Lecture 28: Redis Vector Store Implementation

Implementation in Java Code:

- **Step 1**: Create Connection
    - Use **JedisPooled** to connect with the Redis server.
    - Pass **host (localhost)** and **port (6379)** while creating the bean

```java
@Bean
public JedisPooled jedisPooled() {
    return new JedisPooled("localhost", 6379);
}
```

- **Step 2**: Configure Redis Vector Store
    - Inject **JedisPooled** and **EmbeddingModel**.
    - Use **RedisVectorStore.builder()** for configuration.
    - Set required properties like **indexName** and **initializeSchema**.

```java
@Bean
public VectorStore vectorStore(JedisPooled jedisPooled, EmbeddingModel embeddingModel) {
    return RedisVectorStore.builder(jedisPooled, embeddingModel)
            .indexName("product-index")
            .initializeSchema(true)   // ensures index schema creation
            .build();
}
```

Key Points:

- JedisPooled handles Redis connectivity.
- VectorStore integrates **Redis with Spring AI embeddings**.
- indexName defines where vectors are stored.
- initializeSchema(true) ensures the index schema is created automatically.