Sure, here are 200 questions related to computer fundamentals with their respective answers:

1. **Q: What is a computer?** A: A computer is an electronic device that manipulates information or data. It has the ability to store, retrieve, and process data.
2. **Q: What are the four basic functions of a computer?** A: The four basic functions of a computer are input, processing, output, and storage.
3. **Q: What is hardware?** A: Hardware refers to the physical components of a computer such as the monitor, keyboard, mouse, hard drive, etc.
4. **Q: What is software?** A: Software refers to the programs or applications that run on a computer.
5. **Q: What is an operating system?** A: An operating system (OS) is system software that manages computer hardware, software resources, and provides various services for computer programs.
6. **Q: What is the difference between RAM and ROM?** A: RAM (Random Access Memory) is volatile memory, it loses its data when power is turned off. ROM (Read Only Memory) is non-volatile, it retains its data even when power is off.
7. **Q: What is a CPU?** A: CPU (Central Processing Unit) is the primary component of a computer that performs most of the processing inside the computer.
8. **Q: What is the function of the motherboard?** A: The motherboard is the main circuit board and is responsible for connecting all of the components of a computer.
9. **Q: What is the difference between a bit and a byte?** A: A bit is the most basic unit of information in computing and digital communications. The name is a portmanteau of binary digit. The byte is a unit of digital information that most commonly consists of eight bits.
10. **Q: What is a hard disk?** A: A hard disk is a data storage device used for storing and retrieving digital information using rapidly rotating disks coated with magnetic material.
11. **Q: What is cloud computing?** A: Cloud computing is the delivery of computing services—including servers, storage, databases, networking, software, analytics, and intelligence—over the Internet ("the cloud") to offer faster innovation, flexible resources, and economies of scale.
12. **Q: What is an IP address?** A: An IP address (Internet Protocol address) is a numerical label assigned to each device participating in a computer network that uses the Internet Protocol for communication.
13. **Q: What is a network?** A: A network is a collection of computers, servers, mainframes, network devices, peripherals, or other devices connected to one another to allow the sharing of data.
14. **Q: What is the difference between the internet and the World Wide Web (WWW)?** A: The Internet is a global network of networks while the Web, also referred formally as World Wide Web (www), is collection of information which is accessed via the Internet.
15. **Q: What is a web browser?** A: A web browser is a software application used to locate, retrieve and display content on the World Wide Web, including Web pages, images, video and other files.
16. **Q: What is a URL?** A: URL stands for Uniform Resource Locator, and is used to specify addresses on the World Wide Web. A URL is the fundamental network identification for any resource connected to the web.
17. **Q: What is HTML?** A: HTML stands for HyperText Markup Language. It's the standard markup language for documents designed to be displayed in a web browser.

