Week 14 Research

By: Patrick Corcoran

The Jakarta Persistence API, formerly Java Persistence API, serves as a specification primarily focused on persistence, encompassing any mechanism by which Java objects can outlive the application process that created them. While not all Java objects require persistence, JPA enables the definition of which objects should be persisted and outlines how they should be persisted within Java applications. It's essential to note that JPA, in itself, is not a tool or framework but establishes a set of concepts to guide implementers. Originally influenced by Hibernate, JPA's object-relational mapping model has evolved. Despite its initial association with relational databases, some JPA implementations, like EclipseLink, have extended their functionality for use with NoSQL datastores, aligning with the trend of diversifying data storage solutions. The core distinction of JPA compared to JDBC lies in its ability to minimize the need to "think relationally." In JPA, persistence rules are defined within the realm of Java code and objects, contrasting with JDBC, which demands manual translation between code and relational tables. This abstraction simplifies and streamlines the process of managing persistence in Java applications.

Project Lombok, or simply Lombok, is a Java library leveraging annotations to significantly reduce boilerplate code. This library provides various annotations designed to replace repetitive or tedious Java code. With Lombok, you can streamline your code by avoiding the manual creation of constructors with no arguments, toString(), equals(), and hashCode() methods. The clever aspect of Lombok lies in its compile-time magic, where the library injects bytecode representing the desired boilerplate code directly into your .class files. Additionally, Lombok can seamlessly integrate with your Integrated Development Environment (IDE), allowing you to experience the same convenience as if you had written the boilerplate code yourself.

<https://www.infoworld.com/article/3379043/what-is-jpa-introduction-to-the-java-persistence-api.html>

<https://auth0.com/blog/a-complete-guide-to-lombok/>