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**456.Do you think Java Enums are more powerful than integer constants?**

**457.Why do we use static initializers in Java?**

**458.Your client is complaining that your code is throwing NoClassDefFoundError or NoSuchMethodError, even though you are able to compile your code without error and method exists in your code. What could be the reason behind this?**

**459.How can you check if a String is a number by using regular expression?**

**460.What is the difference between the expressions String s = "Temporary" and String s = new String("Temporary ")? Which one is better and more efficient?**

**461.In Java, can two equal objects have the different hash code?**

**462.How can we print an Array in Java?**

**463.Is it ok to use random numbers in the implementation of hashCode() method in Java?**

**464.Between two types of dependency injections, constructor injection and setter dependency injection, which one is better?**

**465.What is the difference between DOM and SAX parser in Java?**

**466.Between Enumeration and Iterator, which one has better performance in Java?**

**467.What is the difference between pass by reference and pass by value?**

**468.What are the different ways to sort a collection in Java?**

**469.Why Collection interface doesn't extend Cloneable and Serializable interfaces?**

**470.What is the difference between a process and a thread in Java?**

**471.What are the benefits of using an unordered array over an ordered array?**

**472.Between HashSet and TreeSet collections in Java, which one is better?**

**473.When does JVM call the finalize() method?**

**474.When would you use Serial Garbage collector or Throughput Garbage collector in Java?**

**475.In Java, if you set an object reference to null, will the Garbage Collector immediately free the memory held by that object?**

