

CSE 460: Software Analysis and Design

Online Shopping Store Submission

Directions:

Read the description of the online shopping store provided, then respond to the prompts for Phases I and II. Use this document to enter your responses. Save all responses in this document as a single PDF titled “Last Name_First Name_Online Shopping Store Project_Submission”.

Online Shopping Store Submission

Phase I

Develop a scenario for each quality factor based on the online shopping example in the Project Description and explain how to test that quality factor for the client-server web application in the space provided. *You may use additional pages as needed to answer this question.*

Quality Factor: Time Behavior

1. **Source of Stimulus:** End User
2. **Stimulus:** Periodically attempting to navigate the website via the web application
3. **Environment:** Normal operation of the system
4. **Artifact:** System
5. **Response:** Process the stimuli
6. **Response Measure:** No more than 20-30 seconds of wait between queries

How to test time behavior: Performing periodic benchmarks on web application pages to test how long it takes to load pages. This can be used to show exactly how long it takes to load pages, worrying factors in the system as well as other helpful data that can be used to improve response measure to meet business needs.

Quality Factor: Confidentiality

1. **Source of Stimulus:** End User
2. **Stimulus:** Is shopping on the web application with other users concurrently
3. **Environment:** Normal operation of the system
4. **Artifact:** System
5. **Response:** Hide identity of the user and their shopping by separating their shopping experience
6. **Response Measure:** Allow multiple users to shop on the web application concurrently without impeding each other

How to test confidentiality: Test the system by having multiple individuals attempting to shop on the web application at the same time. Ensure that during their shopping experience they are unable to see each other's shopping carts or previously viewed shopping items during the experience. This allows for many users to utilize the site at once while maintaining their confidentiality while shopping from other users.

Online Shopping Store Submission

Quality Factor: Recoverability

1. **Source of Stimulus:** Shopping Store Server (internal)
2. **Stimulus:** The shopping store server has crashed
3. **Environment:** Normal operation of the system
4. **Artifact:** One of the objects has caused the server to be unresponsive
5. **Response:** Inform operator to restart the shopping store server
6. **Response Measure:** Less than 10 minutes of system downtime

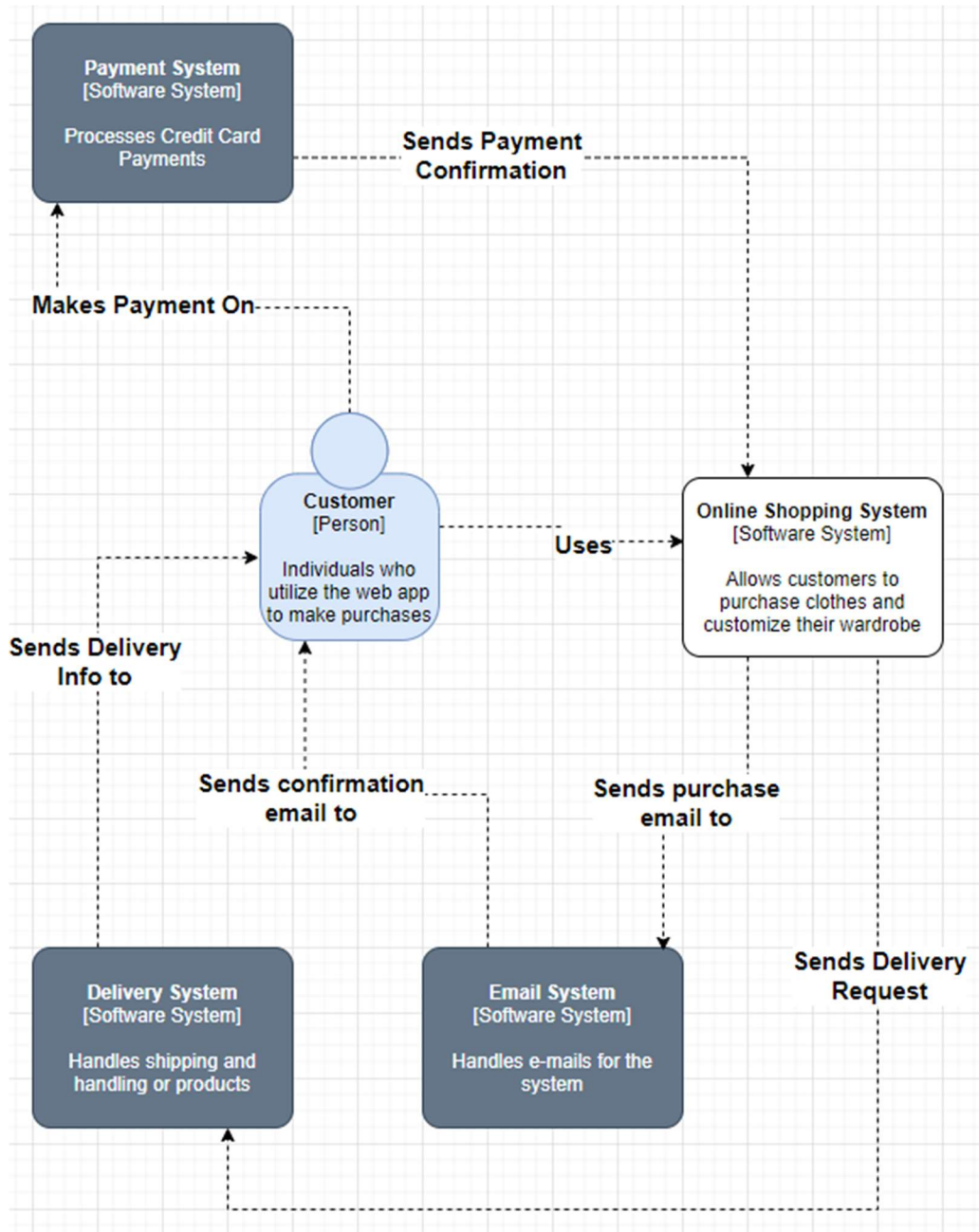
How to test recoverability: One way to test this would be to induce system hang situations that alert the operator that the server needs to be restarted. How the operator is alerted could be from pinging the server during intervals, attempting to access certain features that the server supports during normal operation or checking for thrown errors in a system log. This will help the business needs of having a system that is available 24/7 and serve an expanding customer base.

