

# Online Shopping Store Project

## Phase I

*Develop a scenario for the three (3) identified quality factors. Explain how to test each quality factor for the client-server web application in the space provided. You may add pages if necessary.*

### Quality Factor: Time Behavior

1. **Source of Stimulus:** End user browsing or purchasing in the online store.
2. **Stimulus:** When end user requests a clothing item to be displayed or completes a checkout.
3. **Environment:** Normal operation load.
4. **Artifact:** Client-server application interface.
5. **Response:** The system retrieves and displays the item within 20-30 seconds.
6. **Response Measure:** Confirm that all pages load within the expected 20-30 seconds under normal conditions.

### How to Test Time Behavior

User performance tests along with simulated user loads/traffic to measure response time.

### Quality Factor: Confidentiality

1. **Source of Stimulus:** External attacker or unauthorized user.
2. **Stimulus:** Attempts to access customer data such as shopping history, mailing address, etc.
3. **Environment:** System under regular and high-security checks.
4. **Artifact:** Data storage for customer data and payment processing module.
5. **Response:** System denies access and logs the attempt.
6. **Response Measure:** The system must maintain less than 0.01% unauthorized access rate.

### How to Test Confidentiality

Should perform security testing. This includes penetration tests to evaluate unauthorized access vulnerability.

### Quality Factor: Recoverability

1. **Source of Stimulus:** The system or component failure.
2. **Stimulus:** Unexpected downtime or system crash.
3. **Environment:** During peak or the off-peak hours.
7. **Artifact:** The database and the main application server.

- 8. **Response:** The system reroutes to a backup and full recovery completes in less than 10 minutes.
- 4. **Response Measure:** No more than 10 minutes of downtime.