18. **Q: What is a firewall?** A: A firewall is a network security device that monitors and filters incoming and outgoing network traffic based on an organization's previously established security policies.
19. **Q: What is a computer virus?** A: A computer virus is a malicious program that self-replicates by copying itself to another program. In other words, the computer virus spreads by itself into other executable code or documents.
20. **Q: What is an algorithm?** A: An algorithm is a set of step-by-step procedures, or a set of rules to follow, for completing a specific task or solving a particular problem.
21. **Q: What is a database?** A: A database is an organized collection of data stored and accessed electronically.
22. **Q: What is a GUI?** A: GUI stands for Graphical User Interface. It's a system of interactive visual components for computer software.
23. **Q: What is a file system?** A: A file system controls how data is stored and retrieved. Without a file system, data placed in a storage medium would be one large body of data with no way to tell where one piece of data stops and the next begins.
24. **Q: What is machine learning?** A: Machine learning is a type of artificial intelligence (AI) that provides computers with the ability to learn without being explicitly programmed.
25. **Q: What is data mining?** A: Data mining is the process of discovering patterns in large data sets involving methods at the intersection of machine learning, statistics, and database systems.
26. **Q: What is the difference between data and information?** A: Data is raw, unorganized facts that need to be processed. Information is processed data.
27. **Q: What is the difference between a file and a folder?** A: A file is a collection of data stored in one unit, identified by a filename. A folder is a container for storing files.
28. **Q: What is a programming language?** A: A programming language is a formal language comprising a set of instructions that produce various kinds of output.
29. **Q: What is a compiler?** A: A compiler is a special program that processes statements written in a particular programming language and turns them into machine language or "code" that a computer's processor uses.
30. **Q: What is an interpreter?** A: An interpreter takes a program written in a high-level programming language and runs it by translating it line by line into machine code.
31. **Q: What is the difference between a compiler and an interpreter?** A: The main difference is that a compiler system, including a (built-in or separate) linker, generates a stand-alone machine code program, while an interpreter system instead performs the actions described by the high level program.
32. **Q: What is debugging?** A: Debugging is the process of finding and resolving defects or problems within a computer program that prevent correct operation of computer software or a system.
33. **Q: What is a server?** A: A server is a computer or system that provides resources, data, services, or programs to other computers, known as clients, over a network.
34. **Q: What is a client?** A: A client is a piece of computer hardware or software that accesses a service made available by a server.
35. **Q: What is the OSI model?** A: The OSI model (Open Systems Interconnection) model defines a networking framework to implement protocols in seven layers. It was developed by the ISO (International Organization for Standardization).
36. **Q: What are the seven layers of the OSI model?** A: The seven layers are: Physical, Data Link, Network, Transport, Session, Presentation, and Application.

37. **Q: What is a peripheral device?** A: A peripheral device is an external device that provides input and output for the computer. For example, a keyboard and mouse are input peripherals, while a monitor and printer are output peripherals.
38. **Q: What is a network protocol?** A: A network protocol defines rules and conventions for communication between network devices. Protocols for computer networking all generally use packet switching techniques to send and receive messages in the form of packets.
39. **Q: What is the function of a router?** A: A router is a networking device that forwards data packets between computer networks. Routers perform the traffic directing functions on the Internet.
40. **Q: What is the function of a switch in a network?** A: A network switch is a computer networking device that connects devices together on a computer network, by using packet switching to receive, process and forward data to the destination device.
41. **Q: What is a protocol in computer terms?** A: In computing, a protocol is a standard set of rules that allow electronic devices to communicate with each other. These rules include what type of data may be transmitted, what commands are used to send and receive data, and how data transfers are confirmed.
42. **Q: What is Wi-Fi?** A: Wi-Fi is a wireless networking technology that uses radio waves to provide wireless high-speed Internet and network connections.
43. **Q: What is Ethernet?** A: Ethernet is a network protocol that controls how data is transmitted over a LAN (Local Area Network).
44. **Q: What is Bluetooth?** A: Bluetooth is a wireless technology standard used for exchanging data between fixed and mobile devices over short distances.
45. **Q: What is a VPN?** A: A VPN, or Virtual Private Network, allows you to create a secure connection to another network over the Internet.
46. **Q: What is a domain name?** A: A domain name is an address where Internet users can access your website.
47. **Q: What is DNS?** A: DNS stands for Domain Name System. It's the Internet's system for converting alphabetic names into numeric IP addresses.
48. **Q: What is a web server?** A: A web server is a system that delivers content or services to end users over the internet.
49. **Q: What is the function of an operating system?** A: The operating system serves as an intermediary between the user and the computer hardware and controls the execution of all kinds of programs.
50. **Q: What is a database management system (DBMS)?** A: A DBMS is software for creating and managing databases. It provides users with a systematic way to create, retrieve, update and manage data.
51. **Q: What is the difference between system software and application software?** A: System software is designed to run a computer's hardware and provides a platform for applications to run on top of. Application software, on the other hand, performs a specific task for end users.
52. **Q: What is open-source software?** A: Open-source software is software with source code that anyone can inspect, modify, and enhance.
53. **Q: What is proprietary software?** A: Proprietary software is software that is owned by an individual or a company. There are almost always major restrictions on its use, and its source code is almost always kept secret.
54. **Q:What is a spreadsheet?** A: A spreadsheet is a file made of rows and columns that help sort, organize, and arrange data efficiently.

