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American International University-Bangladesh (AIUB)  
**Department of Computer Science  
Faculty of Science & Technology (FST)**

**Software Quality and Testing**

**Fall 2021-22**

**Section: C**

“Test Plan for Dhaka Subway Systems Automated Ticket Issuing System**”**

**Submitted By-**

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# TEST PLAN IDENTIFIER

Test Plan \_Automated ticket issuing System\_V\_1.0

# REFERENCE

The referencing is done on the basis of requirement which is given in the requirement document provided . We also take help from our previous software test plan in our software farm. We arranged several meeting with our client for the software requirement. Based on this we developed and finalized the requirement. We also set requirement priority based on the customer requirement analysis.

# Introduction

Dhaka Subway Systems Automated Ticket Issuing System which will need to be developed by the software engineers. It has many features to be developed. This system will reduce time and cost as well. Dhaka is a mega city where Subway is very important to be developed for the passengers automated ticket issuing system is mandatory .It will be time consuming as well. It has credit card transaction system as well as billing is also possible by coin. It will introduce a better experience for the passengers. The software development will be done which will be differ when comparing to others. The features are developed in such a way where all required features are tried to be developed. While developing the software there need to be introduced hardware component to be installed for better performance. This system will display information about ticket availability .It will give the time schedule as well. In this system, transaction method is introduced in a modern way where tk and coin system is recognized. This software is also web applicable.

# TEST ITEM

* Registration
* Administration
* Accountment Management
* Scheduling

# Features to be tested

* Time Schedule
* Touch Screen monitor
* On screen keyboard
* Destination, Arrival time
* Credit Card Transaction
* Credit Card Transaction validation
* Multiple ticket purchasing at the same time
* Administrator access
* Ticket Cancellation
* Ticket cancellation by administrator
* Online payment issues
* Account management
* Web Application Support
* User Support
* User Reporting
* Navigation
* Log in Details
* Registration
* Ticket confirmation

# Features not to be tested

* Efficiency of the Oracle database with the software
* The Connectivity of 24/7 service
* User information authentication
* Touch Screen menu Selection
* Overload of huge user access
* Cancellation of the transaction
* Coin Acceptance
* Limit number of ticket issue at the same time
* Multiple log
* Duplicate registration

# APPROACH

* Find the requirements that will be tested. All test cases shall be created according to the Program Specification.
* Determine which tests will be applied to test each module.
* Analyze the test data and test cases to confirm that the unit has been carefully tested and that the test data and test cases are sufficient to verify the unit's suitable operation.
* Determine the predicted outcomes for each test.
* The test case configuration, test data, and expected results should all be documented.
* Complete the tests.
* The test data, test cases, and test configuration used during the testing process should all be documented. These data shall be submitted through the Unit/System Test Report (STR).
* Before the unit is eligible for component integration/system testing, it must pass unit testing.
* Unsuccessful testing require the creation of a Bug Report Form. The test case, the problem encountered, the likely cause, and the sequence of events that lead to the problem are all described in this document. It will serve as a foundation for future technical analysis.
* Documents and reports from the tests must be submitted. Any specs that need to be examined, altered, or updated must be done instantly.

# Item pass/fail criteria

This section lays out the general pass/fail criteria for the tests in this plan. The test design requirements are added by pass/fail criteria.

**Component Pass/Fail criteria**

Component tests pass only if the signatures, constraints, and interfaces specified in the Object Design Specification for that component are met. Positive, negative and stress tests, as well as boundary tests are all included.

If a test fails to meet the objectives of the object design specification, it will fail, and a defect will be filed in the defect tracking system for the triage team to review.

**Integration Pass/Fail criteria**

The signatures, constraints, and interfaces stipulated by both the object design definition and the system architecture specification are only satisfied when tests on integrated components pass. This comprises positive, negative and stress testing, as well as boundary conditions and explicit interface manipulation tests (such as the physical connection to the database server).

If a test fails to meet the objectives of both the object design and system architecture specifications, it will fail, and a defect will be filed in the defect tracking system for the triage team to review.

**System Pass/Fail criteria**

The functional requirements, non-functional requirements, and use cases are used as the oracle in tests run against the system to decide whether it passes or fails.

If a test fails because the product fails to fulfill the objectives of any of the functional requirements, non-functional requirements, or use cases, the test will fail and a defect will be forwarded to the triage team for assessment.

# Test Deliverables

During the software development life cycle, test deliverables are the objects that are presented to the investors of a software project. Every stage of the software development life cycle has its own set of test deliverables. Some test deliverables are delivered prior to the testing phase, while others are provided during the testing phase, and still others are provided after the testing cycle is completed.

1. Test Plan
2. Test Cases
3. Test Suite
4. Test Scripts
5. Execution Log
6. Defect Log
7. Test Summary Report

# Environmental Needs

In this project, we use JIRA for the management. All communication is done by  this communication channel. Functional and regression testing is done by Test Complete. Automated testing is also introduced by tester . For doing this, we have to train our tester.

# Staffing and Training Needs

This includes all areas of the test plan. Test engineers can build a less bug free project on budget and on time. But a good number of experienced engineers will cost a huge amount of money that will exceed the project budget. Then a tester will be assigned to the project. These expert test engineers will train other members for this project. Staff are permanent for the duration of this project.

# Responsibilities

**Project Leader**

• Before signing off on the System Test, double-check that the exit criteria have been met.

