

Attendance Management System

Test Report

Version<1.1>

<02/04/2018>



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Version History

Version #	Implemented By	Revision Date	Short description
1.0	Kavish Gambhir & Kuldeep Singh Jangir	02 April 2018	Attendance Management System for Software Engineering Course : Initial Tests
1.1	Kavish Gambhir & Kuldeep Singh Jangir	23 April 2018	Integration Bugs Resolved 4.4 , 4.7 , 4.8 , 4.13 , 4.14 , 4,15 , 4,16

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1.0 INTRODUCTION

1.1 PURPOSE

This *Attendance Management System Unit and System Test Report* provides a summary of the results of test performed as outlined within this document. The purpose of making this test report is to verify each function and its integration with the system and the surroundings. Each functionality required is met with the standards and is working fine or not. Also it finds and discover the defects and errors that may have occurred during development or due to any other reason. It helps to find the faults as well. This Test report also states the delivered product is as per specifications of SRS document and if not then point of deviation and reason as well so that corrective measures can be taken.

2.0 TEST PLAN

There are various types of test plans but we are doing testing level specific test plans and under this also we are following **unit test plan** and **system test plan**. The idea is doing the unit testing of each function and then test the integration of system as whole. We are using Bottom-Up strategy for testing.

3.0 DETAILS OF UNIT TESTING

3.1 User :: getName()

1. Feature To Be Tested : Return name of user with return type as string
2. Pass/Fail Criteria : Returned string is name of user

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	Verified
3.1	An object of user with name "kuldeep"	Kuldeep	Kuldeep	Pass	Pass

3.2 User :: viewDefaulters()

1. Feature To Be Tested : Prints list of students (Roll Number) who has attendance less than 85% with their respective attendance

2. Pass/Fail Criteria : List of students printed are actually having attendance less than 85%. The printed attendance match with actual attendance

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	
3.2	Required Files storing attendance of two days for two students. B16CS010 0 1 B16CS011 1 1	B16CS010 50 %	B16CS010 50 %	Pass	Pass

3.3 User :: viewAttendance()

1. Feature To Be Tested : Prints All the attendance with Date and respective Absentees of that date.
2. Pass/Fail Criteria : Printed students were mentioned absent on that date in the files.

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	
3.3	Required Files storing attendance of two dates for two students. 21-2-2018 B16CS010 0 B16CS011 1 23-2-2018 B16CS010 1 B16CS011 0	21-2-2018 -- B16CS010 23-2-2018 -- B16CS011	21-2-2018 -- B16CS010 23-2-2018 -- B16CS011	Pass	Pass

3.4 User :: loadPresentCountList()

1. Feature To Be Tested : Loads the file presentCount.txt to map presentCountList. Checks for existence of file also

2. Pass/Fail Criteria : If file is present then map is loaded with data from file presentCount.txt. If file is not present then empty map.

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	
3.4.1	Required File presentCount.txt storing Roll Number and presents for two students. B16CS001 1 B16CS002 2	Map presentCountList is loaded	Map presentCountList is loaded	Pass	Pass
3.4.2	File presentCount.txt is not present	Map is empty	Map is Empty	Pass	Pass

3.5 User :: storePresentCountList()

1. Feature to be tested : Store the map presentCountList to file presentCount.txt(Database)
2. Item Pass/Fail Criteria : File contains the data is same as map.

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	Verified
3.5.1	Map has Roll Number and presents for two students. B16CS001 1 B16CS002 2	File has B16CS001 1 B16CS002 2	File has B16CS001 1 B16CS002 2	Pass	Pass

3.6 Interface_handler :: _register()

1. Feature to be tested : Registers new faculty and stores it into facultyMap and database. Requires admin Password. Takes input Faculty Name , faculty

Password. Only Strong Passwords are accepted. User re-enters the entered password to confirm registration (max 3 times allowed)

2. Item Pass/Fail Criteria : Faculty is registered if conditions are satisfied else goes to homeView().
3. Password Strength Criteria : $6 \leq \text{length of password} \leq 13$, at least One Capital Letter and at least one Numeric letter

