

**Exam Grades Management System TEST REPORT**

Version *<2.0> 10* April 2018

 

**Exam Grades Management System**



**VERSION HISTORY**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version #** | **Implemented By** | **Revision Date** | **Brief Description** |
| 1.0 | Sohail Khan (B16CS036) Aniket Parate(B16CS023) | 02-04-2018 | *The following document contains unit and system testing for the grades management system.* |
| 2.0 | Sanchit Taliyan(B16CS031)  Uneet Meena(B16CS037) | 10-04-2018 |  |
|  |  |  |  |
|  |  |  |  |

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**4.0 DETAILS OF SYSTEM TESTING**

**1.0 INTRODUCTION**

**1.1**

**2.0**

**PURPOSE**

This *Exam Grades Management System Unit and System* Test Report provides a summary of the results of test performed as outlined within this document.

**TEST PLAN**

The testing of the system will proceed in the following manner.

* Static Unit Testing:   
  In this part the code will be checked and reviewed if there are any compilation errors in the code. Examination over all possible situation that may arise during will be done.   
  Here the following techniques will be used: 1. Inspection  
  2. Walkthrough
* Dynamic Unit Testing:  
  Here the code will be executed in units which would be functions   
  related to a specific unit.

Two types of testing will be done in this part:

1. Control Flow Testing:  
   Here appropriately few paths will be selected so that each   
   predicate expression is executed and checked whether it produces the desired outcome.
2. Data Flow Testing:  
   The aim of this part is to check whether there is any kind of   
   data flow anomaly associated with the unit being checked. All the variables associated with the unit being tested are checked to be free of any kind of data flow anomaly.

System Testing:  
When all the units of the code are checked statically and dynamically

they are integrated into one complete system and the system is checked as a whole. The behavior of the system is checked against the expected behavior.

**Exam Grades Management System**



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**3.0 DETAILS OF UNIT TESTING**

**3.1UTILITY CLASS**  
**3.1.1 VOID START()**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.1.1.1 | 1’ / char | Function for register is called | Function for register is called | PASS | Yes |
| 3.1.1.2 | 2’ / char | Function for login is called | Function for login is called | PASS | Yes |
| 3.1.1.3 | 3’ / char | Exits the Program | Exits the Program | PASS | Yes |
| 3.1.1.4 | Any character other than the above | Displays “Invalid Choice” | Displays “Invalid Choice” | PASS | Yes |
| 3.1.1.5 | String | Displays “Invalid Choice” | Displays “Invalid Choice” | PASS | Yes |

**3.1.2 VOID USER\_REGISTER()**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.1.2.1 | String / username | Given string should be accepted as the username of the new user to be registered | Given string is accepted as the username of the new user to be registered | PASS | Yes |
| 3.1.2.2 | String / userid | The system should automatically generate the userid of the new user | The system should automatically generate the userid of the new user | PASS | Yes |
| 3.1.2.3 | String / userid | No two users should have same | No two users should have same | PASS | Yes |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | userid | userid |  | Yes |
| 3.1.2.4 | String / mail | Accepts the desired email of the new user | Accepts the desired email of the new user | PASS | Yes |
| 3.1.2.5 | String / mail | Email should be accepted only if it is in a valid email format | Email should be accepted only if it is in a valid email format | PASS |  |
| 3.1.2.6 | 1’ / char | User type as student is selected | User type as student is selected | PASS |  |
| 3.1.2.7 | 2’ / char | User type as Faculty is selected | User type as Faculty is selected | PASS |  |
| 3.1.2.8 | Any char other than ‘1’ and ‘2’ | Message as invalid choice is displayed | Message as invalid choice is displayed | PASS |  |
| 3.1.2.9 | String / pass,c\_pass | Function accepts the desired string as password only when pass and c\_pass matches | Function accepts the desired string as password only when pass and c\_pass matches | PASS |  |

**3.1.3 VOID USER\_LOGIN()**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.1.3.1 | String, string / username , password | User is logged in if the user with given username and password is registered in the system | User is logged in if the user with given username and password is registered in the system | PASS | Yes |
| 3.1.3.2 | String, string / username , password | “Either username or password is incorrect” is displayed if user does not exist | “Either username or password is incorrect” is displayed if user does not exist | PASS | Yes |

