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.
4. **Artifact**:The database and the main application server.
5. **Response**:The system reroutes to a backup and full recovery completes in less than 10 minutes.
6. **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.*

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## System Diagram

A diagram of a shopping system

Description automatically generated

## Container Diagram

A diagram of a product

Description automatically generated

## Deployment Diagram

A diagram of a diagram

Description automatically generated