• Check in with the Test Controller on a regular basis to see how things are doing with the testing.

• Raise and handle issues that remain to the project or that are not under the control of the Test Team.

• Review and sign off on the methodology, plans, and timetable for the test.

**SQA Project Leader**

• Examine the testing results on a regular basis.

• Manage System Test Team concerns and dangers.

• Provide the resources required to complete the system test.

**Test Planner**

• Generate high-level testing environments.

• Achieve the desired results.

• Establish test cycles and troubleshoot problems.

• Ensure that any concerns with test systems are recounted and monitored.

**Tester**

* Recognize Test Data.
* Perform Test Conditions.
* Measure off results.
* Maintenance IMS Regions.
* Decide Spooling Issues (if necessary).

**Technical Support**

* Assist with the hardware environment
* Provide assistance with test software.
* Software should be promoted to the system testing environment.

# Schedule

|  |  |  |  |
| --- | --- | --- | --- |
| **Task** | **Start Date** | **Duration (Days)** | **End Date** |
| **Initiate Project** | **01/09/2021** | **30** | **02/10/2021** |
| **Develop Project charter** | 01/09/2021 | 15 | 16/10/2021 |
| Define Scope | 01/09/2021 | 5 | 06/10/2021 |
| Identify High Level Roles | 05/09/2021 | 2 | 07/09/2021 |
| Develop High level Budget | 08/09/2021 | 2 | 10/09/2021 |
| Identify High level Control Strategies | 20/09/2021 | 6 | 26/09/2021 |
| **Finalize Charter and Gain Approval** | **02/10/2021** | **10** | **12/10/2021** |
| Consolidate and publish project charter | 02/10/2021 | 3 | 05/10/2021 |
| Hold Review Meeting | 07/10/2021 | 2 | 09/10/2021 |
| Revise Project Charter | 08/10/2021 | 3 | 11/10/2021 |
| Gain Approvals from Government | 10/10/2021 | 2 | 12/10/2021 |
| **Plan Project (10%)** | **14/10/2021** | **28** | **12/11/2021** |
| **Develop Work Plan** | 14/10/2021 | 12 | 26/10/2021 |
| Develop Work breakdown structure | 20/10/2021 | 4 | 24/04/2021 |
| Develop Project Staffing Plan | 25/10/2021 | 4 | 29/10/2021 |
| Develop Project Schedule | 01/10/2021 | 4 | 05/10/2021 |
| Develop Project Budget | 06/10/2021 | 4 | 10/10/2021 |
| **Develop Project Control Plan** | **12/10/2021** | **10** | **22/10/2021** |
| Develop Communication plan | 12/10/2021 | 6 | 18/10/2021 |
| Develop Quality Management Plan | 18/11/2021 | 4 | 22/11/2021 |
| **Design** | **24/10/2021** | **10** | **04/11/2021** |
| Define stages and activities | 24/10/2021 | 4 | 28/10/2021 |
| Design content formats | 26/10/2021 | 3 | 29/10/2021 |
| Object design review | 01/11/2021 | 3 | 04/11/2021 |
| **Build** | **05/10/2021** | **45** | **20/11/2021** |
| Write Code | 05/10/2021 | 35 | 10/11/2021 |
| Project review with Client | 10/10/2021 | 10 | 20/10/2021 |
| **Testing** | **20/10/2021** | **30** | **20/11/2021** |
| Unit testing | 21/10/2021 | 20 | 11/11/2021 |
| Test of usability | 10/11/2021 | 10 | 20/11/2021 |
| **Implementation** | **21/10/2021** | **40** | **10/11/2021** |
| Move tool to production environment | 21/10/2021 | 20 | 10/11/2021 |
| Announce Tool Arability | 19/10/2021 | 20 | 10/11/2021 |
| **Close Project** | **11/11/2021** | **25** | **05/12/2021** |

# Planning Risks and Contingencies

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S/N** | **Risk Description** | **Probability** | **Impact** | **Mitigation Plan** |
| 1 | Log in Attempt | 25% | Significant | Allow users to enter 3 times to enter incorrect password |
| 2 | Valid User Information | 33% | High | Use NID Details |
| 3 | Ticket Availability | 29% | High | Maximum 3 ticket purchase at a time |
| 4 | Exceeding budget | 60% | High | Elimination same resources if possible |
| 5 | Transaction | 75% | Low | Specify appropriate payment system |

# APROVALS

|  |  |
| --- | --- |
| Project Sponsor | S.M. ABDUR BHUIYAN ROUF |
| Project Manager | RAFID SHARIAR RIMU |
| Test Lead | Md. Abeer Hossain |
| Test Planner | Md. Mahbubur Rahman |
| Development Team Manager | Rashedul Islam |

# GLOSSARY

|  |  |
| --- | --- |
| ATS | Automated Ticket System |
| IT | Information Technology |
| MTP | Master Test Plan |
| PM | Project Manager |
| Test Case | Test case has always four phases: preparation, execution, verification and finalization. Test execution differs from normal execution in that there is this verification part. |
| Test Data | The information that is given to the system and expected to get back from the system. |
| Test Suite | A collection of test cases that have the same test objective. |
| STR | System Test Report |
| BAT | Build Acceptance Test |
| QA | Quality Assurance |
| PM | Project Manager |
| TM | Test Manager |