

Student Fee Management System

Test Report

Version 1.0

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Version History

Version	Implemented By	Date	Description
1.0	Shivam Nirne And Nikunj Labana	1-04-2018	Unit Testing And Software Testing are briefly explained in this document.
2.0	Vijay Siddharth and Vinay Nagalgaonkar	9 04-2018	

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1.0 Introduction

1.1 Purpose

The main purpose is to create such a document which can record data which is obtained from the experimental evaluation of the software. This evaluation shows the expected result and actual result that the software gives for particular set of input. This is done in proper manner. Testing is done to minimize the errors in software.

2.0 Test Plan

While testing the software following order will be followed :-

1. Unit Testing
2. System Testing

Unit Testing :-

In this testing each function in the code will be tested separately . All possible sets of inputs will be used to test the function . Expected and actual output will be noted for each function. Criteria to fail/pass the function are also mentioned.

System Testing :-

There are many systems/units in this software such as Mess Fee Payment, Register New Student etc. . These units are tested individually .Set input are used to test and end results are examined .

3 Details of Unit Testing

3.1 Take User Type

3.1.1 Taking user type

3.1.2 Features - Whether user is admin or student is taken.If “1” is pressed user type will be admin and if it presses “2” student will be the user type.

3.1.3 Criteria -Input should be integer either 1 or 2 for calling next function.

Test ID	Set Of Inputs	Actual Outcome	Expected Outcome	Pass/Fail	Description	Verification
3.1.1.1	1	login Interface	login Interface	Pass		Verified
3.1.1.2	2	login Interface	login Interface	Pass		Verified
3.1.1.3	5	Same Page	Same Page	Pass	Input Should be 1 or 2.	Verified

3.1.1.4	string	Same Page	Same Page	Pass	Input Should be 1 or 2	Verified
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3.2 Take Log In Details

3.2.1 Taking Log In Details from User

3.2.2 Features - Whether user is giving correct Id & Password or not is checked using data stored in file. This is applicable for both Student and Admin.

3.2.3 Criteria - User should enter correct ID & Password to proceed.

Test ID	Input ID Password		Actual Outcome	Expected Outcome	Pass / Fail	Description	Verification
3.2.2.1	correct	Incorrect	Enter correct details	Enter correct details	Pass		Verified
3.2.2.2	Incorrect	Incorrect	Enter correct details	Enter correct details	Pass		Verified
3.2.2.3	Correct	Correct	Logged In Successful	Logged In Successful	Pass		Verified

3.3 Take Admin Input :-

3.3.1 Taking Admin Input

3.3.2 Features :- 1 to 5 options are displayed. If any one among these options is given, corresponding functions will be called.

3.3.3 Criteria :- Input should be among 1 to 5 only. If other integer or string is given this will fail and same function will be executed.

Test ID	Input	Actual Outcome	Expected Outcome	Pass / Fail	Description	Verification
3.3.3.1	3	Entered in remove student	Entered in remove student	Pass		Verified
3.3.3.2	9	Enter Valid option	Enter valid option	Pass		Verified
3.3.3.3	1	Entered in Register	Entered in register	Pass		Verified

		student	student			
3.3.3.4	2	Entered in View student	Entered in View student	Pass		Verified
3.3.3.5	shivam	Enter Valid option	Enter valid option	Pass		Verified
3.3.3.6	4	Entered in Update details student	Entered in Update details student	Pass		Verified
3.3.3.4	2fgtdf	Entered in view details	Enter Valid option	Fail	Input is invalid but function is accepting this input.	resolved

3.3 Take Student Input :-

3.3.1 Taking Student Input

3.3.2 Features :- 1 to 5 options are displayed. If any one among these options is given, corresponding functions will be called.

3.3.3 Criteria :- Input should be among 1 to 5 only. If other integer or string is given this will fail and same function will be executed.

