BÀI TẬP QUÁ TRÌNH

Set-1: Basic OS question

Câu 1 What is operating system?

A. collection of programs that manages hardware resources
B. system service provider to the application programs
C. link to interface the hardware and application programs
D. all of the mentioned

ans: all of the mentioned

Câu 2 To access the services of operating system, the interface is provided by the

A. system calls
B. API
C. library
D. assembly instructions

ans: D. assembly instructions

Câu 3 Which one of the following error will be handle by the operating system?

A. power failure
B. lack of paper in printer
C. connection failure in the network
D. all of the mentioned

Câu 4 The main function of the command interpreter is

A. to get and execute the next user-specified command
B. to provide the interface between the API and application program
C. to handle the files in operating system
D. none of the mentioned

Câu 5 By operating system, the resource management can be done via

A. time division multiplexing
B. space division multiplexing
C. both (a) and (b)
D. none of the mentioned

câu 6 If a process fails, most operating system write the error information to a

A. log file
B. another running process
C. new file

D. none of the mentioned

ans: A. log file

Câu 7: The systems which allows only one process execution at a time, are called

A. uniprogramming systems
B. uniprocessing systems
C. unitasking systems
D. none of the mentioned

Câu 8 In operating system, each process has its own

A. address space and global variables
B. open files
C. pending alarms, signals and signal handlers
D. all of the mentioned

Câu 9 A process can be terminated due to

A. normal exit
B. fatal error
C. killed by another process
D. all of the mentioned

Câu 10 What is the ready state of a process?

A. when process is scheduled to run after some execution
B. when process is unable to run until some task has been completed
C. when process is using the CPU
D. none of the mentioned

ans: A. when process is scheduled to run after some execution

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Set-2

Câu 1 What is interprocess communication?

A. communication within the process
B. communication between two process
C. communication between two threads of same process
D. none of the mentioned

ans: B. communication between two process

Câu 2 A process stack does not contain

A. function parameters
B. local variables
C. return addresses
D. PID of child process

Ans: D. PID of child process

Câu 3: When the process issues an I/O request :

A. It is placed in an I/O queue
B. It is placed in a waiting queue
C. It is placed in the ready queue
D. It is placed in the Job queue

Câu 4 What is a long-term scheduler ?

A. It selects which process has to be brought into the ready queue
B. It selects which process has to be executed next and allocates CPU
C. It selects which process to remove from memory by swapping
D. None of these

Câu 5 What is a medium-term scheduler ?

A. It selects which process has to be brought into the ready queue
B. It selects which process has to be executed next and allocates CPU
C. It selects which process to remove from memory by swapping
D. None of these

Ans: C. It selects which process to remove from memory by swapping

Câu 6 What is a short-term scheduler ?

A. It selects which process has to be brought into the ready queue
B. It selects which process has to be executed next and allocates CPU
C. It selects which process to remove from memory by swapping
D. None of these

Ans: B. It selects which process has to be executed next and allocates CPU

Câu 7 The primary distinction between the short term scheduler and the long term scheduler is :

A. The length of their queues
B. The type of processes they schedule
C. The frequency of their execution
D. None of these

Set-3

Câu 1 In a time-sharing operating system, when the time slot given to a process is completed, the process goes from the running state to the :

A. Blocked state
B. Ready state
C. Suspended state
D. Terminated state

Ans: B. Ready state

Câu 2 In a multi-programming environment :

A. the processor executes more than one process at a time
B. the programs are developed by more than one person
C. more than one process resides in the memory
D. a single user can execute many programs at the same time

Ans: C. more than one process resides in the memory

Câu 3: Suppose that a process is in "Blocked" state waiting for some I/O service. When the service is completed, it goes to the :

A. Running state
B. Ready state
C. Suspended state
D. Terminated state

Câu 4 Which of the following does not interrupt a running process ?

A. A device
B. Timer
C. Scheduler process
D. Power failure

Câu 5 Several processes access and manipulate the same data concurrently and the outcome of the execution depends on the particular order in which the access takes place, is called a(n) ____.

A. Shared Memory Segments
B. Entry Section
C. Race condition
D. Process Synchronization

Ans: C. Race condition

Câu 6 Which of the following state transitions is not possible ?

A. blocked to running
B. ready to running
C. blocked to ready
D. running to blocked

Câu 7 Which process can affect of be affected by other processes executing in the system?

