

Spring Boot & Annotations

1. **What is the purpose of the @SpringBootApplication annotation in a Spring Boot application?**
 - a) It marks the application as a Spring Boot application and triggers auto-configuration.
 - b) It is used to inject dependencies.
 - c) It is used to configure connection pools.
 - d) It marks the application as a JPA entity.
2. **Which annotation is used to inject a bean into another bean in Spring?**
 - a) @Component
 - b) @Service
 - c) @Repository
 - d) @Autowired
3. **What is the role of the @Component annotation?**
 - a) It indicates that an annotated class is a "component" and will be managed by the Spring container.
 - b) It marks a class as a service.
 - c) It is used to configure a database connection.
 - d) It marks a class as a repository.
4. **What does the @Service annotation signify in a Spring application?**
 - a) It marks a class as a service, indicating that it's holding business logic.
 - b) It is used to inject a data source.
 - c) It marks a class as a controller.
 - d) It configures a transaction manager.
5. **Which annotation would you use to define a repository interface in Spring Data JPA?**
 - a) @Component
 - b) @Repository
 - c) @Service
 - d) @Entity
6. **What is a connection pool and why is it used in JDBC?**
 - a) A connection pool is a collection of database connections that can be reused, reducing the overhead of creating and closing connections frequently.
 - b) A connection pool is a collection of SQL queries stored for reuse.
 - c) It is a group of transaction managers.
 - d) It is a set of database tables.

7. What is the purpose of the try-with-resources statement in JDBC?

- a) To open a new database connection.
- b) To ensure that the resources (e.g., database connections) are closed automatically.
- c) To execute multiple SQL queries in a transaction.
- d) To log SQL errors.

8. What is the role of the application.properties file in a Spring Boot application?

- a) It is used to write SQL queries.
- b) It configures database connections and other application properties.
- c) It is used to inject dependencies.
- d) It defines the main method of the application.