Test ID	Input	Actual Outcome	Expected Outcome	Pass / Fail	Description	Verification
3.3.3.1	3	Entered in View Receipt	Entered in View Receipt	Pass		Verified
3.3.3.2	9	Enter Valid option	Enter valid option	Pass		Verified
3.3.3.3	shivam	Enter Valid option	Enter valid option	Pass		Verified
3.3.3.4	2	Entered in Mess fee payment	Entered in Mess fee payment	Pass		Verified

3.3.3.5	1typr	Entered in Semester fee payment	Enter Valid option	Fail	Input is invalid but function is accepting this input.	resolved
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3.4 Enter Student Detail

3.4.1 Admin is entering student detail

3.4.2 Features :- Admin is entering student detail and this detail will be stored in file or students database and will be used if further needed. On successful registration number student counter for B.tech and Msc will be incremented. There are separate counters for both.

3.4.3 Criteria - Name should be string and caste and program should be among the provided options, otherwise same function will be executed. Caste has 1 to 3 options. Program has 1 to 2 options.

Test ID	Name	Input Caste	Program	Actual Outcome	Expected Outcome	Pass / Fail	Description	Verification
3.4.1.1	Shivam	1	2	Registered successfully	Registered successfully	Pass		Verified
3.4.1.2	Shivam Nirne	1	2	Registered successfully	Registered successfully	Pass	Only the first name will be written in file	Verified
3.4.1.3	Shivam	5	1	Same function is called	Same function is called	Pass	Caste input is not amongst 1 to 3.	Verified
3.4.1.4	Shivam	2	5	Same function is called	Same function is called	Pass	Program input is not amongst 1 to 2.	Verified

3.4.1.5	5	2	2	Registered successfully	Registered successfully	Pass	Name will be written 5 in this case.	Verified
3.4.1.6	Shivam	edfgh	1	Same function is called	Same function is called	Pass	String is given instead of int.	Verified
3.4.1.7	Shivam	2	sdfgh	Same function is called	Same function is called	Pass	String is given instead of int.	Verified

3.5 See Details

3.5.1 See Student Details

3.5.2 Features - On the Interface of Admin if admin selects 2 as option ,then details of all students will be shown to admin by reading the student database file.

3.5.3 Criteria - None.

3.6 Delete Student :-

3.6.1 Removal of student by Admin

3.6.2 Features - Admin will enter the ID of student he wants to remove , then from database all information that was stored for that particular student.If that particular student does not exist , then Admin is requested to enter correct Id.

3.6.3 Criteria - ID should be valid ,i.e. ID should be there in the file.

Test ID	Input	Actual Outcome	Expected Outcome	Pass / Fail	Description	Verification
3.6.6.1	BT5	Student is removed and data related to that student will be erased from file	Student is removed and data related to that student will be erased from file	Pass	BT5 is already present as ID in database.	Verified
3.6.6.2	BT7	Enter Valid ID	Enter Valid ID	Pass	BT7 is not in File.	Verified

3.6.6.2	Shivam	Enter Valid ID	Enter Valid ID	Pass	Shivam is present in file , but not as ID , it is Name.	Verified
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Test ID	Option	Input Amount	Actual Outcome	Expected Outcome	Pass / Fail	Description	Verification
3.7.7.1	2	20000	Fees of BTech SC/ST student is updated to 20000	Fees of BTech SC/ST student is updated to 20000	Pass		Verified
3.7.7.2	8	20000	Enter valid Option	Enter valid Option	Pass	Option is not amongst 1 to 7.	Verified
3.7.7.3	rdfgh	20000	Enter valid Option	Enter valid Option	Pass	String is given instead of int.	Verified
3.7.7.4	3	erdtfgh	Enter valid amount	Enter valid Amount	Pass	String is given instead of int.	Verified

3.7.1 Updation of fees by Admin

3.7.2 Features- Admin can update fees by selecting option 4 on Admin Interface Handler. In update fees option from 1 to 7 will be shown. This option will differ on whose fees admin wants to update, ex. "1" for updating fees of Btech General/OBc Caste Student. Also the amount that he wants to update is also taken.

