**Project Specification**

**Problem Statement:**

Proposed Software System is e-Commerce System which lets Buyers to search for products such as electronic items, clothing, etc.. add to shopping cart and checkout. Sellers can add Products to sell, update stock, price and other details of products to be sold.

Below are the roles which need to be supported by e-Commerce System.

1. Buyer
2. Seller

**Buyer can perform below:**

1. Can search for Products
2. Can browse Products based on category/sub category
3. Can add Products to Shopping Cart
4. Can check out Shopping Cart

**Seller can perform below:**

1. Can add Products to be sell
2. Can list Seller’s Products
3. Can update stock numbers, price, specifications of Seller’s Products
4. Can delete/disable Seller’s Products
5. Can specify discounts of Seller’s products(optional)

**Technical Requirements:**

1. Mid Tier Functionality need to be divided into Microservices and Spring Cloud Netflix tools such as Zuul(Proxy/Gateway), Eureka(Service registry/discovery), Spring Cloud Config, Hystrix Circuit Breaker, Ribbon Load Balancer(optional) developed using Microservices Architecture
2. Microservices can interact with each other using Feign Client or RestTemplate
3. Use Controller, Service, Repository Layers with required interfaces
4. Validate Input data,handle Exceptions in REST APIs
5. Spring Boot Data JPA(with HIbernate) can be used with required Entity Mappings, Pagination/Sorting, Custom Queries(JPQL/HQL)
6. Web Service end points need to be tested using Postman
7. To support Authentication/Authorization Spring Security/JWT can be used
8. JUnit/Mockito can be used to perform Unit Testing of any Layers(optional)
9. Angular 9 or above can be used to develop either for Seller or Buyer functionality.

**Technologies/Tools to be used:**

Core Java 8 or above

Spring 5/Spring Boot 2.x

Rest API

Maven Build Automation Tool

MySql 8.x database

Netflix OSS Tools(Zuul Proxy, Eureka Server

Spring Cloud Config, Hystrix Circuit Breaker(optional)

Spring Boot Data JPA with HIbernate

Feign Client

Angular 9 or above, HTML5, CSS3, Bootstrap

**Project Deliverables:**

Source code of Buyer Microservice

Source code of Seller Microservice

Source code of Eureka Server Project

Source code of Zuul gateway Project

Source code of Angular Project(either for Buyer or Seller)

Atleast 2 Screenshots of Postman with sample Http request(s) and response(s)

Atleast 2 Screenshots of Web pages with sample data