**3.1.4 VOID CHOICES()**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.1.4.1 | 1’ / c | Function for view profile is executed | Function for view profile is executed | PASS | Yes |
| 3.1.4.2 | 2’ / c | Function for modify profile is executed | Function for modify profile is executed | PASS | Yes |
| 3.1.4.3 | 3’ / c | Function for adding courses is executed | Function for adding courses is executed | PASS | Yes |
| 3.1.4.4 | 4’ / c | Function for view courses is executed | Function for view courses is executed | PASS | Yes |
| 3.1.4.5 | 5’ /c | Function for view statistics is executed | Function for view statistics is executed | PASS | Yes |
| 3.1.4.6 | 6’ / c | Student : user is logged out  Faculty : function for update marks is executed | Student : user is logged out  Faculty : function for update marks is executed | PASS | Yes |
| 3.1.4.7 | 7’ / c | Function for modify grades is executed | Function for modify grades is executed | PASS | Yes |
| 3.1.4.8 | 8’ / c | Faculty user is logged out | Faculty user is logged out | PASS | Yes |

**3.2 USER CLASS**

**3.2.1 VOID VIEW\_PROFILE()**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.2.1.1 | Nil | Details of user are visible | Details of user are visible | PASS | yes |

**3.2.2 VOID MODIFY\_PROFILE()**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.2.2.1 | String / userid | Userid of the user should be changed | Userid of the user should be changed | PASS | Yes |
| 3.2.2.2 | String / email | Email linked with user is changed | Email linked with user is changed | PASS | Yes |
| 3.2.2.3 | String / userid | Validity of the userid should be done | Validity of the userid should be done | PASS | Yes |
| 3.2.2.4 | String / mail | Validity of the mail should be checked | Validity of the mail should be checked | PASS | Yes |

**3.2.3 VOID VIEW\_STATS()**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.2.1.1 | Nil | Details of user are visible | Details of user are visible | PASS | Yes |

**3.2.4 VOID VIEW\_COURSES ()**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.2.4.1 | Nil | Student and faculty : Courses registered by user is displayed | Student and Faculty : Courses registered by user is displayed | PASS | Yes |

**3.2.5 VOID UPDATE\_MARKS()**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.2.5.1 | Any int between 1-6 / c | Course related to the respective integer is selected | Course related to the respective integer is selected | PASS | Yes |
| 3.2.5.2 | Integer other than 1-6 / c | Displays Message as Invalid Result | Displays Message as Invalid Result | PASS | Yes |
| 3.2.5.3 | String / username | Select the user with the given string as username | Select the user with the given string as username | PASS | Yes |
| 3.2.5.4 | String / username | Displays message that the user is not | Displays message that the user is not | PASS | Yes |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | registered if this case prevails | registered if this case prevails |  |
| 3.2.5.5 | Integer / marks | Updates the total marks for the selected user | Updates the total marks for the selected user | PASS |
| 3.2.5.6 | Integer / marks | Updates marks in a specified range | Updates marks in a specified range | PASS |

**3.2.6 VOID MODIFY\_GRADES()**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.2.6.1 | Integer from 1-5 / c | Course for which grade is to be modified is selected | Course for which grade is to be modified is selected | PASS | Yes |
| 3.2.6.2 | Integer other than 1-5 / c | Message is displayed as invalid selection | Message is displayed as invalid selection | PASS | Yes |
| 3.2.6.3 | String / username | Student with the given string as username is selected | Student with the given string as username is selected | PASS | Yes |
| 3.2.6.4 | String / Username | Displays “student does not exits” if the given username is not registered with the system | Displays “student does not exits” if the given username is not registered with the system | PASS | Yes |
| 3.2.6.5 | char / grade | Updates the grade of the selected student | Updates the grade of the selected student | PASS | Yes |
| 3.2.6.6 | Char / grade | Takes input only from ‘A’ , ‘B’ , ‘C’, ‘D’ and ‘F’ | Takes input only from ‘A’ , ‘B’ , ‘C’, ‘D’ and ‘F’ | PASS | Yes |

