|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Type | ID | Concern | Quality Attribute | Relate use case |
| Performance | QA.P1 | Response time | System response statistic report immediately | Head office manager. |
| QA.P1 | Stamina | System can run normally when get high number of transactions | * Sale transaction. |
| Availability | QA.A1 | Ability to operate continuously | Ensure system operate constantly (Turn off a database server) | * Manage store. * Sale transaction. |
| QA.A2 | Ability to operate continuously | Ensure system operate constantly (Turn off a web server) | * Manage store. * Sale transaction. |
| Security | QA.S1 | Against attacking | Resist attack to database | * Manage store. * Sale transaction. |

|  |  |
| --- | --- |
| QA.P1 Performance Scenario. System response statistic report immediately | |
| Portion of scenario | Possible value |
| Source | Head office manager |
| Stimulate | Request to get statistic report of stores. |
| Artifact | Report controllers |
| Environment | System operating environment (runtime) – normal mode |
| Response | * Show statistic information on browser. |
| Response measure | Average time of response when system load statistic in database to web browser must less than 4 seconds. |

|  |  |
| --- | --- |
| QA.P2 Performance Scenario. System can run normally when get high number of transactions | |
| Portion of scenario | Possible value |
| Source | Cashiers |
| Stimulate | Make 100 transactions at the same time. |
| Artifact | Sale controllers. |
| Environment | System operating environment (runtime) – normal mode |
| Response | * Calculate total of bill and show on browser include product list that customer selected. |
| Response measure | Average time of calculating and show bill on browser must less than 500 milliseconds. |

|  |  |
| --- | --- |
| QA.A1 Availability Scenario. Ensure system operate constantly. | |
| Portion of scenario | Possible value |
| Source | Incident at the server, lost connect to database server. |
| Stimulate | Turn off a database server. |
| Artifact | Database server. |
| Environment | System operating environment (runtime) – normal mode |
| Response | System switch to use backup database server when problem occur immediately and automatically. |
| Response measure | System still running without interruption. |

|  |  |
| --- | --- |
| QA02A2 Availability Scenario. Ensure system operate constantly. | |
| Portion of scenario | Possible value |
| Source | Incident at the web server, crash web server. |
| Stimulate | Turn off a web server. |
| Artifact | Web server |
| Environment | System operating environment (runtime) – normal mode |
| Response | System redirect all access from crash server to another. |
| Response measure | System still running without interruption. |

|  |  |
| --- | --- |
| QA03S1 Security Scenario. Resist attack to database. | |
| Portion of scenario | Possible value |
| Source | Hacker |
| Stimulate | Hacker attack to system, collect information or try to break out system. |
| Artifact | Database. |
| Environment | System operating environment (runtime) – normal mode |
| Response | All access to system must be authenticated before use system feature and access to database. Block all access that are not authenticated. |
| Response measure | Ensure that no any external attack can get into the database. |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ID | Quality Attribute Type | Priority | Difficulty | Final Priority |
| QA.P1 | Performance | H | 1 | V.H |
| QA.P2 | Performance | H | 1 | V.H |
| QA.A1 | Availability | H | 2 | H |
| QA.A2 | Availability | H | 2 | H |
| QA.S1 | Security | H | 1 | V.H |