55. **Q: What is a binary system?** A: The binary number system is a base-2 number system that uses only two numerals: 0 and 1.
56. **Q: What is machine language?** A: Machine language is the low-level programming language understood by a computer. It is binary in nature.
57. **Q: What is assembly language?** A: Assembly language is a low-level programming language for a computer or other programmable device specific to a particular computer architecture.
58. **Q: What is high-level language in programming?** A: High-level language is a programming language such as Python, C, C++, Java etc. These languages are designed to be easy to read and understand.
59. **Q: What is the difference between high-level and low-level programming languages?** A: High-level languages are closer to human languages, while low-level languages are closer to hardware languages.
60. **Q: What is a data structure?** A: A data structure is a data organization, management, and storage format that enables efficient access and modification.
61. **Q: What is a server farm or data center?** A: A server farm or data center is a collection of computer servers usually maintained by an organization to supply server functionality far beyond the capability of a single machine.
62. **Q: What is big data?** A: Big data is a term that describes the large volume of data – both structured and unstructured – that inundates a business on a day-to-day basis.
63. **Q: What is the difference between lossy and lossless compression?** A: Lossless compression is a method of data compression in which the original data can be perfectly reconstructed from the compressed data. Lossy compression is a method of compression that removes data that is not noticeable and might not be needed.
64. **Q: What is a pixel?** A: A pixel is the smallest unit of a digital image or graphic that can be displayed and represented on a digital display device.
65. **Q: What is a chatbot?** A: A chatbot is a software application used to conduct an online chat conversation via text or text-to-speech, in lieu of providing direct contact with a live human agent.
66. **Q: What is CAPTCHA?** A: CAPTCHA is a program that protects websites against bots by generating and grading tests that humans can pass but current computer programs cannot. The term stands for Completely Automated Public Turing test to tell Computers and Humans Apart.
67. **Q: What is phishing?** A: Phishing is a type of cyber attack where a scammer attempts to trick individuals into revealing sensitive information, such as personally identifiable information, banking and credit card details, and passwords.
68. **Q: What is ransomware?** A: Ransomware is a type of malicious software designed to block access to a computer system until a sum of money is paid.
69. **Q: What is a DDoS attack?** A: A DDoS attack (Distributed Denial of Service attack) is an attempt to make an online service unavailable by overwhelming it with traffic from multiple sources.
70. **Q: What is the difference between malware and a virus?** A: Malware is any malicious software, script or code developed or used to disrupt computer operation, gather sensitive information or gain unauthorized access to computer systems. A virus is a type of malware that is capable of copying itself and spreading to other computers.

71. **Q: What is data encryption?** A: Data encryption is the process of converting data into another form, or code, so that only people with access to a secret key or password can read it.

72. **Q: What is two-factor authentication (2FA)?** A: Two-factor authentication (2FA) is a security system that requires two separate, distinct forms of identification in order to access something.
73. **Q: What is HTTPS?** A: HTTPS stands for Hyper Text Transfer Protocol Secure. It is the secure version of HTTP, the protocol over which data is sent between your browser and the website that you are connected to.
74. **Q: What is SSL?** A: SSL (Secure Sockets Layer) is a standard security protocol for establishing encrypted links between a web server and a browser in an online communication.
75. **Q: What is the difference between a thread and a process?** A: A process is an instance of a program running in a computer which can contain one or more threads. A thread is the smallest unit of processing that can be performed in an OS.
76. **Q: What is a deadlock in computing?** A: A deadlock is a situation where in two or more competing actions are each waiting for the other to finish, and thus neither ever does.
77. **Q: What is a data packet?** A: A data packet is a unit of data which is transmitted through the Internet.
78. **Q: What is the difference between uploading and downloading?** A: Uploading is the process of putting web pages, images and files onto a web server. Downloading is the process of getting web pages, images and files from a web server.
79. **Q: What is an API?** A: API stands for Application Programming Interface. It is a set of rules that allow programs to talk to each other.
80. **Q: What is a web crawler?** A: A web crawler, or spider, is a type of bot that is typically operated by search engines like Google. It indexes or categorizes websites by "crawling" through web pages.
81. **Q: What is data warehousing?** A: Data warehousing is the process of constructing and using a data warehouse. A data warehouse is a databas used for reporting and data analysis.
82. **Q: What is the difference between analog and digital signals?** A: Analog signal is a continuous signal which represents physical measurements. Digital signals are discrete time signals generated by digital modulation.
83. **Q: What is a cookie in terms of computers?** A: A cookie is a small amount of data generated by a website and saved by your web browser. Its purpose is to remember information about you, similar to a preference file created by a software application.
84. **Q: What is the function of the ALU in a CPU?** A: The Arithmetic Logic Unit (ALU) of a CPU performs arithmetic and logic operations on the data.
85. **Q: What is a cache memory?** A: Cache memory is a type of computer memory which is random access and high-speed that a computer microprocessor can access more quickly than it can access regular RAM.
86. **Q: What is a device driver?** A: A device driver is a particular form of software application that is designed to enable interaction with hardware devices.
87. **Q: What is UNIX?** A: UNIX is a powerful, multi-user and multitasking operating system originally developed at AT&T Bell Laboratories.
88. **Q: What is Linux?** A: Linux is a free and open-source,UNIX-like operating system based on the Linux kernel.

