o eCommerce System

The server should use a database (either MongoDB or PouchDB) to store information and pass it to the client through an API. Other types of database are not acceptable for this module.

WebSockets should be used to enable communication between two clients.

You must produce a working system, comprising a client constructed using dynamic web technologies (HTML, CSS and JavaScript) and a server using Node.js (no other server is permitted).

The application must use JavaScript as the main development language both client-side and server-side (no other language is acceptable).

The system must be interactive, i.e., the user should be able to affect its behaviour by interacting with it using a suitable input device (such as keyboard and mouse).

The system must run on multiple computers, i.e., it must be distributed.

Include CRUD functionality for at least 3 entities.

Include appropriate security considerations (such as a login system)

You must document the system, including its design and details of the implementation process you have followed, and provide a description of your DevOps pipeline. This should include your code repository, continuous integration/deployment setup, unit tests, integration tests, behaviour tests, code analyses, usage metrics and usage analyses.

Requirements (ca. 400 words with additional documents in appendices)

Who is the application aimed at?

What features were included and why?

• Design (ca. 500 words with UML diagrams)

What is the system architecture (clients/servers/peers)?

How do the components interact?

How are the data and code structured?

Why are these structures appropriate?

• Testing (ca. 400 words)

What automated testing have you performed?

What usability testing have you performed?

• DevOps pipeline (ca. 400 words)

Describe your development environment.

Describe your continuous integration pipeline and how you used it.

• Personal reflection (ca. 300 words)

What worked/didn’t work well (techniques and technologies you used)?

What lessons would you take from this project into your next project.