3.7.3 Criteria - Option should be integer between 1 to 7 to pass. Also, the amount should be integer.

Test ID	Option	Input Amount	Actual Outcome	Expected Outcome	Pass / Fail	Description	Verification
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3.7.7.1	2	20000	Fees of BTech SC/ST student is updated to 20000	Fees of BTech SC/ST student is updated to 20000	Pass		Verified
3.7.7.2	8	20000	Enter valid Option	Enter valid Option	Pass	Option is not amongst 1 to 7.	Verified
3.7.7.3	rdfgh	20000	Enter valid Option	Enter valid Option	Pass	String is given instead of int.	Verified
3.7.7.4	3	erdtfgh	Enter valid amount	Enter valid Amount	Pass	String is given instead of int.	Verified

3.8 Take Input To View Receipt

3.8.1 Student Will give option to view fee receipt.

3.8.2 Features - This will be on screen when student select 3 on homepage of student. Student have to select "1" to view Semester fee receipt , "2" to view Mess Fee Receipt . As "1" is selected , Name , Caste,ID , program and Semester fees status will be given as output for that particular student. This will be done by Searching that student in File and then reading of the data of that student will be done to display that data.Similarly it will be done for viewing mess fee receipt.

3.8.3 Criteria - Credentials entered should be either 1 or 2 to pass.

Test ID	Input	Actual Outcome	Expected Outcome	Pass / Fail	Description	Verification
3.8.8.1	1	Sem fee	Sem fee	Pass		Verified

		receipt will be displayed.	receipt will be displayed.			
3.8.8.2	2	Mess fee receipt will be displayed.	Mess fee receipt will be displayed.	Pass		Verified
3.8.8.3	8	Enter valid Option	Enter valid Option	Pass	Input should either 1 or 2.	Verified
3.8.8.4	dfgh	Enter valid Option	Enter valid Option	Pass	String is given instead of int.	Verified

3.9 Pay Mess Fee:-

3.9.1 Make mess fee payment .

3.9.2 Features - This will be on screen when student select 2 on homepage of student. It will be checked that whether the student has paid the fees or not by reading the data for that student from file . If has already paid then “You have already paid” will be shown , else amount of mess fee will be shown and student is asked to press “1” if he wants to proceed else any input . If he presses “1” the mess fee status will be updated.

3.9.3 Criteria - “1” to pay and anything to not to pay.

Test ID	Input	Actual Outcome	Expected Outcome	Pass / Fail	Description	Verification
3.9.9.1	1	Mess fees is paid and updated status.	Mess fees is paid and updated status.	Pass	Mess fee is not paid before giving input.	Verified

3.9.9.2	1	Already Paid	Already Paid	Pass	Mess fee is paid already.	Verified
3.9.9.3	fdgh	Back to Student Homepage	Back to Student Homepage	Pass		Verified

3.10 take Password :-

3.10.1 Take Password

3.10.2 Features-This will be on screen when student select 4 on homepage of student.New password is taken as input from student of “8” characters is taken.If it is not of “8” characters then student will have to give new password of “8” characters. Then it is asked to re-enter password. If the re-entered password matches then new Password will be updated in file.If that doesn’t matches password is asked to re-enter until it matches.

3.10.3 Criteria - Password should contain “8” characters.

Test ID	Input Password Re-entry		Actual Outcome	Expected Outcome	Pass / Fail	Description	Verification
3.10.10.1	abcdefgh	abcdefgh	Successfully updated	Successfully updated	Pass		Verified
3.10.10.2	sdfghu	trfgh	Re-enter	Re-enter	Pass	Re-entered password does not matches.	Verified
3.10.10.3	sdfg	sdfg	Re-enter	Re-enter	Pass	“8” characters are not there.	Verified

3.11 Calculate Fees for BTech Gen/OBC :-

3.11.1 Calculate Fees

3.11.2 Features - If the student falls under the category BTech Gen/OBC, then input among 1 to 3 is demanded from student . These option will differ on the basis of family’s income.Ex.below

1 lac etc. According to options different files are there in which fees for that particular is stored. According to options data from these files are read.

3.11.3 Criteria- Input should be between 1 to 3.

Test ID	Input	Actual Outcome	Expected Outcome	Pass / Fail	Description	Verification
3.11.11.1	1	Fees for family income below 1 lac is read.	Fees for family income below 1 lac is read.	Pass		Verified
3.11.11.2	5	Enter Valid Option.	Enter Valid Option.	Pass	Input should be int bet 1 to 3.	Verified
3.11.11.3	sdfgh	Enter Valid Option.	Enter Valid Option.	Pass	String instead of int.	Verified

3.12 Process Sem Fees

3.12.1 Sem fees will be calculated and shown.

3.12.2 Features-This will be on screen when student select 1 on homepage of student. When “1” is selected first of all student is identified with help of ID in the database. And in this function according to students caste and program fees is calculated and shown. Student is asked to press “1” if he wants to proceed to payment, else any key.