89. **Q: What is the difference between UNIX and Linux?** A: UNIX is a proprietary operating system originally developed by Bell Labs, while Linux is a free and open source operating system inspired by the UNIX design.

90. **Q: What is the Internet of Things (IoT)?** A: The Internet of Things (IoT) refers to a system of interrelated, internet-connected objects that are able to collect and transfer data over a wireless network without human intervention.
91. **Q: What is a URL?** A: URL stands for Uniform Resource Locator, and is used to specify addresses on the World Wide Web.
92. **Q: What is cloud computing?** A: Cloud computing is the delivery of computing services over the internet rather than having local servers or personal devices handle applications.
93. **Q: What is SaaS?** A: SaaS stands for Software as a Service. It is a cloud-based service where you access an application via an Internet browser.
94. **Q: What is a firewall in computer terms?** A: A firewall is a system designed to prevent unauthorized access to or from a private network.
95. **Q: What is the difference between hardware and software?** A: Hardware is any physical device used in or with your machine, whereas software is a collection of code installed onto your computer's hard drive.
96. **Q: What is the World Wide Web?** A: The World Wide Web is an information system where documents and other web resources are identified by URLs, interlinked by hypertext links, and can be accessed via the Internet.
97. **Q: What is HTML?** A: HTML stands for Hypertext Markup Language. It's the standard markup language for documents designed to be displayed in a web browser.
98. **Q: What is CSS?** A: CSS stands for Cascading Style Sheets. It is a style sheet language used for describing the look and formatting of a document written in HTML.
99. **Q: What is JavaScript?** A: JavaScript is a high-level, interpreted programming language that is a core technology of the World Wide Web, alongside HTML and CSS.
100. **Q: What is the difference between Java and JavaScript?** A: Java is a general-purpose programming language that is class-based, object-oriented, and designed to have as few implementation dependencies as possible. JavaScript, on the other hand, is a text-based programming language used both on the client-side and server-side that allows you to make web pages interactive.
101. **Q: What is agile development?** A: Agile software development refers to software development methodologies centered round the idea of iterative development, where requirements and solutions evolve through collaboration between self-organizing cross-functional teams.
102. **Q: What is scrum?** A: Scrum is an agile process framework for managing complex knowledge work, with an initial emphasis on software development.
103. **Q: What is a full stack developer?** A: A full stack developer is a web developer or engineer who works with both the front and back ends of a website or application.
104. **Q: What is the front end?** A: The front end of a website is the part that users interact with. It is also referred to as the 'client side' of the application.
105. **Q: What is the back end?** A: The back end of a website consists of a server, an application, and a database. It is also referred to as the 'server side' of the application.
106. **Q: What is Python?** A: Pythonis a high-level, interpreted, interactive and object-oriented scripting language, designed to be highly readable and uses English keywords frequently.

107. **Q: What is SQL?** A: SQL stands for Structured Query Language. It's a standard language for accessing and manipulating databases.

