INTE 31273: System Integration Technologies – 1(Group project)

Deadline: 30-07-2023
The total mark allocated: 30

Notes:

- This is a **group** project. A group must not exceed more than 8(eight) members.
- All the work should be committed to a git repository progressively. You should not wait until the last moment to commit. Commit your work as soon as you complete it. Commit history will be evaluated.
- A viva session will be conducted via Zoom and participation is mandatory. The date of the viva session will be communicated later.
- Divide the work among group members before starting the work.
- Copied assignments will be given zero marks.

Evaluation Criteria

The individual contribution will be the primary evaluation criterion. Other than that, the marks will be given by evaluating the following points.

- The completeness of the functionalities.
- Code quality, maintainability and extensibility.

Task

The task is to implement an E-commerce system using REST APIs. The system should consist of a database, REST API, a single-page application (front-end) and a mobile app. You should not use any readily available e-commerce frameworks to build this (ex: woocommerce)

The minimum set of features to implement (Not all functionalities are expected to have in the mobile app):
- The users should be able to register and log in to the system.

- The email verification(by sending a verification link to the given email) should be done upon user registration.
- The users(including the non-signed-in users) should be able to search for products. Products should be added to product categories.
- The users can place an order after selecting(adding to cart) a few products. If the user is not logged in when placing the order, the system should ask the user to login before placing the order. API should be secured.
- Upon placing an order, an order confirmation email should be sent to the user's email address.
- The address of the user should be collected/confirmed upon checkout. Only the cash on-delivery feature is available in this version of the application.
- Other than the above-mentioned features, you are encouraged to define and implement any other functionalities as time permits and availability of the group members(Ex: Push notifications for the mobile app).

Technologies to use:

- Use any language or framework to develop the backend REST API. (Java/Springboot preferred)
- Use any database technology as you wish. (Try to use JPA to access the database)
- Use any framework to develop the single-page application as you wish. Ex: React, Vue, Angular
- Use any framework to develop the mobile app.
- In order to send emails, use Mailgun/Sendgrid type of API. No need to configure the email servers manually.
- Authentication should be handled by using JWT tokens. You can use the Spring Security library for this.