Online Shopping Store Submission

Phase II

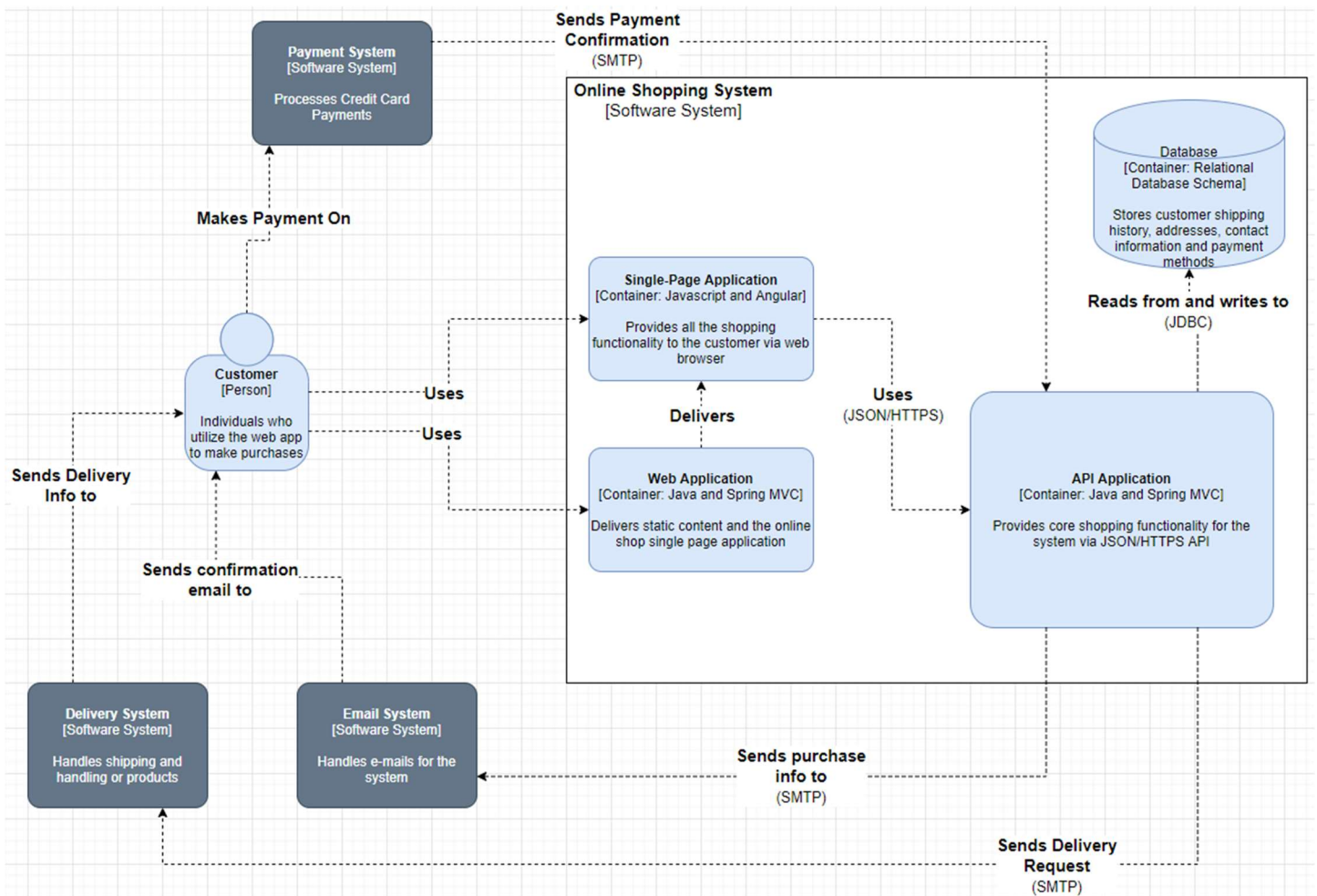
Draw each diagram according to the online shopping store situation described in the project description. Take a clear screenshot of each diagram and paste it in the corresponding space provided. *You may add additional pages as needed.*

System Diagram:



Online Shopping Store Submission

Container Diagram:



Online Shopping Store Submission

Deployment Diagram:

