<<BRAC UNIVERSITY ENTRANCE SYSTEM>>

Test Plan Documentation

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Introduction

The Test Plan has been created to communicate the test approach to team members. It includes the objectives, scope, schedule, risks and approach. This document will clearly identify what the test deliverables will be and what is deemed in and out of scope.

1.1 Objectives

AES is an automated entrance system which we will use in BRAC University to make the main entrance fast and easy to maintain. The test team is responsible for testing the system and ensuring it meets the client's needs. The test team is both the customer and the tester in this project. Jira and Selenium have been used for manual testing and automated testing respectively.

1.2 Team Members

Resource Name	Role
Sadman Sakib Mridul	Project Manager
Sadman Sakib Mridul	Developer
S.M. Ali Ijtihad Nasif	Web developer
Sadman Sakib Mridul	Tester
S.M. Ali Ijtihad Nasif	Analysist

2 Scope

The initial planning / phase will include all important requirements that must be implemented in the system. These and any other requirements that get included must all be tested. At the end of testing a tester must be able to:

1. Create a manual test with as many steps as necessary
2. Save it for further process
3. Retrieve it and have the ability to view it when running the test
4. Enter results and appropriate feedback
5. View results in a use case / activity document.

As the team works with the product, we will define the needs for the second phase.

Load testing will not be considered part of this project since the user base is known and not an issue.

Rewriting, moving or porting existing test cases from the existing Word documents is not considered part of this project.

2.1 Primary objectives

A primary objective of testing this system is to: ***assure that this system meets the full requirements, including quality requirements (AKA: Non-functional Requirements) and fit metrics for each quality requirement and satisfies the Use-case scenarios and maintain the quality of the product.***

Any other changes, additions, or deletions to the requirements document, Functional Specification, or Design Specification will be documented and tested at the highest level of quality allowed within the remaining time of the project and within the ability of the test team.

2.2 Secondary objectives

The secondary objective of testing this entrance systems will be to: ***identify and expose all issues and risks and ensure that all issues / risks are addressed in an appropriate matter before release of this system.***

As an secondary objective, this requires careful and methodical testing of the Entrance system to first ensure all areas of the system are scrutinized and, consequently, all issues / Bugs found are dealt with appropriately.

3 Assumptions / Risks

3.1 Assumption

There is some assumption that are made specific to this project when testing the system.

- Delivery of the product is in format that the test team can check it into CVS
- Use case have been developed by adopters for user acceptance testing. Use cases are approved by test lead.
- Test team will support and provide appropriate guidance to adopters and developers to conduct testing.

3.2 Risks

The following risks have been identified and the appropriate action identified to mitigate their impact on the project. The impact of the risk is based on how the project would be affected if the risk was triggered. The trigger is what milestone or event would cause the risk to become an issue to be dealt with.

#	Risk	Impact	Trigger	Mitigation Plan
1	Scope Creep – as testers become more familiar with the tool, they will want more functionality	High	Delays in implementation date	Each iteration, functionality will be closely monitored. Priorities will be set and discussed by stakeholders. Since the driver is functionality and not time, it may be necessary to push the date out.
2	Changes to the functionality may negate	High – to schedule	Loss of all test cases	Export data prior to any upgrade, massage as necessary

	the tests already written and we may loose test cases already written	and quality		and re-import after upgrade.
3	Weekly delivery is not possible because the developer works off site	Medium	Product did not get delivered on schedule	

4 Test Approach

The project is using an agile approach, with weekly iterations. At the end of each week the requirements identified for that iteration will be delivered to the team and will be tested.

Exploratory testing will play a large part of the testing as the team has never used this type of tool and will be learning as they go. Tests for planned functionality will be created and added to TCT as we get iterations of the product.

4.1 List of features need to be tested

There is some important feature that need to be tested before releasing the entrance system.

Feature	Testing description
1. User interface test case	1. Is the system is able to display picture of the student's info in any size screen without any problem or glitch.
2. Performance test case	2. How long does it take for the system to authenticate a user and give the permission to enter.
3. Database test case	3. How flexible the database is i.e. is it easy to add or delete data with minimum data loss. Also is it safe and restrict students to get into it.
4. Security test case	4. If the face recognition failed to identify what kind of action the system will take.
5. User acceptance test case	5. Is the system can update student info in any format by admin.

5 Testing stages

It's a strategy that will be used to test the system, the resources that will be used, the test environment in which testing will be performed, the limitations of the testing and the schedule of testing activities. Typically, the Quality Assurance Team Lead will be responsible for writing a Test Plan. A test plan will include the following.

5.1 Functional testing

5.1.1 Unit testing

Developers test the system by isolating different parts of the system and check if those parts are correct in terms of requirements and functionality. They also assure the quality of the system.

5.1.2 System testing

Testing team will run a test on the whole system to see if the system run perfectly and meets the demand of the consumer with good quality

5.2 Nonfunctional testing

5.2.1 Performance testing

Test Objective:	To take users info and match that info with the system database and verify it
Technique:	To stand Infront of the camera and scan the id
Completion Criteria:	Will get permission to enter if info is verified
Special Considerations:	

5.2.2 Load Testing

Test Objective:	How the system behave if huge number of data give input in a system in a short period of time
Technique:	Many student will try to enter through the gate in a short period of time
Completion Criteria:	The system should scan all the students the verify them all
Special Considerations:	

6 Test case

Test case id	Test title	Test case	Testing steps	Test data	Expected result
T1	Check student info with valid data	Should stand Infront of the camera	Verify students' image	Student should get permission to enter	
		Should swipe the id card	Scan QR code in id		
T2	Check stranger info with system data	Should stand Infront of the camera	Verify strangers' image	Stranger shouldn't get permission to enter	
		Should swipe the id card	Scan QR code		

7 Milestones / Deliverables

7.1 Test Schedule

Task Name	Start	Finish	Effort	Comments
Test Planning				
Review Requirements documents			2 d	
Create initial test estimates			1 d	
Staff and train new test resources				
First deploy to QA test environment				
Functional testing – Iteration 1				
Iteration 2 deploy to QA test environment				
Functional testing – Iteration 2				
System testing				
Regression testing				
Resolution of final defects and final build testing				
Deploy to Staging environment				
Performance testing				
Release to Production				