**476.How can you make an Object eligible for Garbage collection in Java?**

**477.When do you use Exception or Error in Java? What is the difference between these two?**

**478.What is the advantage of PreparedStatement over Statement class in Java?**

**479.In Java, what is the difference between throw and throws keywords?**

**480.What happens to the Exception object after the exception handling is done?**

**481.How do you find which client machine is sending request to your servlet in Java?**

**482.What is the difference between a Cookie and a Session object in Java?**

**483.Which protocol does Browser and Servlet use to communicate with each other?**

**484. What is HTTP Tunneling?**

**485.Why do we use JSP instead of Servlet in Java?**

**486.Is empty ‘.java’ file name a valid source file name in Java?**

**487.How do you implement Servlet Chaining in Java?**

**488.Can you instantiate this class?**

**489.Why Java does not support operator overloading?**

**490.Why String class is Immutable or Final in Java?**

**491.What is the difference between sendRedirect and forward methods?**

**492.How do you fix your Serializable class, if it contains a member that is not serializable?**

**493.What is the use of run time polymorphism in Java?**

**494.What are the rules of method overloading and method overriding in Java?**

**495.What is the difference between a class and an object in Java?**

**496.Can we create an abstract class that extends another abstract class?**

**497.Why do you use Upcasting or Downcasting in Java ?**

**498.What is the reason to organize classes and interfaces in a package in Java?**

**499.What is information hiding in Java?**

**500.Why does Java provide default constructor?**

**501.What is the difference between super and this keywords in Java?**

**502.What is the advantage of using Unicode characters in Java?**

**503.Can you override an overloaded method in Java?**

**504.How can we change the heap size of a JVM?**

**505.Why should you define a default constructor in Java?**

**506.How will you make an Object Immutable in Java?**

**507.How can you prevent SQL Injection in Java Code?**

**508.Which two methods should be always implemented by HashMap key Object?**

**509.Why an Object used as Key in HashMap should be Immutable?**

**510.How can we share an object between multiple threads?**

**511. How can you determine if your program has a deadlock?**

**JSP**

**512.What are the implicit objects in JSP?**

**513.How will you extend JSP code?**

**514.How will you handle runtime exceptions in JSP?**

**515.How will you prevent multiple submits of a page that come by clicking refresh button multiple times?**

**516.How will you implement a thread safe JSP page?**

**517.How will you include a static file in a JSP page?**

**518.What are the lifecycle methods of a JSP?**

**519.What are the advantages of using JSP in web architecture?**

**520.What is the advantage of JSP over Javascript?**

**521.What is the Lifecycle of JSP?**

**522.What is a JSP expression?**

**523.What are the different types of directive tags in JSP?**

**524.What is session attribute in JSP?**

**525.What are the different scopes of a JSP object?**

**526.What is pageContext in JSP?**

**527.What is the use of jsp:useBean in JSP?**

**528.What is difference between include Directive and include Action of JSP?**

**529.How will you use other Java files of your application in JSP code?**

**530.How will you use an existing class and extend it to use in the JSP?**

**531.Why \_jspService method starts with \_ symbol in JSP?**

**532.Why do we use tag library in JSP?**

**533.What is the different type of tag library groups in JSTL?**

**534.How will you pass information from one JSP to another JSP?**

**535.How will you call a stored procedure from JSP?**

**536.Can we override \_jspService() method in JSP?**

**537.What is a directive in JSP?**

**538.How will you implement Session tracking in JSP?**

**539.How do you debug code in JSP?**

**540.How will you implement error page in JSP?**

**541.How will you send XML data from a JSP?**

**542.What happens when we request for a JSP page from web browser?**

**543.How will you implement Auto Refresh of page in JSP?**

**544.What are the important status codes in HTTP?**

**545.What is the meaning of Accept attribute in HTTP header?**

**546.What is the difference between Expression and Scriptlet in JSP?**

**547.How will you delete a Cookie in JSP?**

**548.How will you use a Cookie in JSP?**

**549.What is the main difference between a Session and Cookie in JSP?**

**550.How will you prevent creation of session in JSP?**

**551.What is an output comment in JSP?**

**552.How will you prevent caching of HTML output by web browser in JSP?**

**553.How will you redirect request to another page in browser in JSP code?**

**554.What is the difference between sendRedirect and forward in a JSP?**

**555.What is the use of config implicit object in JSP?**

**556.What is the difference between init-param and context-param?**

**557.What is the purpose of RequestDispatcher?**

**558.How can be read data from a Form in a JSP?**

**559.What is a filter in JSP?**

**560.How can you upload a large file in JSP?**

**561.In which scenario, Container initializes multiple JSP/Servlet objects?**

### **Java Design Patterns**

**562.When will you use Strategy Design Pattern in Java?**

**563.What is Observer design pattern?**

**564.What are the examples of Observer design pattern in JDK?**

**565.How Strategy design pattern is different from State design pattern in Java?**

- 566. Can you explain Decorator design pattern with an example in Java?**
- 567. What is a good scenario for using Composite design Pattern in Java?**
- 568. Have you used Singleton design pattern in your Java project?**
- 569. What are the main uses of Singleton design pattern in Java project?**
- 570. Why `java.lang.Runtime` is a Singleton in Java?**
- 571. What is the way to implement a thread-safe Singleton design pattern in Java?**
- 572. What are the examples of Singleton design pattern in JDK?**
- 573. What is Template Method design pattern in Java?**
- 574. What are the examples of Template method design pattern in JDK?**
- 575. Can you tell some examples of Factory Method design pattern implementation in Java?**
- 576. What is the benefit we get by using static factory method to create object?**
- 577. What are the examples of Builder design pattern in JDK?**
- 578. What are the examples of Abstract Factory design pattern in JDK?**
- 579. What are the examples of Decorator design pattern in JDK?**
- 580. What are the examples of Proxy design pattern in JDK?**
- 581. What are the examples of Chain of Responsibility design pattern in JDK?**
- 582. What are the main uses of Command design pattern?**
- 583. What are the examples of Command design pattern in JDK?**
- 584. What are the examples of Interpreter design pattern in JDK?**

- 585.What are the examples of Mediator design pattern in JDK?**
- 586.What are the examples of Strategy design pattern in JDK?**
- 587.What are the examples of Visitor design pattern in JDK?**
- 588.How Decorator design pattern is different from Proxy pattern?**
- 589.What are the different scenarios to use Setter and Constructor based injection in Dependency Injection (DI) design pattern?**
- 590.What are the different scenarios for using Proxy design pattern?**
- 591.What is the main difference between Adapter and Proxy design pattern?**
- 592.When will you use Adapter design pattern in Java?**
- 593.What are the examples of Adapter design pattern in JDK?**
- 594.What is the difference between Factory and Abstract Factory design pattern?**
- 595.What is Open/closed design principle in Software engineering?**
- 596.What is SOLID design principle?**
- 597.What is Builder design pattern?**
- 598.What are the different categories of Design Patterns used in Object Oriented Design?**
- 599.What is the design pattern suitable to access elements of a Collection?**
- 600.How can we implement Producer Consumer design pattern in Java?**
- 601.What design pattern is suitable to add new features to an existing object?**
- 602.Which design pattern can be used when to decouple abstraction from the implementation?**

