Promineo Tech Back-End Coding Bootcamp Week 7 Research Assignent

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Prompts

1. Research the SOLID principles of Object-Oriented Programming (OOP) as introduced by Robert Martin.

   The SOLID principles of OOP are a set of practices that are meant to be followed in the development of software for the purpose of properly maintaining and extending it as a project grows. The acronym of SOLID stands for: Single-responsibility Principle, Open-closed Principle, Liskov Substitution Principle, Interface Segregation Principle, and Dependency Inversion Principle. Single-Responsibility refers to the principle of a Class being responsible for a single function. Open-Closed refers to the principle of a class allowing for extension but not modification. Liskov Substitution refers to the principle that any subclass or derived class should be substitutable for their base or parent class. Interface Segregation refers to the principle that clients shouldn't be forced to implement interfaces it doesn't use or depend on methods they don't use. Dependency Inversion refers to the principle that entities must depend on abstractions, not on concretions and that higher-level modules shouldn't depend on lower level modules, but that they should depend on abstractions.

2. What are wildcards in MySQL? How are they useful?

   Wildcards in MySQL are specific characters (such as % or -) that allow the user to search through tables for complex data with relative ease. Normally, you'd have to perfectly match the characters of both strings before there is an output from comparison given. With wildcards, however, you can use either a single character or a group of characters to acheive the same result. Other advantages that wildcards present in MySQL are that they improve the performance of an application, saving time when you are filtering records in a table, helps makes complex queries into simple ones, and enables the development of strong search engines into large data-driven applications. The use of a Wildcard tends to work as follows: `SELECT * FROM tab_name WHERE column_name LIKE 'X%'` . For this example, 'tab_name' refers to the table being searched, 'column_name' refers to the specific column in the table being called, and ''X%'' refers to what wildcard is being utilized, with this instance would search for the data in the specified table and column to find a character at the

zero position of the String data (specifically an 'X', though whatever you input in place of the 'X' will be the character that gets searched for instead).

Sources

- https://www.digitalocean.com/community/conceptual-articles/s-o-l-i-d-the-first-five-principles-of-object-oriented-design
- https://www.javatpoint.com/mysql-wildcards