**Task Details:** Restful api implementation for Restaurant simulation

**Technology Used:**

* J2EE, Spring, Hibernate
* MySQL
* Apache Tomcat

**Implementation:** I used Java 2 Enterprise Edition(J2EE) to create Rest api. To connect and perform operation over database management system I used Hibernate. To connect with the Hibernate and perform operations Spring ORM tool is being used. All the data are saved in MySQL DBMS. Apache Tomcat is being used as local server where this application is running.

**Database working:** We aerated three tables for restaurants, menu and items in the menu. To perform a number of operations, say 1 million queries at a time, we are using indexing in the tables so that response time can be reduced to at least 1/10th. Hibernate creates connection pool so that we are not required to create database connection for every operation. It will increase efficiency of the software by reducing time and cost of every time connection creation in database.

Other Technologies which can be used:

**Redis:** We can use Redis data structure store. In this, all the static information like all the menu and items’ list can be cached locally. On each and every call we can fetch values without hitting any kind of SQL database again and again. It can handle millions of requests at a time without creating database object every time. It can reduce cost of transaction and time of execution by the factor of 100 or more.

**DynamoDB:** Since, data in DynamoDB saved in key-value pair and doesn’t require SQL queries to call data from database or say it will not connect with a relational database management system for every execution. It can return values in microseconds and hence improving performance with great factors.

To be honest, I don’t have much knowledge and experience over Redis and DynamoDB but if provided time, I can implement both the things. I am eager to learn new things and confident that I can learn quickly.