**603. Which is the design pattern used in Android applications?**

**604. How can we prevent users from creating more than one instance of singleton object by using clone() method?**

**605. What is the use of Interceptor design pattern?**

**606. What are the Architectural patterns that you have used?**

**607. What are the popular uses of Façade design pattern?**

**608. What is the difference between Builder design pattern and Factory design pattern?**

**609. What is Memento design pattern?**

**610. What is an AntiPattern?**

**611. What is a Data Access Object (DAO) design pattern?**

**Spring Questions**

Spring framework là 1 framework giúp lập trình viên java phát triển java backend, java web 1 cách dễ dàng, nhanh chóng, hỗ trợ lập trình viên java có các tính năng, công cụ lập trình vi java, java web mà không phiền tiring tốn thời gian xây dựng ứng dụng.

**612. What is Spring framework?**

Spring giúp lập trình Java nhanh hơn, dễ dàng hơn và an toàn hơn cho mọi người.

**613. What are the benefits of Spring framework in software development?**

The Core Container consists of the Core, Beans, Context and Expression modules.

**614. What are the modules in Core Container of Spring framework?**

The Core Container consists of the Core, Beans, Context and Expression modules.

**615. What are the modules in Data Access/Integration layer of Spring framework?**

The Data Access/Integration layer consists of the JDBC, ORM, OXM, JMS and Transaction modules.

**616. What are the modules in Web layer of Spring framework?**

The Web layer consists of the Web, Web-Servlet and Web-Portlet modules.

**617. What is the main use of Core Container module in Spring framework?**

**618. What kind of testing can be done in Spring Test Module?**

Integration testing, unit testing, Security testing, Data testing, Web testing

**619. What is the use of BeanFactory in Spring framework?**

BeanFactory cung cấp một cách cơ bản nâng cao có khả năng quản lý các beans, sử dụng bộ khai báo phông tin lưu trữ nào.

**620. Which is the most popular implementation of BeanFactory in Spring?**

**621. What is XMLBeanFactory in Spring framework?**

- 622.What are the uses of AOP module in Spring framework?**
- 623.What are the benefits of JDBC abstraction layer module in Spring framework?**
- 624.How does Spring support Object Relational Mapping (ORM) integration?**
- 625.How does Web module work in Spring framework?**
- 626.What are the main uses of Spring MVC module?**
- 627.What is the purpose of Spring configuration file?**
- 628.What is the purpose of Spring IoC container?**
- 629.What is the main benefit of Inversion of Control (IOC) principle?**
- 630.Does IOC containers support Eager Instantiation or Lazy loading of beans?**
- 631.What are the benefits of ApplicationContext in Spring?**
- 632.How will you implement ApplicationContext in Spring framework?**
- 633.Explain the difference between ApplicationContext and BeanFactory in Spring?**
- 634.Between ApplicationContext and BeanFactory which one is preferable to use in Spring?**
- 635.What are the main components of a typical Spring based application?**
- 636.Explain Dependency Injection (DI) concept in Spring framework?**
- 637.What are the different roles in Dependency Injection (DI)?**
- 638.Spring framework provides what kinds of Dependency Injection mechanism?**
- 639.In Spring framework, which Dependency Injection is better? Constructor-based DI or Setter-based DI?**

- 640.What are the advantages of Dependency Injection (DI)?**
- 641.What are the disadvantages of Dependency Injection (DI)?**
- 642.What is a Spring Bean?**
- 643.What does the definition of a Spring Bean contain?**
- 644.What are the different ways to provide configuration metadata to a Spring Container?**
- 645.What are the different scopes of a Bean supported by Spring?**
- 646.How will you define the scope of a bean in Spring?**
- 647.Is it safe to assume that a Singleton bean is thread safe in Spring Framework?**
- 648.What are the design-patterns used in Spring framework?**
- 649.What is the lifecycle of a Bean in Spring framework?**
- 650.What are the two main groups of methods in a Bean's lifecycle?**
- 651.Can we override main lifecycle methods of a Bean in Spring?**
- 652.What are Inner beans in Spring?**
- 653.How can we inject a Java Collection in Spring framework?**
- 654.What is Bean wiring in Spring?**
- 655.What is Autowiring in Spring?**
- 656.What are the different modes of Autowiring supported by Spring?**
- 657.What are the cases in which Autowiring may not work in Spring framework?**
- 658.Is it allowed to inject null or empty String values in Spring?**
- 659.What is a Java-based Configuration in Spring?**

