

Software Engineering Fundamentals

Software Engineering · Answer Key · 20 Questions

1. What is the first step in the traditional software development lifecycle (SDLC)?

- A) Coding
- B) Testing
- C) Requirements Analysis**
- D) Deployment

2. Which term refers to the human-readable instructions written by a programmer?

- A) Source code**
- B) Binary code
- C) Machine language
- D) Hardware

3. Which of these is a popular high-level programming language used for web development and data science?

- A) Python**
- B) HTML
- C) Assembly
- D) Binary

4. What is the primary purpose of a 'compiler' in software engineering?

- A) To fix hardware issues
- B) To translate source code into machine code**
- C) To design user interfaces
- D) To delete unused files

5. What does the acronym 'IDE' stand for in programming?

- A) Integrated Development Environment**
- B) Internal Data Engine
- C) Internet Design Element
- D) Initial Development Entry

6. Which of these is an example of an Operating System?

- A) Microsoft Windows**
- B) Visual Studio
- C) Google Chrome
- D) Adobe Photoshop

7. In software engineering, what is a 'bug'?

- A) A type of hardware
- B) A mistake or error in code**
- C) A virus from the internet
- D) A physical computer part

8. Which version control system is most widely used by software engineers to track changes in code?

- A) Git**
- B) SQL
- C) HTML5
- D) Java

9. What is the function of a database in software applications?

- A) To store and organize data**
- B) To display graphics
- C) To send emails
- D) To connect to Wi-Fi

10. What does 'HTML' stand for?

- A) HyperText Markup Language**
- B) High Tech Machine Language
- C) Hyperlink Text Management Logic
- D) Home Tool Markup Layout

11. Which process involves checking software for errors before it is released to users?

- A) Testing**
- B) Deployment
- C) Compilation
- D) Defragmentation

12. What is the role of a 'back-end' developer?

- A) Building the server-side logic and databases**
- B) Designing the website buttons
- C) Creating the physical computer case
- D) Writing the computer manual

13. Which file extension typically indicates a Python script?

- A) .py**
- B) .java
- C) .html
- D) .exe

14. What is an algorithm in the context of computer science?

- A) A step-by-step procedure for calculations**
- B) A type of computer hardware
- C) A graphical user interface
- D) A brand of software

15. Which of these describes 'Open Source' software?

- A) Software with source code available for anyone to modify**
- B) Software that only runs on one computer
- C) Software that is illegal to share
- D) Software that is only for video games

16. What does a 'variable' do in programming?

- A) Stores data values**
- B) Calculates high-speed graphics
- C) Connects to the internet
- D) Displays the computer monitor

17. Which company created the Java programming language?

- A) Sun Microsystems**
- B) Apple
- C) Microsoft
- D) Nintendo

18. What is the purpose of 'comments' in source code?

- A) To explain code to human readers**
- B) To speed up the program
- C) To encrypt the data
- D) To replace the compiler

19. Which symbol is commonly used to denote a comment in Python?

- A) #**
- B) %
- C) &
- D) \$

20. What is the primary function of a web browser?

A) To render and display web pages

B) To write software code

C) To repair broken hardware

D) To create 3D models