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	
3.6.1	Admin password entered is "qwerty"	Calls homeView() function	Calls homeView() function	Pass	Pass
3.6.2	Admin Password is "cs223"	Asks for name and Password of faculty	Asks for name and Password of faculty	Pass	Pass
	Entered name is "Kuldeep Singh" and Password is "Kuldeep"	Weak password. Asks for Password again	Weak password. Asks for Password again	Pass	Pass
	Entered Password is "Kuldeep123"	Accepts password and asks to re-enter the password	Accepts password and asks to re-enter the password	Pass	Pass
	Re-entered password is "Kuldeep1234"	Password does not match. Enter again.	Password does not match. Enter again.	Pass	Pass
	Re-entered password is "Kuldeep123"	Faculty object created and addFaculty() function called in database_handler . Faculty added to map facultyMap and to file faculty_details.txt	Faculty object created and addFaculty() function called in database_handler. Faculty added to map facultyMap and to file faculty_details.txt	Pass	Pass

3.7 Faculty :: addStudent()

1. Feature to be tested : takes Roll Number from user, verify its existence. Adds only if not present, takes name from user, add student to database by calling function from database_handler
2. Item Pass/Fail Criteria : Student Added to studentsMap , presentCountList , respective files

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	Verified
3.7.1	Input: B16CS020 Nikhil Srivastava	Student updated in studentsMap, presentCountList, presentCount.txt Nikhil Srivastava successfully registered	Student updated in studentsMap, presentCountList, presentCount.txt Nikhil Srivastava successfully registered	Pass	Pass
3.7.2	Input: B16CS020	Student already registered as Nikhil Srivastava	Student already registered as Nikhil Srivastava	Pass	Pass

3.8 Faculty :: deleteStudent()

1. Feature to be tested : Takes Roll Number from faculty, to be deleted. Verify existence of student, deletes only if student present. Deletes student by calling delete function from database_handler.
2. Item Pass/Fail Criteria : student removed from studentsMap, studentsList.txt

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	Verified
3.8.1	Input: B16CS020 y	Student deleted from studentsMap, studentsList.txt. Nikhil Srivastava is de-registered	Student deleted from studentsMap, studentsList.txt. B16CS020 is de-registered	Pass	Pass

		from course	from course		
3.8.2	Input: B16CS020	B16cs020 is not registered in the course	B16cs020 is not registered in the course	Pass	Pass

3.9 Faculty :: addAttendance()

1. Feature to be tested : Attendance for a Date is added by giving input the roll number of students absent on that date. Validity of date is also checked. A file with name date.txt is created in folder “date”. Presents of students is updated in presentCountList as well as in file presentCount.txt. the Date is added to lectureDates annd lectureDates.txt
2. Item Pass/Fail Criteria : attendance is added for date in file and number of presents of students is also update. The result is reflected in the list of defaulters.

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	Verified
3.9.1	Input: 29 2 2018	Invalid Date	Invalid Date	Pass	Pass
3.9.2	Input: 15 2 2018 2 B16CS010 B16CS011	File 15-2-2018.txt is created in folder date. Presents Count is updated for both students.	File 15-2-2018.txt is created in folder date. Presents Count is updated for both students.	Pass	Pass
3.9.3	Input: 15 2 2018 2 B16CS010 B16CS020	File 15-2-2018(1).txt is created in folder date. Presents Count is updated for B16CS010 but not for B16CS020 as B16CS020 is not registered	File 15-2-2018(1).txt is created in folder date. Presents Count is updated for B16CS010 but not for B16CS020 as B16CS020 is not registered	Pass	Pass

3.10 Faculty :: modifyAttendance()

1. Feature to be tested : A valid date , roll number of student , new attendance status (0 for absent and 1 for present) is entered. if there was a lecture on that date and student is registered then, attendance of student is updated in both database as well as files, else error message is shown.
2. Item Pass/Fail Criteria : Updated attendance is reflected in defaulters list and in file containing attendance of that date.

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	Verified
3.10.1	Input: 29 2 2018	Lecture on this date does not exist	Lecture on this date does not exist	Pass	Pass
3.10.2	Input: 15 2 2018 2 B16CS020 0	Student roll number is wrong	Student roll number is wrong	Pass	Pass
3.10.3	Input: 15 2 2018 2 B16CS010 0	Same attendance is already in database	Same attendance is already in database	Pass	Pass
3.10.4	Input: 15 2 2018 2 B16CS010 1	Modification of B16CS010 is done to 1 on date 15-2-2018.	Modification of B16CS010 is done to 1 on date 15-2-2018.	Pass	Pass

3.11 void Admin :: addFaculty()

1. Feature to be tested : _register function is called to add faculty
2. Item Pass/Fail Criteria : _register function is called to add faculty

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	Verified
3.11.1	Input: NA	_register function is called	_register function is called	Pass	Pass
	Input: cs223 Shivam Nirne Shivam123	Shivam Nirne succesfully registered as	Shivam Nirne succesfully registered as	Pass	Pass