- 660.What is the purpose of @Configuration annotation?**
- 661.What is the difference between Full @Configuration and 'lite' @Beans mode?**
- 662.In Spring framework, what is Annotation-based container configuration?**
- 663.How will you switch on Annotation based wiring in Spring?**
- 664.What is @Autowired annotation?**
- 665.What is @Required annotation?**
- 666.What are the two ways to enable RequiredAnnotationBeanPostProcessor in Spring?**
- 667.What is @Qualifier annotation in Spring?**
- 668.How Spring framework makes JDBC coding easier for developers?**
- 669.What is the purpose of JdbcTemplate?**
- 670.What are the benefits of using Spring DAO?**
- 671.What are the different ways to use Hibernate in Spring?**
- 672.What types of Object Relational Mapping (ORM) are supported by Spring?**
- 673.How will you integrate Spring and Hibernate by using HibernateDaoSupport?**
- 674.What are the different types of the Transaction Management supported by Spring framework?**
- 675.What are the benefits provided by Spring Framework's Transaction Management?**
- 676.Given a choice between declarative and programmatic Transaction Management, which method will you choose?**

**677.What is Aspect Oriented Programming (AOP)**

**678.What is an Aspect in Spring?**

**679.In Spring AOP, what is the main difference between a Concern and a Cross cutting concern?**

**680.What is a Joinpoint in Spring AOP?**

**681.What is an Advice in Spring AOP?**

**682.What are the different types of Advice in Spring AOP?**

**683.What is a Pointcut in Spring AOP?**

**684.What is an Introduction in Spring AOP?**

**685.What is a Target object in Spring AOP?**

**686.What is a Proxy in Spring AOP?**

**687.What are the different types of AutoProxy creators in Spring?**

**688.What is Weaving in Spring AOP?**

**689.In Spring AOP, Weaving is done at compile time or run time?**

**690.What is XML Schema-based Aspect implementation?**

**691.What is Annotation-based aspect implementation in Spring AOP?**

**692.How does Spring MVC framework work?**

**693.What is DispatcherServlet?**

**694.Can we have more than one DispatcherServlet in Spring MVC?**

**695.What is WebApplicationContext in Spring MVC?**

**696.What is Controller in Spring MVC framework?**

**697.What is @RequestMapping annotation in Spring?**

**698.What are the main features of Spring MVC?**

**699.What is the difference between a Singleton and Prototype bean in Spring?**

**700.How will you decide which scope- Prototype or Singleton to use for a bean in Spring?**

**701.What is the difference between Setter and Constructor based Dependency Injection (DI) in Spring framework?**

**702.What are the drawbacks of Setter based Dependency Injection (DI) in Spring?**

**703.What are the differences between Dependency Injection (DI) and Factory Pattern?**

**704.In Spring framework, what is the difference between FileSystemResource and ClassPathResource ?**

**705.Name some popular Spring framework annotations that you use in your project?**

**706.How can you upload a file in Spring MVC Application?**

**707.What are the different types of events provided by Spring framework?**

**708.What is the difference between DispatcherServlet and ContextLoaderListener in Spring?**

**709.How will you handle exceptions in Spring MVC Framework?**

**710.What are the best practices of Spring Framework?**

**711. What is Spring Boot?**

**Hibernate**

**712.What is Hibernate framework?**

- 713.What is an Object Relational Mapping (ORM)?**
- 714.What is the purpose of Configuration Interface in Hibernate?**
- 715.What is Object Relational Impedance Mismatch?**
- 716.What are the main problems of Object Relational Impedance Mismatch?**
- 717.What are the key characteristics of Hibernate?**
- 718.Can you tell us about the core interfaces of Hibernate framework?**
- 719.How will you map the columns of a DB table to the properties of a Java class in Hibernate?**
- 720.Does Hibernate make it mandatory for a mapping file to have .hbm.xml extension?**
- 721.What are the steps for creating a SessionFactory in Hibernate?**
- 722.Why do we use POJO in Hibernate?**
- 723.What is Hibernate Query Language (HQL)?**
- 724.How will you call a stored procedure in Hibernate?**
- 725.What is Criteria API in Hibernate?**
- 726.Why do we use HibernateTemplate?**
- 727.How can you see SQL code generated by Hibernate on console?**
- 728.What are the different types of collections supported by Hibernate?**
- 729.What is the difference between session.save() and session.saveOrUpdate() methods in Hibernate?**
- 730.What are the advantages of Hibernate framework over JDBC?**
- 731.How can we get statistics of a SessionFactory in Hibernate?**