A. cooperating process
B. child process
C. parent process
D. init process

Câu 8 A semaphore is a shared integer variable

A. that can not drop below zero
B. that can not be more than zero
C. that can not drop below one
D. that can not be more than one

Ans: A. that can not drop below zero

Set-5

Câu 1 Operating System maintains the page table for

A. each process
B. each thread
C. each instruction
D. each address

ans: A. each process

Câu 2 Because of virtual memory, the memory can be shared among

A. processes
B. threads
C. instructions
D. none of the mentioned

A. processes

Câu 3 _____ is the concept in which a process is copied into main memory from the secondary memory according to the requirement.

A. Paging
B. Demand paging
C. Segmentation
D. Swapping

Câu 4 A memory buffer used to accommodate a speed differential is called

A. stack pointer
B. cache
C. accumulator
D. disk buffer

Câu 5 Which one of the following is the address generated by CPU?

A. physical address
B. absolute address
C. logical address
D. none of the mentioned

Ans: C. logical address

Câu 6 Run time mapping from virtual to physical address is done by

A. memory management unit
B. CPU
C. PCI
D. none of the mentioned

Ans: A. memory management unit

Câu 7 Memory management technique in which system stores and retrieves data from secondary storage for use in main memory is called

A. fragmentation
B. paging
C. mapping
D. none of the mentioned

Câu 8 Program always deals with

A. logical address
B. absolute address
C. physical address
D. relative address

Set-6

Câu 1 _____ is a unique tag, usually a number, identifies the file within the file system

A. File identifier
B. File name
C. File type
D. none of the mentioned

ans: A. File identifier

From the given options, the correct choice for a unique tag that identifies the file within the file system is 1. File identifier. The file identifier, commonly known as the inode number, serves as a unique identifier for a file within a file system. It is assigned to each file's corresponding inode and is used by the operating system to locate and manage the file's data. The file name and file type, on the other hand, are attributes associated with the file but do not necessarily provide a unique identification within the file system.

Câu 2 To create a file

A. allocate the space in file system
B. make an entry for new file in directory
C. both (a) and (b)
D. none of the mentioned

ans: C. both (a) and (b)

To create a file in a file system, both options (a) and (b) are correct:

1. Allocate the space in the file system: When creating a file, the file system needs to allocate space on the storage media to store the file's data. This involves reserving a portion of the disk or other storage device to hold the contents of the file.

2. Make an entry for the new file in the directory: The file system also needs to keep track of the file's existence and location. This is done by making an entry in the directory, which is a data structure that organizes and maintains a list of file names along with their corresponding metadata, such as the file's inode number and location.

Therefore, the correct answer is option 3. both (a) and (b).

Câu 3 By using the specific system call, we can

A. open the file
B. read the file
C. write into the file
D. all of the mentioned

Câu 4 File type can be represented by

A. file name
B. file extension
C. file identifier
D. none of the mentioned

ans: B. file extension

File types can be represented by file extensions. A file extension is a suffix added to the end of a filename, separated by a period (.) character. It is typically composed of a few characters that indicate the file's format or type. For example:

- .txt represents a text file.
- .jpg or .jpeg represents an image file in JPEG format.
- .mp3 represents an audio file in the MP3 format.
- .docx represents a Microsoft Word document file.

File extensions help both the operating system and users identify the type of content contained within a file and determine which application or program should be used to open or process it.

Câu 5 A _____ is a collection of electronics that can operate a port, a bus, or a device.

A. controller
B. driver
C. host
D. bus

Ans: A. controller

A "controller" is a collection of electronics that can operate a port, a bus, or a device.

A controller is a hardware component or integrated circuit that manages the communication and operation of a specific port, bus, or device within a computer system. It is responsible for controlling the flow of data, managing protocols, handling data transfers, and coordinating the interaction between the connected devices.

Controllers exist for various purposes and interfaces, such as disk controllers for managing data transfer between the computer's storage devices (e.g., hard drives or solid-state drives) and the rest of the system, USB controllers for managing USB ports and devices, network controllers for handling network communications, and so on.

Câu 6 An I/O port typically consists of four registers status, control, _____ and _____registers.

A. system in, system out
B. data in, data out

C. flow in, flow out
D. input, output

Set-8

Câu 1 Which of the following memory unit that processor can access more rapidly

A. Main Memory
B. Virtual Memory
C. Cache memory
D. Read Only Memory

Ans: C. Cache memory

Câu 2 When a computer is first turned on or restarted, a special type of absolute loader called ____ is executed

A. Compile and Go loader
B. Boot loader
C. Bootstrap loader
D. Relating loader

C. Bootstrap loader

Câu 3 In which type of the following OS, the response time is very crucial.

