

Chapter 7

Evaluation

7.1. Introduction

In previous section I discussed the implementation details of proposed examination management system.

In this chapter my main aim is to describe the evaluation of Examination management system. Main aim of the evaluation of examination management system is to test whether objectives are successfully achieved. There are three main evaluation techniques I have applied to evaluate the system.

Unit testing

System Testing

User Accepting Testing

7.2. Unit testing

Main objective of the unit testing is to test whether each and every code segments are working perfectly. Unit testing is done by the developer as soon as finished developing each interface of the software. I have tested following units with test data.

- Create user interface
- New course interface
- Add subject interface
- New batch interface
- New students interface
- New hall interface
- Add exam interface
- Apply repeat interface
- Repeat request interface
- Exam halls interface
- View halls interface
- Exam timetable interface
- Add results interface
- My result interface
- Result analyze interface

7.3. System Testing

Here I have to carry out system testing on proposed examination management system to test the whole system. This was done after developing the complete. My System testing plan consists of following main steps.

Step 1: Open User Registration Interface

Create three users from each user type as Student, Lecturer and examination unit as stated below.

E.g.:

User Id	Password	User Type
DO12001	123	Student
Sunil	456	Lecturer
Nimal	789	Exam Chief

Step 2: Open Log in Interface and Type Nimal for user name, 789 for password and select Exam chief as user Type. Then click on login button. Following interfaces should be visible to the examination staff in main menu.

- Course Details Interface
- Student Details Interface
- Module Details Interface
- Employee Details Interface
- Hall Details Interface
- Exam schedule interface
- Results upload interface
- Select awardees Interface
- Analyze Student Interface

Step 3: Open Course Details Interface and Enter sample Course Details shown below.

E.g.:

Course Code	Course Name
1000	DCSD

Step 4: Open Module Details Interface and Enter sample module Details shown below.

E.g.:

Module Code	Module Name
100	Introduction
101	QTC

Step 5: Open Batch Details Interface and Enter batch Details as shown below.

E.g.:

Batch No	No. of students
12.1	50

Step 6: Open Student Details Interface and enter student details shown below.

E.g.:

Std No	Std Name
DO121001	S.R.Silva
.....
DO121050	S.D.Jayasekara

Step 7: Open Employee Details Interface and Enter Employee details shown below.

E.g.:

Emp No	Emp Name	Emp Type
1201	Asanka	Lecturer
1202	Nishantha	Invigilator
1203	Gamini	Invigilator
1204	Nilupa	Invigilator

Step 8: Open Hall Details Interface and enter hall details as shown below.

E.g.:

Hall No	Capacity
01	20
02	20
14	50
Auditorium	75

Step 9: Open Exam Scheduling Interface and Input course name (DCSD), batch name (12.1), module name (Introduction), hall name\s (01/02/14/Auditorium), exam date (2013-6-1), exam time (9.00- 12.00), supervisor name (1201), invigilator names (1202/1203/1204) and click on schedule.

Step 10: Log out from the current user and Open Login Interface and Type Kamal for user name, 123 for password and select Student as user Type. Then click on login button.

Following interfaces should be displayed.

- Exam Registration Interface
- Exam Result view
- Exam transcript request

Step 11: Open Exam Registration Interface and Select the modules (QTC) which they expect to repeat. Then click apply repeat button.

Step 12: Log out from the current user. Then open Login Interface and Type Nimal for user name, 789 for password and select exam chief as user Type.

Step 13: Open exam result upload interface and Upload the sample exam results using excel sheet (introduction module).

Step 14: Repeat step 10 and open Exam Result view interface

Step 15: Open Exam transcript request interface and Click on request button..

Step 16: Repeat Step 12 and Open Exam awardees selection Interface. Then Select course (DCSD) and the batch name (12.1). Then click select button.

Step 17: Open Exam result analyze interface and the exam results as course wise, batch wise and also module wise.

I have listed expected results and the received results of each test case taken at a one test round in the following table. But to test the system I have gone 50 tests rounds and check the received result with expected results. Here I also used the sample records given by the examination unit.

Test Case	Expected Result	Received Result
Step 01	Successfully Registered message should be displayed	Same as expected
Step 02	Main menu should be displayed.	Same as expected
Step 03	Successfully submitted message should be displayed	Same as expected
Step 04	Successfully submitted message should be displayed	Same as expected
Step 05	Successfully submitted message should be displayed	Same as expected
Step 06	Successfully submitted message should be displayed	Same as expected
Step 07	Successfully submitted message should be displayed	Same as expected
Step 08	Successfully submitted message should be displayed	Same as expected
Step 09	Scheduled should be displayed.	Same as expected
Step 10	Main menu should be displayed.	Same as expected
Step 11	Successfully applied message should be displayed.	Same as expected
Step 12	Pending exam registrations should be displayed.	Same as expected
Step 13	Successfully uploaded message should be displayed.	Same as expected
Step 14	Uploaded results should be displayed	Same as expected
Step 15	Successfully requested message should be displayed.	Same as expected
Step 16	Awardees list should be generated	Same as expected
Step 17	Exam results pass and fail rates should be shown as requested.	Same as expected

Table 7.1 - Expected Results and the Received Results

When looking at the following table I decided the whole system is working perfectly as users expected.

7.4. User Accepting Testing

User acceptance test is planned to test the achievement of goals expected by the users of examination management system. To carry out user acceptance testing, I have designed three questioner sets for students, lecturers and examination staff. First I have allocated a time period for selected users (students, lecturers and examination staff) to experience the examination management system. After that I provided designed questioners for each and every user. [Appendix H]. Replies of each user was studied carefully to test their satisfaction level.

7.5. Summery

In this chapter I have discussed about evaluation of the proposed solution. To evaluate the software I have to conduct various tests. Mainly I conducted unit test to check the accuracy of each code segments, system test to test the whole system and user accept testing to test the user satisfaction. After the testing and bug fixing I recommend the system to install on the computer.