**732.What is the Transient state of an object in Hibernate?**

**733.What is the Detached state of an object in Hibernate?**

**734.What is the use of Dirty Checking in Hibernate?**

**735.What is the purpose of Callback interface in Hibernate?**

**736.What are the different ORM levels in Hibernate?**

**737.What are the different ways to configure a Hibernate application?**

**738.What is Query Cache in Hibernate?**

**739.What are the different types of Association mappings supported by Hibernate?**

**740.What are the different types of Unidirectional Association mappings in Hibernate?**

**741.What is Unit of Work design pattern?**

**742.In Hibernate, how can an object go in Detached state?**

**743.How will you order the results returned by a Criteria in Hibernate?**

**744.How does Example criterion work in Hibernate?**

**745.How does Transaction management work in Hibernate?**

**746.How can we mark an entity/collection as immutable in Hibernate?**

**747.What are the different options to retrieve an object from database in Hibernate?**

**748.How can we auto-generate primary key in Hibernate?**

**749.How will you re-attach an object in Detached state in Hibernate?**

**750.What is the first level of cache in Hibernate?**

**751.What are the different second level caches available in Hibernate?**

**752.Which is the default transaction factory in Hibernate?**

**753.What are the options to disable second level cache in Hibernate?**

**754.What are the different fetching strategies in Hibernate?**

**755.What is the difference between Immediate fetching and Lazy collection fetching?**

**756.What is ‘Extra lazy fetching’ in Hibernate?**

**757.How can we check is a collection is initialized or not under Lazy Initialization strategy?**

**758.What are the different strategies for cache mapping in Hibernate?**

**759.What is the difference between a Set and a Bag in Hibernate?**

**760.How can we monitor the performance of Hibernate in an application?**

**761.How can we check if an Object is in Persistent, Detached or Transient state in Hibernate?**

**762.What is ‘the inverse side of association’ in a mapping?**

**763.What is ORM metadata?**

**764.What is the difference between load() and get() method in Hibernate?**

**765.When should we use get() method or load() method in Hibernate?**

**766.What is a derived property in Hibernate?**

**767.How can we use Named Query in Hibernate?**

**768.What are the two locking strategies in Hibernate?**

**769.What is the use of version number in Hibernate?**

**770.What is the use of session.lock() method in Hibernate?**

**771.What inheritance mapping strategies are supported by Hibernate?**

## **Maven**

**772.What is Maven?**

**773.What are the main features of Maven?**

**774.What areas of a Project can you manage by using Maven?**

**775.What are the main advantages of Maven?**

**776.Why do we say “Maven uses convention over configuration”?**

**777.What are the responsibilities of a Build tool like Maven?**

**778.What are the differences between Ant and Maven?**

**779.What is MOJO in Maven?**

**780.What is a Repository in Maven?**

**781.What are the different types of repositories in Maven?**

**782.What is a local repository in Maven?**

**783.What is a central repository in Maven?**

**784.What is a Remote repository in Maven?**

**785.Why we should not store jars in CVS or any other version control system instead of Maven repository?**

**786.Can anyone upload JARS or artifacts to Central Repository?**

**787.What is a POM?**

**788.What is Super POM?**

**789.What are the main required elements in POM file?**

**790.What are the phases in Build lifecycle in Maven?**

**791.What command will you use to package your Maven project?**

**792.What is the format of fully qualified artifact name of a Maven project?**

**793.What is an Archetype in Maven?**

**794.What is the command in Maven to generate an Archetype?**

**795.What are the three main build lifecycles of Maven?**

**796.What are the main uses of a Maven plugin?**

**797.How will you find the version of a plugin being used?**

**798.What are the different types of profile in Maven? Where will you define these profiles?**

**799.What are the different setting files in Maven? Where will you find these files?**

**800.What are the main elements we can find in settings.xml?**

**801.How will you check the version of Maven in your system?