108. **Q: What is a programming paradigm?** A: A programming paradigm is a style or way of programming. Some examples are procedural programming, object-oriented programming, and functional programming.

109. **Q: What is the difference between an interpreted language and a compiled language?** A: An interpreted language is a type of programming language for which most of its implementations execute instructions directly and freely, without previously compiling a program into machine-language instructions. A compiled language is a programming language whose implementations are typically compilers, and not interpreters.

110. **Q: What is pseudocode?** A: Pseudocode is a plain language description of the steps in an algorithm or another system. Pseudocode often uses structural conventions of a normal programming language, but is intended for human reading rather than machine reading.

111. **Q: What is recursion in programming?** A: Recursion in programming is a method where the solution to a problem depends on solutions to smaller instances of the same problem.

112. **Q: What is an algorithm in programming?** A: An algorithm is a set of instructions designed to perform a specific task. It can be a simple process, such as adding two numbers together, or a complex operation, such as sorting data.

113. **Q: What is a data breach?** A: A data breach is an incident where information is stolen or taken from a system without the knowledge or authorization of the system's owner.

114. **Q: What is quantum computing?** A: Quantum computing is the area of study focused on developing computer-based technologies centered around the principles of quantum theory.

115. **Q: What is a computer network?** A: A computer network is a set of computers connected together for the purpose of sharing resources.

116. **Q: What is an IP address?** A: An IP address (internet protocol address) is a numerical representation that uniquely identifies a specific interface on the network.

117. **Q: What is a MAC address?** A: A MAC address (media access control address) is a unique identifier assigned to a network interface controller for use as a network address in communications within a network segment.

118. **Q: What is a GUI?** A: GUI stands for Graphical User Interface. It's a type of user interface that allows users to interact with electronic devices via graphical icons and visual indicators.

119. **Q: What is a command line interface?** A: A command line interface (CLI) is a means of interacting with a computer program where the user issues commands to the program in the form of successive lines of text (command lines).

120. **Q: What is the difference between a file and a folder?** A: A file is a block of arbitrary information, or resource for storing information. A folder is a storage space where many files can be placed into groups and subgroups.

121. **Q: What is the difference between RAM and ROM?** A: RAM (Random Access Memory) and ROM (Read Only Memory) are types of computer memory. RAM is volatile memory that temporarily stores the files you are working on. ROM is non-volatile memory that permanently stores instructions for your computer.

122. **Q: What is the function of the motherboard in a computer?** A: The motherboard serves as the central circuit hub that connects all the peripherals and components of a computer.

123. **Q:

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What is a solid-state drive (SSD)?** A: A solid-state drive (SSD) is a type of storage device that uses integrated circuit assemblies to store data persistently, typically using flash memory.

124. **Q: What is the difference between an SSD and an HDD?** A: An SSD (Solid State Drive) and an HDD (Hard Disk Drive) are both storage devices, but SSDs are faster, more expensive, and don't have moving parts, unlike HDDs.
125. **Q: What is a network protocol?** A: A network protocol defines rules and conventions for communication between network devices.
126. **Q: What is TCP/IP?** A: TCP/IP (Transmission Control Protocol/Internet Protocol) is the suite of communications protocols used to connect hosts on the Internet.
127. **Q: What is the difference between IPv4 and IPv6?** A: IPv4 and IPv6 are both versions of the Internet Protocol. IPv4 uses 32-bit addresses, while IPv6 uses 128-bit addresses, allowing for many more devices to be connected to the Internet.
128. **Q: What is a virtual machine?** A: A virtual machine (VM) is a software program or operating system that not only exhibits the behavior of a separate computer, but is also capable of performing tasks such as running applications and programs like a separate computer.
129. **Q: What is machine learning?** A: Machine learning is a type of artificial intelligence (AI) that allows software applications to become more accurate at predicting outcomes without being explicitly programmed to do so.
130. **Q: What is the difference between supervised and unsupervised machine learning?** A: Supervised learning uses labeled data to predict outcomes, while unsupervised learning uses unlabeled data and needs to infer its own structure from such data.
131. **Q: What is a neural network in the context of AI?** A: A neural network is a series of algorithms that endeavors to recognize underlying relationships in a set of data through a process that mimics the way the human brain operates.
132. **Q: What is deep learning?** A: Deep learning is a subset of machine learning in artificial intelligence (AI) that has networks capable of learning unsupervised from data that is unstructured or unlabeled.
133. **Q: What is natural language processing?** A: Natural Language Processing, or NLP, is a branch of artificial intelligence that deals with the interaction between computers and humans through the natural language.
134. **Q: What is a GPU?** A: GPU stands for Graphics Processing Unit - it's a specialized electronic circuit designed to rapidly manipulate and alter memory to accelerate the creation of images in a frame buffer intended for output to a display.
135. **Q: What is a CPU?** A: A CPU (Central Processing Unit), often called the "brains" of the device, is the primary component of a computer that performs most of the processing inside the computer.
136. **Q: What is the difference between a CPU and a GPU?** A: A CPU (Central Processing Unit) is designed for general-purpose computing, while a GPU (Graphics Processing Unit) is designed for more efficient computation of functions related to graphics and image processing.