A. Network Operating System
B. Real Time Operating System
C. Batch Operating System
D. Unix Operating System

Câu 4 Virtual Memory is

A. Extremely Large Main memory
B. Extremely Large Secondary memory
C. An illusion of extremely large main memory
D. An illusion of extremely large secondary memory

Câu 5: Swapping

A. Works best with many small partitions
B. Allows many programs to use memory simultaneously
C. Allows each program in turn to use the memory
D. Does not work with overlaying

Ans: C. Allows each program in turn to use the memory

Câu 6 A program in execution is called

A. A Paging
B. A Process
C. A virtual memory
D. A Demand Page

Ans. A Process

Set-9

Câu 1 What hole will allocates in "Worst-Fit" algorithm of memory management?

A. It allocates the smaller hole than required memory hole
B. It allocates the smallest hole from the available memory holes
C. It allocates the largest hole from the available memory holes
D. It allocates the exact same size memory hole

Ans: C. It allocates the largest hole from the available memory holes

Câu 2 Which of the following is the allocation method of a disk space?

A. Contiguous allocation
B. Linked allocation
C. Indexed allocation
D. All of the Above

Ans: D. All of the Above

Câu 3 Virtual memory typically located on

A. RAM
B. CPU
C. Flash card
D. Hard drive

Câu 4 What is contained in the page table?

A. Base address of each frame and corresponding page number
B. Memory address and corresponding page number
C. File name and corresponding page number
D. None of Above

Câu 5 Tree structure displays the

A. File only

B. Directory only
C. File and directory name
D. None of above

Ans C. File and directory name

Câu 6 Multiprogramming systems:

A. Are easier to develop than single programming systems
B. Execute each job faster
C. Execute more jobs in the same time period
D. Are used only one large mainframe computers.

Ans C. Execute more jobs in the same time period

Chapter 9: Security and Protection

- Threats and attacks
- Authentication and access control

Câu 1 When an attempt is to make a machine or network resource unavailable to its intended users, the attack is called _____

A. denial-of-service attack
B. slow read attack
C. spoofed attack
D. starvation attack

ans A.

Câu 2 The code segment that misuses its environment is called a _____

A. internal thief
B. trojan horse
C. code stacker
D. none of the mentioned

Answer: b

Câu 3 The internal code of any software that will set of a malicious function when specified conditions are met, is called _____

A. logic bomb
B. trap door
C. code stacker
D. none of the mentioned

Câu 4 The pattern that can be used to identify a virus is known as _____

A. stealth
B. virus signature
C. armoured
D. multipartite

Câu 5 Which one of the following is a process that uses the spawn mechanism to revage the system performance?

A. worm
B. trojan
C. threat
D. virus

Answer: a

Câu 6 What is a trap door in a program?

A. a security hole, inserted at programming time in the system for later use
B. a type of antivirus
C. security hole in a network
D. none of the mentioned

Câu 7 Which one of the following is not an attack, but a search for vulnerabilities to attack?

A. denial of service
B. port scanning
C. memory access violation
D. dumpster diving

Câu 8 File virus attaches itself to the _____

A. source file
B. object file
C. executable file
D. all of the mentioned

Answer: c

Câu 9 Multipartite viruses attack on _____

A. files
B. boot sector
C. memory
D. all of the mentioned

Câu 10 In asymmetric encryption _____

A. same key is used for encryption and decryption
B. different keys are used encryption and decryption
C. no key is required for encryption and decryption
D. none of the mentioned

Answer: b

Bảo mật

Câu 1 All of the following are examples of real security and privacy threats except:

A. Hackers
B. Virus
C. Spam
D. Worm

Ans: C.

Câu 2. Unsolicited commercial email is known as _____.

A. Spam
B. Malware
C. Virus
D. Spyware

Ans: A.

Câu 3. Which of the following is not an external threat to a computer or a computer network

A. Ignorance
B. Trojan horses
C. Adware
D. Crackers

Câu 4. Which of the following is a class of computer threat

A. Phishing
B. Soliciting
C. DoS attacks
D. Stalking

Câu 5. Digital signature cannot provide _____ for the message

A. integrity
B. confidentiality
C. nonrepudiation
D. authentication

Ans: B.

Câu 6. If _____ is needed, a cryptosystem must be applied over the scheme

A. integrity
B. confidentiality
C. nonrepudiation
D. authentication

Ans B.

Câu 7. It is a program or hardware device that filters the information coming through an internet connection to a network or computer system.

A. Anti virus
B. Cookies
C. Firewall
D. Cyber safety

Câu 8. It allow a visited website to store its own information about a user on the user's computer.

A. Spam
B. Cookies
C. Malware
D. Adware

Câu 9. Exploring appropriate and ethical behaviours related to online environments and digital media.

A. Cyber ethics
B. Cyber security
C. Cyber safety
D. Cyber law

Ans A.

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