	Shivam123	faculty	faculty		
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3.12 Interface_handler :: loginFaculty()

1. Feature to be tested : Faculty registered is logged in with correct credentials input
2. Item Pass/Fail Criteria : If faculty is registered and input credentials matched then logged in else return to homeView

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	Verified
3.12.1	Input: Shivam nirne Shivam123	Invalid Name	Invalid Name	Pass	Pass
3.12.2	Input: Shivam Nirne Shivam1234	Invalid Password	Invalid Password	Pass	Pass
3.12.3	Input: Shivam Nirne Shivam123	Welcome Dr. Shivam nirne	Welcome Dr. Shivam nirne	Pass	Pass

3.13 Admin :: deleteFaculty()

1. Feature to be tested : Deletes a Faculty (name and password) from faculty_details.txt and from facultyMap. This faculty is no longer able to login as faculty.
2. Item Pass/Fail Criteria : Faculty is deleted from database and files. Faculty deleted is unable to login after deletion.

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	Verified
3.13.1	Input: Shivam nirne	No such faculty present	No such faculty present	Pass	Pass
3.13.2	Input: Shivam Nirne	Shivam Nirne is removed from Course	Shivam Nirne is removed from Course	Pass	Pass

3.13.3	Trying to login as faculty. Interface_handler :: loginFaculty() Input : Shivam Nirne Shivam123	Invalid Name	Invalid Name	Pass	Pass
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3.14 Faculty :: isValidDate(year, month, day)

1. Feature to be tested : returns true if a date is valid else returns false if date is invalid. Invalid date means such a date can never exist.
2. Item Pass/Fail Criteria : True is returned for a valid date and if true is returned the the date is valid, same as for false and invalid date.

Test Number	Input/Local Variables	Expected Output	Actual Output	Pass/Fail	Verified
3.13.1	Input: 2018 2 29	False	False	Pass	Pass
3.13.2	Input: 2016 2 29	True	True	Pass	Pass
3.13.3	Input: 2018 2 15	True	True	Pass	Pass

4.0 DETAILS OF SYSTEM TESTING

4.0 System Testing

Step #	Test Step	Intended Result	Actual Result	Pass/Fail	Comments	Resolution
1	Login as Admin -> Add Faculty	New Faculty added	New Faculty is added	Pass	Verified	
2	Login As Admin -> Log out from Admin	Logged Out -> Home View	Logged Out -> Home View	Pass	Verified	

3	Login As Faculty -> Add Student	New Student is Added	New Student is Added	Pass	Verified	
4	Login As Faculty -> Modify Student	Student Name is modified	Student Name is modified	Pass	Failed	Bug Fixed
5	Login As Student -> Delete Student	Student is deleted from course	Student is deleted from course	Pass	Verified	
6	Login As Faculty -> Add Attendance	Attendance is Added	Attendance is Added	Pass	Verified	
7	Login As Faculty -> Modify Attendance	Attendance is Modified	Attendance is Modified	Pass	Failed if modified for the same status	Bug Fixed
8	Login As Faculty -> Change Password	Password of Faculty is Changed	Password of Faculty is Changed	Pass	Failed password is changed but unable to re-login	Bug Fixed
9	View Defaulters	Defaulters List with respective % Attendance is displayed	Defaulters List with respective % Attendance is displayed	Pass	Pass	
10	View Attendance	Attendance of all the lectures is displayed	Attendance of all the lectures is displayed	Pass	Pass	
11	Login As Admin -> modify faculty	Faculty name is changed	Faculty name is changed	Pass	Pass	
12	Login As Admin -> remove faculty	Faculty is removed from course and no longer able to login as faculty	.Faculty is removed from course and no longer able to login as faculty	Pass	Pass	

13	Login As faculty -> Log out	Faculty is logged Out -> Home View	Faculty is logged Out -> Home View	Pass	Pass but logged out printed thrice	Bug Fixed
14	Login As faculty->Register a student ->modify attendance	Status changed to absent, present	Student roll number is wrong	Failed	User is already registre d still not finding student roll number	Bug Fixed
15	Login as faculty->modify attendance of a particular student	Date, Roll number and o is displayed	Only date is printed	Failed	Re-updati ng the same status again for student	Bug Fixed
16	Login as faculty-> change password->Re-lo gin	Password changed successfully Logged in	Password changed successfully Invalid password	Failed	Space separated password is updated	Bug Fixed

5.0 UNRESOLVED TEST INSTANCES

Test Case ID	Summary Of Defect	Why Not Resolved