

SWE 523 ADVANCED INFORMATION AND MANAGEMENT SYSTEMS - 1 MONOLITHIC SYSTEMS

Due date: 17.Oct.2025 Friday, in class.

In this project, you are asked to implement a **Java Spring-Boot** rest application in monolithic architecture (views are not expected). You are expected to use a Redis cache between RDB and your application. Implement repository and service layers in your application. Test your application with Postman and observe the turn-around-time for CRUD operations (http requests), explain what is happening. Add logging feature to your application and show that consecutive read requests do not go to the DB. Experiment different cache policies such as LRU, FIFO etc.

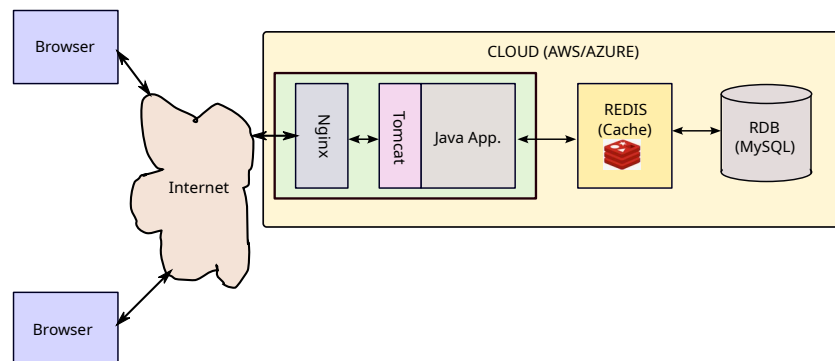


Figure 1. Block diagram of project 1.

After testing your application on local computer FTP the jar file over the cloud. On cloud instance, install and configure: Nginx, MySQL, and Redis. Test your application running on cloud, using Postman at your local computer. Observe the timing for requests.

Grading:

No Task

	Grade
1 Database and tables in DB server.	5
2 Model entities and required DTOs	10
3 Controllers and CRUD methods.	10
4 Repository and server layers	15
5 Redis	15
6 Exceptions handled properly	15
7 Runs on cloud (AWS or Azure)	10
8 Postman tests and commenting on the request access time and the monolithic structure	20

PS: In class presentation is required