */
```

```
Process 2 {  
while true {  
    while (turn == 2)  
        ; /* do nothing */
```

Answer (Please [click here to Add Answer](#))



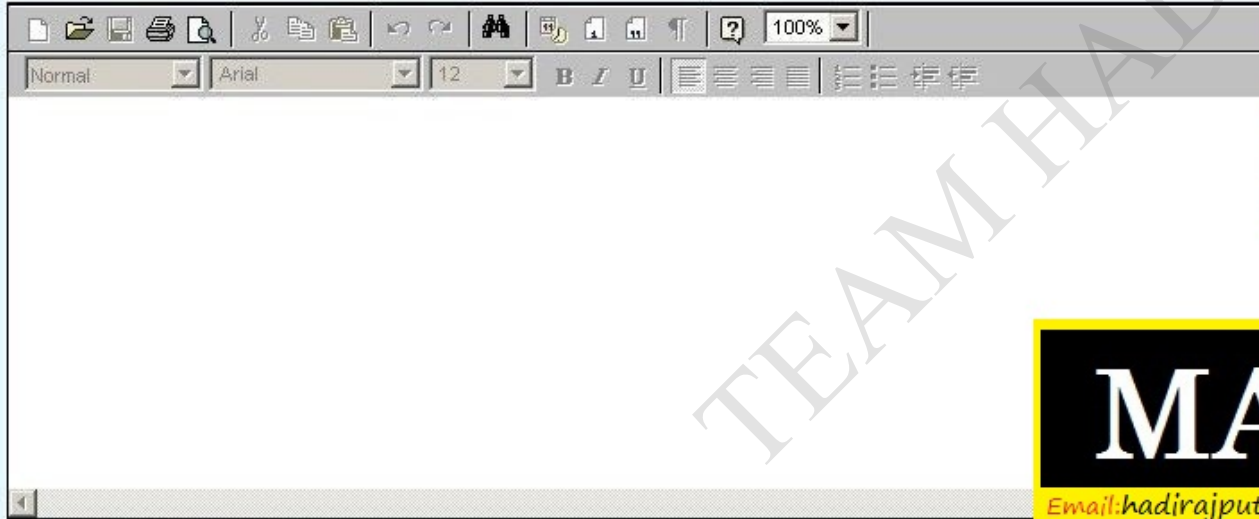
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Briefly explain that how a Page Fault occurs and who is responsible to handle Page Fault?

Answer (Please [click here to Add Answer](#))



The image shows a screenshot of a rich text editor interface. The top toolbar contains various icons for file operations (save, print, copy, paste), editing (undo, redo, bold, italic, underline), and alignment (bullet point, numbered list, indent). The font settings are set to 'Normal', 'Arial', and size '12'. The text area below the toolbar is currently empty.



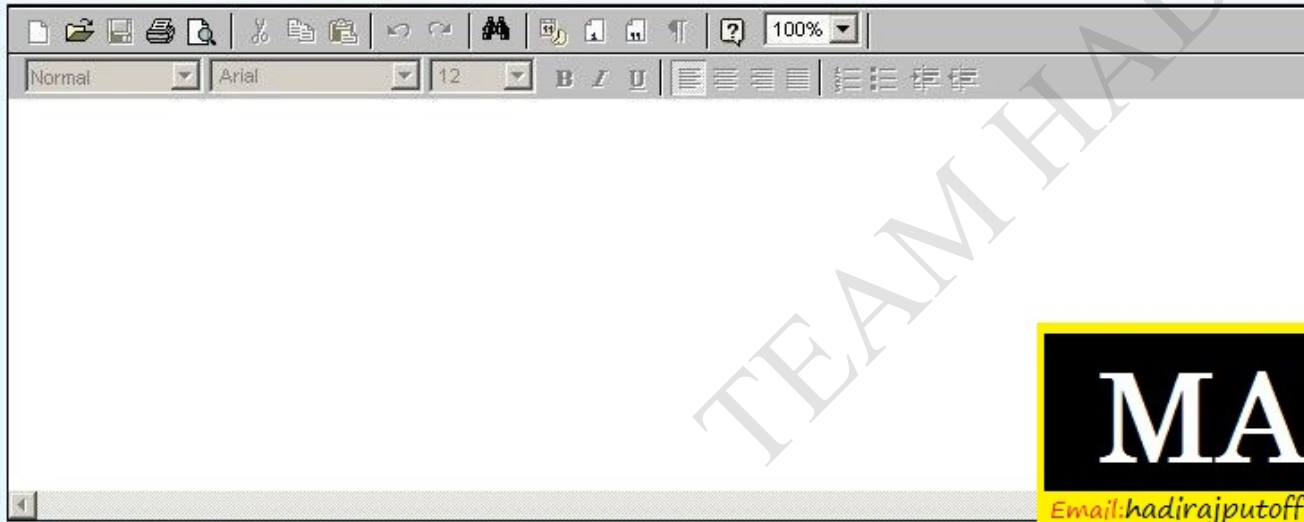
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In case of file protection, what should the file owner/creator be able to control? And what operations need to be controlled?

Answer (Please [click here](#) to Add Answer)



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Analyze that how an operating system protects the CPU.

Answer (Please [click here to Add Answer](#))



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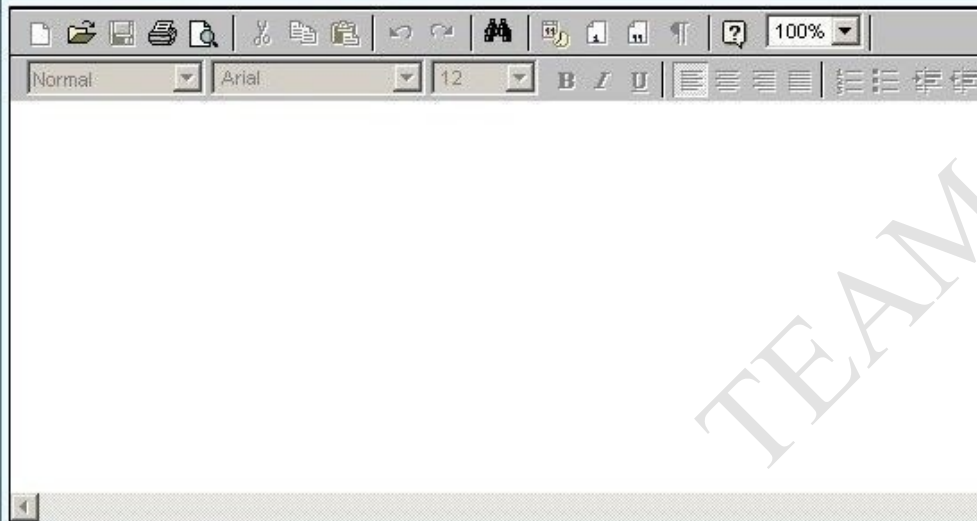
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Let us consider a page size of 16 bytes and process address space of 32 pages and physical address space of 64 frames. Calculate the following.

- Size of logical address i.e. Number of bits needed to uniquely identify a page in this address space of 16 pages.
- Logical address in bits for (18, 10). Where 'p' and 'd' are 18 and 10 respectively.

Answer (Please [click here to Add Answer](#))



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MADE BY HADI

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