**3.2.7 VOID SELECT\_COURSES ()**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.2.7.1 | Any int between 1-6 / c | Course related to the respective integer is added | Course related to the respective integer is added | PASS | Yes |
| 3.2.7.1 | Any int between 1-6 / c | Does not adds the course if it is already added | Does not adds the course if it is already added | PASS | Yes |

**3.3 COURSES CLASS**  
**3.3.1 VOID SHOW\_USER\_COURSES()**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.3.1.1 | Nil | Shows courses  which in which user has registered | Shows courses which in which user has registered | PASS | Yes |

**3.3.2 VOID GET\_COURSE\_GRADE(CONST STRING &CNAME)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.3.2.1 | String/ cname | Shows grades of the courses selected | Shows grades of the courses selected | PASS | Yes |
| 3.3.2.2 | String / cname | Displays “Invalid Course” when valid course is not entered | Displays “Invalid Course” when valid course is not entered | PASS | Yes |

**3.3.3 VOID UPDATE\_MARKS(INT MARKS)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.3.3.1 | integer / marks | Set total marks as the integer given to function | Set total marks as the integer given to function | PASS | Yes |
| 3.3.3.2 | Integer/ marks | Negative marks should not be accepted | Negative marks should not be accepted | PASS | Yes |
| 3.3.2.2 | String / cname | Displays “Invalid Course” when valid course is not entered | Displays “Invalid Course” when valid course is not entered | PASS | Yes |

**3.4 STATISTICS CLASS**  
**3.4.1 VOID GRADES\_CRITERIA(CONST STRING &COURSENAME)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.4.1.1 | String / coursename | Calculate grades on the basis of the set criteria | Calculate grades on the basis of the set criteria | PASS | Yes |
| 3.4.3.2 | String / coursename | Displays “invalid course” if the string given as course is not registered | Displays “invalid course” if the string given as course is not registered | PASS | Yes |

**3.4.2 INT GET\_AVERAGE\_MARKS(CONST STRING &COURSENAME)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.4.2.1 | String / coursename | Calculate average marks of the course given | Calculate average marks of the course given | PASS | Yes |
| 3.4.3.2 | String / coursename | Displays “invalid course” if the string given as course is not registered | Displays “invalid course” if the string given as course is not registered | PASS | Yes |

**3.4.3 INT GET\_MEAN\_DEVIATION(CONST STRING &COURSENAME)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test No.** | **INPUT / LOCAL VARIABLE** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 3.4.3.1 | String / coursename | Returns mean deviation of the marks of the course given | Returns mean deviation of the marks of the course given | PASS | Yes |
| 3.4.3.2 | String / coursename | Displays “invalid course” if the string given as course is not registered | Displays “invalid course” if the string given as course is not registered | PASS | Yes |

**DETAILS OF SYSTEM TESTING**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Step** | **TEST STEP/ INPUT** | **Intended Result** | **Actual Result** | **Pass/Fail** | **Verification** |
| 1 | Register | New user gets registered | New user gets registered | PASS | Yes |
| 2 | Login | User gets login | User gets login | PASS | Yes |
| 3 | Login -> View profile | User can view its details | User can view its details | PASS | Yes |
| 4 | Login -> Modify profile | User can modify profile | User can modify profile | PASS | Yes |
| 5 | Login-> view courses | User can view courses which he/she is studying/teaching | User can view courses which he/she is studying/teaching | PASS | Yes |
| 6 | Login as Student -> View Stats | Student can view the marks and grades of each subject | Student can view the marks and grades of each subject | PASS | Yes |
| 7 | Login as Faculty -> View Stats | Faculty can view grades of any student associated with any of the courses it is teaching | Faculty can view grades of any student associated with any of the courses it is teaching | PASS | Yes |
| 8 | Login as Faculty - > update marks | Faculty can update marks of any student of any course it is teaching | Faculty can update marks of any student of any course it is teaching | PASS | Yes |
| 9 | Login as Faculty - > modify grades | Faculty can modify the grade of any student of any of the course it is teaching | Faculty can modify the grade of any student of any of the course it is teaching | PASS | Yes |
| 10 | Login - > logout | User can logout of the system successfully | User can logout of the system successfully | PASS | Yes |

# 5. Test Failed

Common Error : If function takes input as string then it fails for any input other than strings.