**

**802.How will you verify if Maven is installed on Windows?**

**803.What is a Maven artifact?**

**804.What are the different dependency scopes in Maven?**

**805.How can we exclude a dependency in Maven?**

**806.How Maven searches for JAR corresponding to a dependency?**

**807.What is a transitive dependency in Maven?**

**808.What are Excluded dependencies in Maven?**

**809.What are Optional dependencies in Maven?**

**810.Where will you find the class files after compiling a Maven project successfully?**

**811. What are the default locations for source, test and build directories in Maven?**

**812. What is the result of jar:jar goal in Maven?**

**813. How can we get the debug or error messages from the execution of Maven?**

**814. What is the difference between a Release version and SNAPSHOT version in Maven?**

**815. How will you run test classes in Maven?**

**816. Sometimes Maven compiles the test classes but doesn't run them? What could be the reason for it?**

**817. How can we skip the running of tests in Maven?**

**818. Can we create our own directory structure for a project in Maven?**

**819. What are the differences between Gradle and Maven?**

**820. What is the difference between Inheritance and Multi-module in Maven?**

**821. What is Build portability in Maven?**

**GIT**

**822. How can we see n most recent commits in GIT?** [Sử dụng câu lệnh: git log](#)

**823. How can we know if a branch is already merged into master in GIT?**  
[git branch --merged branch2](#)

**824. What is the purpose of git stash drop?**

**825. What is the HEAD in GIT?** [Nó nh là mt con tr, tro ti branch hoc commit hin ang c check out.](#)

**826. What is the most popular branching strategy in GIT?**

[Git Flow là chiến lược phân nhánh Git phổ biến nhất. Nó xoay quanh việc có 2 branch: main và develop](#)

**827. What is SubGit?**

**828. What is the use of git instaweb?**

**829.What are git hooks?**

**830.What is GIT?** Git là mt h thng kim soát phiên bn phân tán mã ngun m và min phí

Repository trong GIT là mt ni trung tâm lu tr và qun lý mã ngun và tài ssn liên quan khác.

**831.What is a repository in GIT?** Nó cho phép các nhà phát triển theo dõi các thay đổi, qun lý các phiên bn và cng tác cùng nhau trên cùng mt dán. Repository có th là mt kho lu tr a phng hoc t xa

**832.What are the main benefits of GIT?**

- Phân tán: cho phép các nhà phát triển làm việc trên nhiều phiên bản cùng một lúc.
- Nhánh (branching): Git hỗ trợ việc tạo và quản lý nhánh một cách dễ dàng.
- Tính bảo mật:
- Hỗ trợ hiệu suất:

**833.What are the disadvantages of GIT?**

- Khó khăn về số lượng ban đầu có thể không rõ ràng.
- Kích thước kho lưu trữ lớn: Việc quản lý và sao lưu kho lưu trữ có thể tốn nhiều không gian.
- Xử lý các file lớn không tốt:

**834.What are the main differences between GIT and SVN?**

**835.How will you start GIT for your project?**

**836.What is git clone in GIT?** Tao một bản sao của repository học nhanh cụ thể trong repository

**837.How will you create a repository in GIT?**

**838.What are the different ways to start work in GIT?**

**839.GIT is written in which language?**

**840.What does ‘git pull’ command in GIT do internally?** Đầu tiên, nó tìm kiếm các thay đổi từ remote repository, sau đó áp dụng các thay đổi vào local branch.

**841.What does ‘git push’ command in GIT do internally?** Đầu tiên, nó gửi các commit từ local repository sang remote repository, sau đó nó cập nhật các thay đổi trên remote repository bao gồm các commit mới.

**842.What is git stash?**

**843.What is the meaning of ‘stage’ in GIT?**

**844. What is the purpose of git config command?** Cài đặt cấu hình Git cho local or remote project.

**845.How can we see the configuration settings of GIT installation?** git config --list

**846.How will you write a message with commit command in GIT?**

Theo sau câu lệnh "git commit" là "-m" và "thông báo". Cụ thể: git commit -m "message".

1. Ma Hash của commit hiện tại

2. Ma hash của commit cha

3. tác giả

4. date

5. commit message

**847.What is stored inside a commit object in GIT?**

**848.How many heads can you create in a GIT repository?** one head

**849.Why do we create branches in GIT?** Làm việc trực tiếp trong nhánh chính của repository trên Git sẽ vô cùng nguy hiểm. Vì có nguy cơ có những lỗi code (bug) vào project mà không thông qua việc review code. Vì vậy, tránh để lỗi xảy ra, bạn nên tạo một nhánh riêng để tiến hành исправление trong nó.