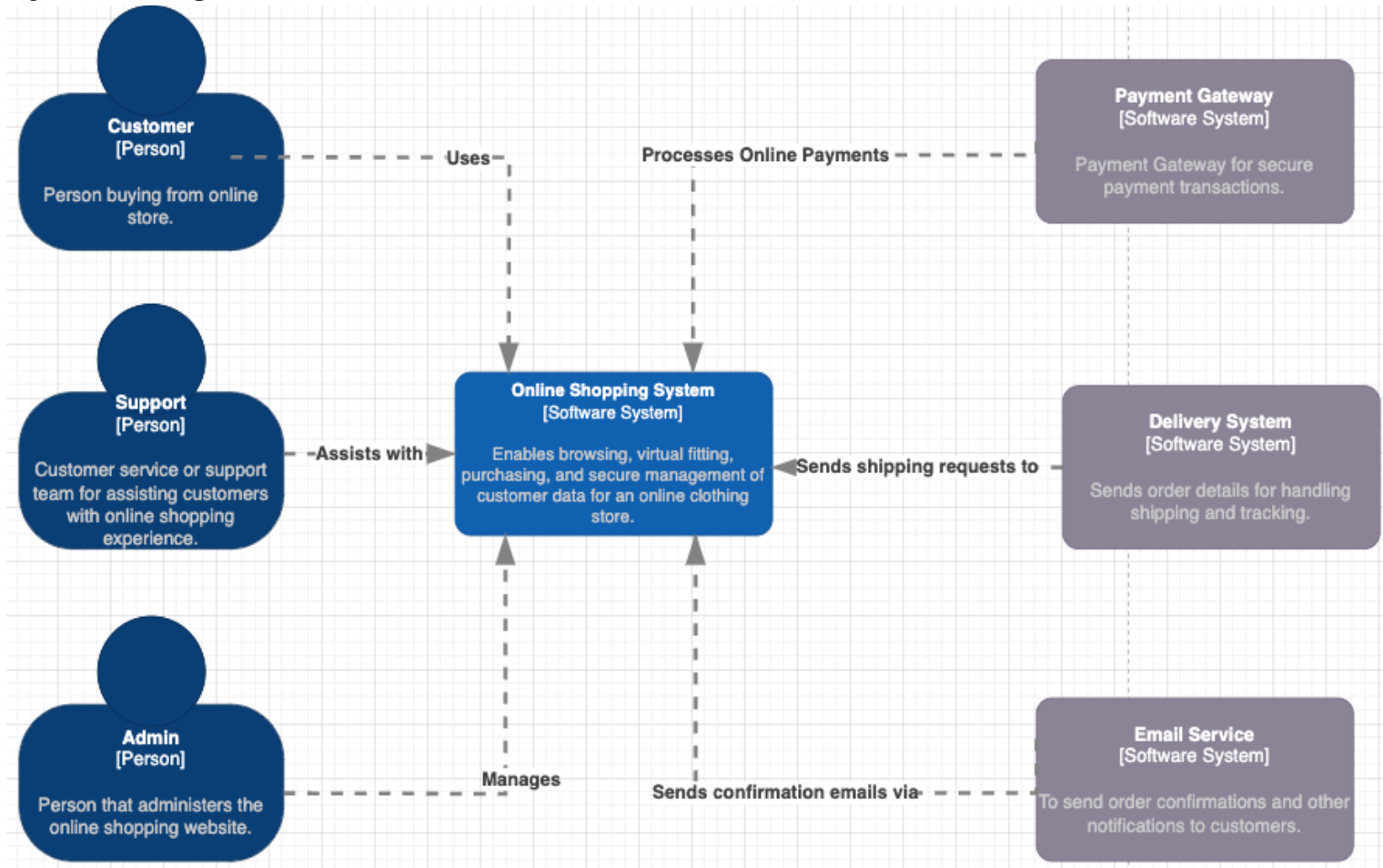
### **How to Test Recoverability**

Should conduct failure simulate to make sure the backup system activates and the data is restored within a 10 minute window.

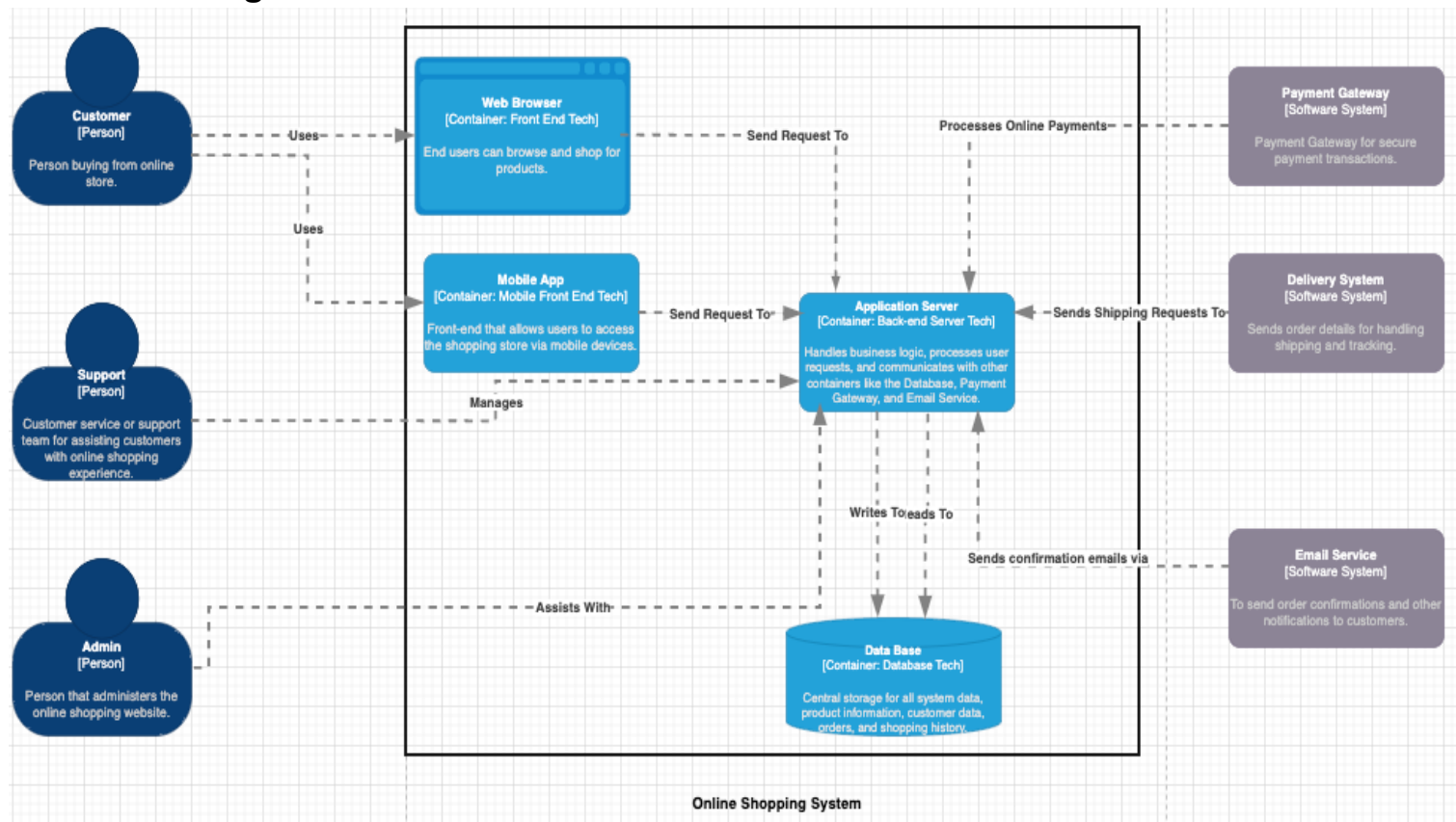
## Phase II

Draw each diagram according to the online shopping store situation described in the project description. Take a clear screenshot of each diagram and paste them in the corresponding spaces. You may add pages if necessary.

### System Diagram



## Container Diagram



## Deployment Diagram

