operating system concepts chapter 3

1. **advanced local procedure call (ALPC)-**	The message-passing facility in Windows is called the
2. **anonymous pipes**	...
3. **background**	application remains in memory, but does not occupy the display screen
4. **big-endian**	store the most significant byte first
5. **Blocking (synchronous)**	Putting the process in the waiting state until something happens.
6. **bounded buffer**	assumes a fixed buffer size
7. **browser process**	is responsible for managing the user interface as well as disk and network I/O
8. **cascading termination**	...
9. **Children-**	are any processes that it creates
10. **communication ports-**	one for client—server messages, the other for server—client messages
11. **Connectionless (UDP) sockets -**	use the Data gram Socket class
12. **Connection-oriented (TCP) sockets -**	are implemented with the Socket class.
13. **connection ports-**	object and sends a connection request to that port
14. **Consumer-**	consumes information from the producer
15. **Context-**	It includes the value of the CPU registers, the process state, and memory-management information
16. **context switch-**	Switching the CPU to another process
17. **CPU-bound process-**	The process needs lots of computing time to complete and is thus bound by the CPU.
18. **data section-a structure that contains global variable**	...
19. **Degree of multiprogramming -**	the number of processes in memory. . Controlled by long-term scheduler. Generally tried to be kept stable, which means that the number of processes entering the system roughly equals the number of processes leaving the system. Because of this, the long-term scheduler is only executed when a process leaves the system.
20. **device queue-**	The list of processes waiting for a particular I/O device
21. **direct communication-**	each process that wants to communicate must explicitly name the recipient or sender of the communication
22. **dispatched-**	it waits there until it is selected for execution
23. **executable file -**	A program is a passive entity, such as a file containing a list of instructions stored on disk
24. **External data representation (XDR). -**	is a standard data serialization format, for uses such as computer network protocols. It allows data to be transferred between different kinds of computer systems.
25. **foreground application**	is the application currently open and appearing on the display
26. **heap-**	is memory that is dynamically allocated during process run time
27. **Interprocess communication (IPC)**	mechanism that will allow them to exchange data and information. There are two fundamental models of interprocess communication: shared memory and message
28. **I/O-bound process -**	The process is waiting for I/O from a device, and is thus bound by the device.
29. **job queue -**	a data structure that consist of all processes in a system
30. **Jobs-**	whereas a time-shared system has user programs, or tasks.
31. **little-endian-**	store the least significant byte first
32. **Long-term scheduler (job scheduler) -**	In batch systems, more jobs are submitted than can be stored in memory at a time. This leads to the problem of needing to decide which jobs get loaded into memory. The Long-Term Scheduler decides this.
33. **Loopback-**	The IP address 127.0.0.1 is a special IP address, computer refers to itself
34. **mailbox set -**	is a collection of mailboxes, as declared by the task, which can be grouped together and treated as one mailbox for the purposes of the task
35. **Marshals-**	involves packaging the parameters into a form that can be transmitted over a network.
36. **Matchmaker-**	an operating system provides a rendezvous daemon on a fixed RPC port

37. **medium-term scheduler-**	is that sometimes it can be advantageous to remove a process from memory (and from active contention for the CPU) and thus reduce the degree of multiprogramming]
38. **message passing-**	communication takes place by means of messages exchanged between the cooperating processes
39. **Messages**	are sent to and received from mailboxes
40. **Microsoft Interface Definition Language(MIDL)-**	which is used for defining the interfaces between client and server programs
41. **nonblocking-asynchronous-**	is lock-free if there is guaranteed system-wide progress regardless of scheduling; wait-free if there is also guaranteed per-thread progress.
42. **orphans.-**	Now consider what would happen if a parent did not invoke wait() and instead terminated, thereby leaving its child processes
43. **parent**	is the process that created it;
44. **pipe**	acts as a conduit allowing two processes to communicate
45. **plug-in**	process is created for each type of plug-in (such as Flash or QuickTime) in use
46. **Ports-**	is simply a number included at the start of a message packet
47. **Process-**	a program that is currently executing
48. **process control block (PCB)—**	also called a task control block It contains many pieces of information associated with a specific process, including these: process state, program counter, cpu register, spu - squeduling information, memory- management information, accounting information, I/O status information
49. **processes**	all these activities are similar
50. **process identifier (or pid)-**	which is typically an integer number
51. **process scheduler**	select an available process (possibly from a set of several available processes) for program execution on the CPU
52. **Producer**	process produces information that is consumed by a consumer process.
53. **Program counter-**	a value that represents a program's current activity
54. **queueing diagram,-**	A common representation of process scheduling
55. **read-end**	...
56. **ready queu.-**	all processes that are ready to run
57. **Renderer processes contain logic for rendering web pages.**	...
58. **rendezvous-**	When both send() and receive() are blocking
59. **sandbox, which means that access to disk and network I/O is restricted,**	...
60. **Scheduler.-**	is the method by which threads, processes or data flows are given access to system resources
61. **section object-**	which is a region of shared memory associated with the channel
62. **service-**	a separate application component that runs on behalf of the background process
63. **shared memory-**	region of memory that is shared by cooperating processes is established
64. **Short-term scheduler, or CPU scheduler-**	Decides which process in the ready queue gets executed
65. **Siblings-**	are children with the same parent process
66. **Socket-**	is defined as an endpoint for communication
67. **Stack-**	which contains temporary data (such as function parameters, return addresses, and local variables)
68. **state -**	the current activity of that process
69. **State restore-**	resume operations.
70. **State Save-**	Saving the process context state that it can be switched from.
71. **Stub-**	in distributed computing is a piece of code used for converting parameters passed during a Remote Procedure Call
72. **Swapping -**	Loading a memory into memory from secondary storage or vice-versa.
73. **Text section-**	A process is more than the program code.
74. **thread-**	of control allows the process to perform only one task at a time

75.	**tree-**	is a widely used abstract data type (ADT) or data structure implementing this ADT that simulates a hierarchical tree structure, with a root value and subtrees of children, represented as a set of linked nodes
76.	**unbounded buffer-**	places no practical limit on the size of the buffer
77.	**write-end-**	...
78.	**zombie-**	A process that has terminated, but whose parent has not yet called wait