Revision

Development refers to the process of growth, progress, or evolution in various contexts. In a general sense, it involves the transformation of something from an initial state to a more advanced or mature state. This can apply to various fields, including:

> **Software Development:** The process of designing, coding, testing, and maintaining software applications. It involves converting user needs and ideas into functional software products.

1. What is the purpose of the Model-View-Controller (MVC) architectural pattern?
    - **Answer:** The MVC pattern separates an application into three interconnected components: the Model (data), the View (user interface), and the Controller (business logic). This separation allows for efficient code organization and reusability.
2. What is the difference between `==` and `===` in JavaScript?
    - **Answer:** In JavaScript, `==` checks for equality with type conversion, while `===` checks for strict equality without type conversion.
3. What is Continuous Integration (CI)?
    - **Answer:** Continuous Integration is a development practice where developers regularly merge their code changes into a shared repository, followed by automated testing to detect issues early.
4. What is the role of RESTful APIs in web development?
    - **Answer:** RESTful APIs allow different software applications to communicate over the web using standard HTTP methods, providing a stateless, scalable, and easily maintainable interface.
5. What is the purpose of dependency injection in software development?
    - **Answer:** Dependency injection is a design pattern used to achieve Inversion of Control (IoC) by passing dependencies into a class instead of the class instantiating them, which improves code modularity and testing.
6. What is the difference between synchronous and asynchronous programming?
    - **Answer:** Synchronous programming executes tasks one after another, blocking further execution until the current task is completed. Asynchronous programming allows tasks to run concurrently, with operations not blocking the execution flow.
7. What is a microservices architecture?
    - **Answer:** Microservices architecture is a design pattern where an application is divided into small, independent services that communicate over a network. Each service handles a specific business function and can be deployed and scaled independently.
8. What is the purpose of version control systems like Git?

    - **Answer:** Version control systems like Git manage changes to source code over time, allowing developers to track modifications, revert to previous versions, and collaborate on projects more effectively.
9. **Question:** What is the role of unit testing in software development?
    - **Answer:** Unit testing involves testing individual components or units of code to ensure they function as intended, helping catch bugs early in the development process.
10. What is Agile methodology in software development?
    - **Answer:** Agile is an iterative approach to software development that emphasizes collaboration, customer feedback, and small, rapid releases to adapt to changing requirements.