**850.What are the different kinds of branches that can be created in GIT?**

Loại nào cũng có thể tuân theo các loại sau: Main, Develop, Feature, Release, Hotfix.

**851.How will you create a new branch in GIT?** [git branch new\\_branch](#)

**852.How will you add a new feature to the main branch?**

1. git branch your\_feature\_name
2. add and commit new feature into branch your\_feature\_name.
3. git checkout main
4. git merge feature/your\_feature\_name

**853.What is a pull request in GIT?**

**854.What is merge conflict in GIT?**

**855.How can we resolve a merge conflict in GIT?**

**856.What command will you use to delete a branch?**

**857.What command will you use to delete a branch that has unmerged changes?**

**858.What is the alternative command to merging in GIT?**

**859.What is Rebasing in GIT?**

**860.What is the ‘Golden Rule of Rebasing’ in GIT?**

**861.Why do we use Interactive Rebasing in place of Auto Rebasing?**

**862.What is the command for Rebasing in Git?**

**863.What is the main difference between git clone and git remote?**

**864.What is GIT version control?**

**865.What GUI do you use for working on GIT?**

**866.What is the use of git diff command in GIT?**

**867.What is git rerere?**

**868.What are the three most popular version of git diff command?**

**869.What is the use of git status command?**

**870.What is the main difference between git diff and git status?**

**871.What is the use of git rm command in GIT?**

**872.What is the command to apply a stash?**

**873.Why do we use git log command?**

**874.Why do we need git add command in GIT?**

**875.Why do we use git reset command?**

**876.What does a commit object contain?**

**877.How can we convert git log messages to a different format?**

**878.What are the programming languages in which git hooks can be written?**

**879.What is a commit message in GIT?**

**880.How GIT protects the code in a repository?**

**881.How GIT provides flexibility in version control?**

**882.How can we change a commit message in GIT?**

**883.Why is it advisable to create an additional commit instead of amending an existing commit?**

**884.What is a bare repository in GIT?**

**885.How do we put a local repository on GitHub server?**

**886.How will you delete a branch in GIT?**

**887.How can we set up a Git repository to run code sanity checks and UAT tests just before a commit?**

**888.How can we revert a commit that was pushed earlier and is public now?**

**889.In GIT, how will you compress last n commits into a single commit?**

**890.How will you switch from one branch to a new branch in GIT?**

**891.How can we clean unwanted files from our working directory in GIT?**

**892.What is the purpose of git tag command?**

**893.What is cherry-pick in GIT?**

**894.What is shortlog in GIT?**

**895.How can you find the names of files that were changed in a specific commit?**

**896.How can we attach an automated script to run on the event of a new commit by push command?**

**897.What is the difference between pre-receive, update and post-receive hooks in GIT?**

**898.Do we have to store Scripts for GIT hooks within same repository?**

**899.How can we determine the commit that is the source of a bug in GIT?**

**900.How can we see differences between two commits in GIT?**

**901.What are the different ways to identify a commit in GIT?**

**902.When we run git branch <branchname>, how does GIT know the SHA-1 of the last commit?**

**903.What are the different types of Tags you can create in GIT?**

**904.How can we rename a remote repository?**

**905.Some people use git checkout and some use git co for checkout. How is that possible?**

**906.How can we see the last commit on each of our branch in GIT?**

**907.Is origin a special branch in GIT?**

**908.How can we configure GIT to not ask for password every time?**

**909.What are the four major protocols used by GIT for data transfer?**

**910.What is GIT protocol?**

**911.How can we work on a project where we do not have push access?**

**912.What is git grep?**

**913.How can you reorder commits in GIT?**

**914.How will you split a commit into multiple commits?**

**915.What is filter-branch in GIT?**

**916.What are the three main trees maintained by GIT?**

**917.What are the three main steps of working GIT?**

**918.What are ours and theirs merge options in GIT?**

**919.How can we ignore merge conflicts due to Whitespace?**

**920.What is git blame?**

**921.What is a submodule in GIT?**

**AWS**

**922.What do you know about AWS Region?**

**923.What are the important components of IAM?**

**924.What are the important points about AWS IAM?**

**925.What are the important features of Amazon S3?**

**926.What is the scale of durability in Amazon S3?**

**927.What are the Consistency levels supported by Amazon S3?**

**928.What are the different tiers in Amazon S3 storage?