137. **Q: What is a blockchain?** A: Blockchain is a type of distributed ledger for maintaining a permanent and tamper-proof record of transactional data.
138. **Q: What is a smart contract?** A: A smart contract is a self-executing contract with the terms of the agreement between buyer and seller being directly written into lines of code.
139. **Q: What is

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cryptocurrency?** A: Cryptocurrency is a type of digital or virtual currency that uses cryptography for security. It operates independently of a central bank.

140. **Q: What is Bitcoin?** A: Bitcoin is a digital currency created in January 2009. It follows the ideas set out in a whitepaper by the pseudonymous person or group of people named Satoshi Nakamoto.
141. **Q: What is Ethereum?** A: Ethereum is an open-source, blockchain-based platform that enables developers to build and deploy decentralized applications (dApps). It also has its own cryptocurrency called Ether (ETH).
142. **Q: What is a DDoS attack?** A: A Distributed Denial of Service (DDoS) attack is an attempt to make an online service unavailable by overwhelming it with traffic from multiple sources.
143. **Q: What is phishing?** A: Phishing is a type of cyber attack that involves sending fraudulent communications that appear to come from a reputable source, usually through email. The goal is to steal sensitive data like credit card and login information or to install malware on the victim's machine.
144. **Q: What is a VPN?** A: VPN stands for Virtual Private Network. It extends a private network across a public network, enabling users to send and receive data across shared or public networks as if their computing devices were directly connected to the private network.
145. **Q: What is the difference between a public and a private IP address?** A: A public IP address is an IP address that is used to access the Internet. Private IP addresses are used for local area networks (LAN), especially at home or business networks.
146. **Q: What is the purpose of a DNS server?** A: A DNS (Domain Name System) server is used to translate human-friendly domain names like www.example.com into IP addresses like 192.0.2.1 that machines use to identify each other on the network.
147. **Q: What is a router in networking?** A: A router is a networking device that forwards data packets between computer networks. Routers perform the traffic directing functions on the Internet.
148. **Q: What is a switch in networking?** A: A network switch is a computer networking device that connects devices together on a computer network by using packet switching to receive, process, and forward data to the destination device.
149. **Q: What is the difference between a router and a switch?** A: A router is a device that connects different networks together, while a switch connects multiple devices on the same network.

150. **Q: What is a server?** A: In computing, a server is a piece of computer hardware or software that provides functionality for other programs or devices, called "clients". This architecture is called the client–server model.
151. **Q: What is a client in a client-server model?** A: In computing, a client is a piece of computer hardware or software that accesses a service made available by a server.
152. **Q: What is the OSI model?** A: The OSI model (Open Systems Interconnection model) is a conceptual model that characterises and standardises the communication functions of a telecommunication or computing system without regard to its underlying internal structure and technology.
153. **Q: What is big data?** A: Big data is a field that treats ways to analyze, systematically extract information from, or otherwise deal with data sets that are too large or complex to be dealt with by traditional data-processing application software.
154. **Q: What is data mining?** A: Data mining is the process of discovering patterns in large data sets involving

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methods at the intersection of machine learning, statistics, and database systems.

