**Task 2: Analysis and Specify Software Quality Requirements**

**Security and Privacy protection**

* The user’s registration data such as username, password, phone number, home address can only be viewed and modified by the user.
* All sensitive data including customer’s personal details, payment information and communication between the customer’s device and the backend system should be encrypted
* For reviews and rankings on a product, they should only be created by a user who purchased the product. Also, only the user who created the review should be able to modify or delete the review. Only registered users should be allowed to make reviews and give feedback. A response can only be given by the shop manager of the branch where the purchase was made by the customer.

**Performance**

* The application must load its initial interface in under 3 seconds on devices.
* For general user interactions the system should aim for a response time of under 2 seconds. These user interactions include searching for restaurants, booking tables, and pre ordering food.
* The application should minimise resource usage (CPU, memory and battery) on the customer’s device by optimising background processes
* The system should be able to handle multiple simultaneous requests, for e.g. several users searching or booking at the same time, without a significant impact on performance.

**Reliability**

* The system should guarantee an uptime of 99% to ensure that customers can reliably search for restaurants, book tables and provide feedback. This ensures the application is available all the time for users (including peak usage times).
* The system should be fault tolerant and should have the ability to deal with and recover from failures like network issues, databases etc, without affecting the user’s experience on the app.
* When a system failure occurs, recovery should on average take no more than 10 hours.
* Backup mechanisms should be implemented to ensure the continuation of services in the case of server failures or crashes.

**Scalability**

* The system should use a distributed database to handle large volumes of restaurant data and customer data efficiently.
* The system should be able to provide services to approximately 20 million users as customers of shoppers in UK nationally.
* During peak seasons such as Christmas, Easter and other holidays, the system should be able to process 3 million orders per hour.