

1. What is SQL? What are relational databases?

SQL stands for structured query language and is a standard language that manipulates and deals with relational databases. It can also be used for database creation. A relational database stores data using tables, rows, columns, fields, and keys. It is called relational because it uses a structure that allows the program to identify and access data in relation to some other piece of data that is also stored in the database.

4. What is a PDO in PHP? Why do we need to use prepared statements?

Php needs pdo's to allow the web app to use SQL to retrieve data and display it on a page. PDO stands for PHP Data objects, which are essentially built-in classes. These Objects represent and control the connection to the database. The connection is established, and then queries can be run through it. PHP will use a PDO to take SQL statements as an input and return the result, storing it into a variable. Prepared statements are useful because they can guard against malicious SQL injection attacks. Prepared statements will run escaping functions to avoid these attacks, similar to avoiding XSS attacks. One must always prepare the statement before being run in sql.