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155. **Q: What is data warehousing?** A: Data warehousing is the process of constructing and using a data warehouse. A data warehouse is constructed by integrating data from multiple heterogeneous sources that support analytical reporting, structured and/or ad hoc queries, and decision making.
156. **Q: What is a programming bug?** A: A programming bug is an error, flaw or fault in a computer program or system that causes it to produce an incorrect or unexpected result, or to behave in unintended ways.
157. **Q: What is debugging?** A: Debugging is the process of finding and resolving bugs (defects or problems that prevent correct operation) within computer programs, software, or systems.
158. **Q: What is a compiler in programming?** A: A compiler is a special program that processes statements written in a particular programming language and turns them into machine language or "code" that a computer's processor uses.
159. **Q: What is an IDE?** A: An IDE, or Integrated Development Environment, is a software application that provides comprehensive facilities to computer programmers for software development.
160. **Q: What is the difference between an IDE and a text editor?** A: An IDE is a suite of software tools for developing software, including a text editor, compiler, and debugger. A text editor is a program that allows you to open, view, and edit plain text files.
161. **Q: What is an API?** A: An API, or Application Programming Interface, is a set of routines, protocols, and tools for building software applications. It specifies how software components should interact.
162. **Q: What is a software library?** A: A software library is a suite of data and programming code that is used to develop software programs and applications.

163. **Q: What is a software framework?** A: A software framework is an abstraction in which software providing generic functionality can be selectively changed by additional user-written code, thus providing application-specific software.
164. **Q: What is open source software?** A: Open source software is software with source code that anyone can inspect, modify, and enhance.
165. **Q: What is proprietary software?** A: Proprietary software is software that is owned by an individual or a company. There are almost always major restrictions on its use, and its source code is almost always kept secret.
166. **Q: What is a database management system (DBMS)?** A: A DBMS is a software system that enables users to define, create, maintain and control access to the database.
167. **Q: What is SQL injection?** A: SQL injection is a code injection technique that might destroy your database. It is one of the most common web hacking techniques.
168. **Q: What is a web server?** A: A web server is server software, or hardware dedicated to running said software, that can serve contents to the World Wide Web.
169. **Q: What is a proxy server?** A: A proxy server is a server application or appliance that acts as an intermediary for requests from clients seeking resources from servers that provide those resources.
170. **Q: What is a content delivery network (CDN)?** A: A CDN is a system of distributed servers (network) that deliver pages and other web content to a user, based on the geographic locations of the user, the origin of the webpage and the content delivery server.
171. **Q: What is a web crawler?** A: A web crawler, also known as a web spider or

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web robot, is a program or automated script which browses the World Wide Web in a methodical, automated manner. It is used to create a copy of all the visited pages for later processing by a search engine, that will index the downloaded pages to provide fast searches.

172. **Q: What is a cookie in terms of computing?** A: A cookie, in computing, is a small piece of data stored on the user's computer by the web browser while browsing a website. Cookies were designed to be a reliable mechanism for websites to remember stateful information or to record the user's browsing activity.
173. **Q: What is a firewall?** A: In computing, a firewall is a network security system that monitors and controls incoming and outgoing network traffic based on predetermined security rules.
174. **Q: What is the cloud in terms of computing?** A: The cloud, in computing, refers to servers that are accessed over the Internet, and the software and databases that run on those servers.
175. **Q: What is Software as a Service (SaaS)?** A: Software as a Service (SaaS) is a software licensing and delivery model in which software is licensed on a subscription basis and is centrally hosted.
176. **Q: What is Infrastructure as a Service (IaaS)?** A: Infrastructure as a Service (IaaS) is an instant computing infrastructure, provisioned and managed over the internet.

177. **Q: What is Platform as a Service (PaaS)?** A: Platform as a Service (PaaS) is a type of cloud computing service that provides a platform allowing customers to develop, run, and manage applications without the complexity of building and maintaining the infrastructure typically associated with developing and launching an app.