**

**929.How will you upload a file greater than 100 megabytes in Amazon S3?**

**930.What happens to an Object when we delete it from Amazon S3?**

**931.What is the use of Amazon Glacier?**

**932.Can we disable versioning on a version-enabled bucket in Amazon S3?**

**933.What are the use cases of Cross Region Replication Amazon S3?**

**934.Can we do Cross Region replication in Amazon S3 without enabling versioning on a bucket?**

**935.What are the different types of actions in Object Lifecycle Management in Amazon S3?**

**936.How do we get higher performance in our application by using Amazon CloudFront?**

**937.What is the mechanism behind Regional Edge Cache in Amazon CloudFront?**

**938.What are the benefits of Streaming content?**

**939.What is Lambda@Edge in AWS?**

**940.What are the different types of events triggered by Amazon CloudFront?**

**941.What is Geo Targeting in Amazon CloudFront?**

**942.What are the main features of Amazon CloudFront?**

**943.What are the security mechanisms available in Amazon S3?**

**Cloud Computing**

**944.What are the benefits of Cloud Computing?**

**945.What is On-demand computing in Cloud Computing?**

**946.What are the different layers of Cloud computing?**

**947.What resources are provided by Infrastructure as a Service (IAAS) provider?**

**948.What is the benefit of Platform as a Service?**

**949.What are the main advantages of PaaS?**

**950.What is the main disadvantage of PaaS?**

**951.What are the different deployment models in Cloud computing?**

**952.What is the difference between Scalability and Elasticity?**

**953.What is Software as a Service?**

**954.What are the different types of Datacenters in Cloud computing?**

**955.Explain the various modes of Software as a Service (SaaS) cloud environment?**

**956.What are the important things to care about in Security in a cloud environment?**

**957.Why do we use API in cloud computing environment?**

**958.What are the different areas of Security Management in cloud?**

**959.What are the main cost factors of cloud based data center?**

**960.How can we measure the cloud-based services?**

**961.How a traditional datacenter is different from a cloud environment?**

**962.How will you optimize availability of your application in a Cloud environment?**

**963.What are the requirements for implementing IaaS strategy in Cloud?**

**DOCKER**

**964.What is Docker?**

**965.What is the difference between Docker image and Docker container?**

**966.How will you remove an image from Docker?**

**967.How is a Docker container different from a hypervisor?**

**968.Can we write compose file in json file instead of yaml?**

**969.Can we run multiple apps on one server with Docker?**

**970.What are the common use cases of Docker?**

**971.What are the main features of Docker-compose?**

**972.What is the most popular use of Docker?**

**973.What is the role of open source development in the popularity of Docker?**

## **UNIX Shell**

**974.How will you remove all files in current directory? Including the files that are two levels down in a sub-directory.**

**975.What is the difference between the -v and -x options in Bash shell scripts?**

**976.What is a Filter in Unix command?**

**977.What is Kernel in Unix operating system?**

**978.What is a Shell in Unix OS?**

**979.What are the different shells in Unix that you know about?**

**980.What is the first character of the output in ls -l command ?**

**981.What is the difference between Multi-tasking and Multi-user environment?**

**982.What is Command Substitution in Unix?**

**983.What is an Inode in Unix?**

**984.What is the difference between absolute path and relative path in Unix file system?**

**985.What are the main responsibilities of a Unix Shell?**

**986.What is a Shell variable?**

**Microservices**

**987.What is a Microservice?**

**988.What are the benefits of Microservices architecture?**

**989.What is the role of architect in Microservices architecture?**

**990.What is the advantage of Microservices architecture over Service Oriented Architecture (SOA)?**

**991.Is it a good idea to provide a Tailored Service Template for Microservices development in an organization?**

**992.What are the disadvantages of using Shared libraries approach to decompose a monolith application?**

**993.What are the characteristics of a Good Microservice?**

**994.What is Bounded Context?**

**995.What are the points to remember during integration of Microservices?**

**996.Is it a good idea for Microservices to share a common database?**

**997.What is the preferred type of communication between Microservices? Synchronous or Asynchronous?**

**998.What is the difference between Orchestration and Choreography in Microservices architecture?**

**999.What are the issues in using REST over HTTP for Microservices?**

**1000. Can we create Microservices as State Machines?**

## **ACKNOWLEDGMENTS**