

Fundamentals of Software Engineering

Software Engineering · Answer Key · 18 Questions

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

- A) To play music from a computer
- B) To translate source code into machine code**
- C) To draw pictures on the screen
- D) To connect the computer to the internet

2. Which phase of the software development life cycle (SDLC) comes immediately after the coding phase?

- A) Requirements gathering
- B) System design
- C) Testing**
- D) Deployment

3. What is an 'algorithm' in the context of computer programming?

- A) A type of hardware component
- B) A step-by-step set of instructions to solve a problem**
- C) A physical storage device
- D) A color scheme for websites

4. What is a 'bug' in a computer program?

- A) A tiny insect inside the computer case
- B) A feature that makes the program faster
- C) An error or flaw that prevents the program from working correctly**
- D) A type of high-level programming language

5. Which of these is a popular high-level programming language often used for web development and data analysis?

- A) Python**
- B) Brick
- C) Hammer
- D) Screwdriver

6. What does the term 'debugging' mean in software engineering?

- A) Designing a new user interface
- B) Writing the first line of code
- C) The process of finding and removing errors in code**
- D) Installing a new operating system

7. What is a 'variable' used for in a computer program?

- A) To permanently damage the hardware
- B) To store information that can be changed**
- C) To measure the speed of the internet
- D) To shut down the computer automatically

8. What is the purpose of a version control system like Git?

- A) To keep track of changes to files over time**
- B) To prevent computers from overheating
- C) To speed up the internet connection
- D) To create 3D animations

9. What is the main function of an Operating System (OS)?

- A) To browse the internet only
- B) To manage computer hardware and software resources**
- C) To write code for mobile apps
- D) To store photos in the cloud

10. What is meant by the term 'open source' software?

- A) Software that costs a lot of money to download
- B) Software where the source code is made available for anyone to inspect and modify**
- C) Software that can only be used on weekends
- D) Software that is hidden from the user

11. Which language is primarily used for creating the structure and content of web pages?

- A) HTML**
- B) Java
- C) Python
- D) SQL

12. What is a 'loop' in programming?

- A) A way to break the computer
- B) A set of instructions that repeats until a condition is met**
- C) A tool to delete files permanently
- D) A physical connection between two computers

13. In software engineering, what is 'documentation'?

- A) A collection of written information explaining how software works**
- B) A list of all the bugs found in a game
- C) A method for upgrading hardware
- D) A type of programming language

14. What is a 'database' used for in software engineering?

A) To organize and store large amounts of data

B) To display graphics on a monitor

C) To provide power to the motherboard

D) To connect a mouse to the computer

15. What is the 'user interface' (UI) of a software application?

A) The internal wiring of the computer

B) The part of the software that the user interacts with

C) The company that sells the software

D) The electricity that runs the program

16. What does the acronym 'API' stand for in software development?

A) Application Programming Interface

B) Automated Program Installation

C) Advanced Processing Instruction

D) Applied Peripheral Interaction

17. Which of these best describes a 'comment' in computer code?

A) An error message sent to the user

B) A note written by a programmer to explain the code to humans

C) A command that tells the computer to stop running

D) A graphic icon used in a menu

18. What is 'cloud computing' in the context of software?

A) Using servers hosted on the internet to store and process data

B) A weather forecasting software program

C) Building computers in the sky

D) A type of hardware made from recycled materials