178. **Q: What is the difference between lossy and lossless compression?** A: Lossless compression is a method of data compression in which the size is reduced without sacrificing the quality of the data. Lossy compression is the method of compression that eliminates data that is not noticeable.

179. **Q: What is a pixel?** A: A pixel is the smallest unit of a digital image or graphic that can be displayed and represented on a digital display device.

180. **Q: What is an operating system?** A: An operating system (OS) is system software that manages computer hardware, software resources, and provides various services for computer programs.

181. **Q: What is the difference between a process and a thread in computing?** A: A process is an instance of a computer program that is being executed. It contains the program code and its current activity. A thread is a component of a process. Multiple threads can exist within one process, executing concurrently and sharing resources.

182. **Q: What is a deadlock in computing?** A: In computing, a deadlock is a state in which each member of a group is waiting for some other member to take action, such as sending a message or more commonly releasing a lock.

183. **Q: What is a race condition in computing?** A: A race condition occurs in computing when two or more threads can access shared data and they try to change it at the same time. As a result, the values of variables may be unpredictable and vary depending on the timings of context switches of the processes.

184. **Q: What is a kernel in computing?** A: In computing, the kernel is the central component of most computer operating systems; it is a bridge between applications and the actual data processing done at the hardware level.

185. **Q: What is a device driver?** A: A device driver is a particular form of software application that is designed to

continue

enable interaction with hardware devices. Without the required device driver, the corresponding hardware device fails to work.

186. **Q: What is a shell in computing?** A: In computing, a shell is a user interface for access to an operating system's services. In general, operating system shells use either a command-line interface (CLI) or graphical user interface (GUI), depending on a computer's role and particular operation.

187. **Q: What is the difference between a compiler and an interpreter?** A: A compiler translates the code written in one language to some other language without changing the meaning of the program. An interpreter, on the other hand, directly executes the instructions written in a programming or scripting language without previously converting them to an object code or machine code.

188. **Q: What is Unicode?** A: Unicode is a computing industry standard for the consistent encoding, representation, and handling of text expressed in most of the world's writing systems.
189. **Q: What is BIOS in computing?** A: The BIOS (Basic Input/Output System) is a chip that contains the first code run by a PC when powered on ('boot firmware'). When the PC starts up, the first job for the BIOS is the power-on self-test, which initializes and identifies system devices such as the CPU, RAM, video display card, keyboard and mouse, hard disk drive, optical disc drive, and other hardware.
190. **Q: What is a file format?** A: A file format is a standard way that information is encoded for storage in a computer file. It specifies how bits are used to encode information in a digital storage medium.
191. **Q: What is the difference between a file format and a file extension?** A: A file format is the structure in which information is stored (encoded) in a computer file. A file extension is a suffix at the end of a filename, which indicates what kind of file it is.
192. **Q: What is a zip file?** A: A zip file is a compressed file. It is used to make large files smaller, and collections of files take up less space, typically for the purpose of archiving or transferring.
193. **Q: What is a PDF?** A: PDF stands for Portable Document Format. It's a file format that captures all the elements of a printed document as an electronic image that you can view, navigate, print, or forward to someone else.
194. **Q: What is HTTP?** A: HTTP stands for Hypertext Transfer Protocol. It is the set of rules for transferring files (text, graphic images, sound, video, and other multimedia files) on the world wide web.
195. **Q: What is HTTPS?** A: HTTPS stands for Hypertext Transfer Protocol Secure. It is the secure version of HTTP, the protocol over which data is sent between your browser and the website that you are connected to. The 'S' at the end of HTTPS stands for 'Secure', which means all communications between your browser and the website are encrypted.
196. **Q: What is an IP address?** A: An IP address, or simply an "IP," is a unique address that identifies a device on the Internet or a local network.
197. **Q: What is the difference between static and dynamic IP addresses?** A: A static IP address doesn't change, while a dynamic IP address does change. Your ISP uses a dynamic IP address to provide you with an Internet connection.
198. **Q: What is a URL?** A: A URL (Uniform Resource Locator) is a reference to a web resource that specifies its location on a computer network and a mechanism