3.12.3 Criteria - None. In any case it will pass.

Test ID	Input	Actual Outcome	Expected Outcome	Pass / Fail	Description	Verification
3.12.12.1	1	Payment is Successful	Payment is Successful	Pass		Verified

3.12.12.2	fghj	Back to student homepage.	Back to student homepage.	Pass		Verified
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4 Details Of System Testing

In this type of testing each unit of system of a part of software is tested.

4.1 Register Student :-

Total Process for registering Student by Admin:-

To select register student admin has to select option “1” which is on Admin Homepage. takeStudentDetails() function will be called in which student details will be entered by admin , giveUsernamePass() will be called which will generate ID and password for student.To write this data in file registerStudent() will be called and all this data for a student will be written in file.Now whole Registration Process is complete and on pressing any key Admin Homepage will be shown.

Step	Test step	Input	Intended Result	Expected Result	Pass / Fail	Comments	Verification
1	takeStudentDetails() Students Name,Caste and Program will be entered .	Student name ,Student Caste,Student Program Ex. Parvesh , GENERAL,BTech.	Status : If Caste and program selected are not correct then details will be asked to re-enter. And these will be stored in temporary variable.	Same as expected.	Pass	This stored data will be used in further process.	Verified
2	giveUsername	BTech	Give Unique ID	Same	Pass	This ID and	Verified

	Pass()	Counter from Btech counter file and Msc Counter from Msc counter file	(using counter) and give a random password containing 8 characters.	as expected		password are also stored in temporary variables and will be used further.	
3	registerStudent()	none.	The data i.e. stored in temporary variables in previous steps will be written into a file and student will be registered successfully.	Same as expected	Pass	There is a file which contains all students data .	Verified

4.2 View Student Details

Total Process for Viewing Student Details by Admin:-

For this admin has to select option “2” which is on Admin Homepage.

viewStudentDetails() function will be called . This function reads all student objects and prints their data on the screen . Now on pressing any key admin will be back to Homepage.

Step	Test step	Input	Intended Result	Expected Result	Pass / Fail	Comments	Verification
1	viewStudentDetails()	None.	Data from Student Database file will be shown on screen.	Same as expected	Pass		Verified

4.3 Remove Student

Total Process for removing Student Details by Admin:-

For this admin has to select option “3” which is on Admin Homepage.

deleteStudent() function will be called, in this function student Id will be taken as Input from Admin. That particular student will be searched in database by Id and all the 7 attributes of that student will be deleted. Now on pressing any key admin will be back to Homepage.

Step	Test step	Input	Intended Result	Expected Result	Pass / Fail	Comments	Verification
1	deleteStudent() ()	Student ID Ex. BT3 (this Id exist in file)	ID will be searched in file, if it exist already then that student will be erased from database , else valid ID is asked to give.	Same as expected	Pass	File will no longer contain the data related to that student.	Verified

4.4 Update Details

Total Process for Updating Details by Admin:-

For this admin has to select option “4” which is on Admin Homepage.

First of all two admin has to select whether he wants to update session or update fees of a particular program and caste. On selecting update session, updateSession() will be called and in this function in same database file bool of mess fee paid and sem fee paid is made false as well as the session will be incremented by 1 which in Session file .And On selecting update fees, updateFeeDetails() function will be called and in this admin is asked to select 1 among 7 options. These options will differ depending on Caste, program and family income. Admin is asked to give input how much he wants to update. There are files in which current fees of each of these 7 options is stored , it will be updated by the amount entered in these files. Now on pressing any key admin will be back to Homepage.

Step	Test step	Input	Intended Result	Expected Result	Pass / Fail	Comments	Verification
1.	updateSession()	None.	Student database file will be opened and status of mess fee and sem fee will be made false for all students. And session will be incremented by 1 in session file.	Same as expected	Pass		Verified
2.	updateFeeDetails()	1.Option "5" Msc Gen/OBC students fees will be updated. 2.amount-40000 This will be new fees for Msc Gen/OBC stud.	Fees file regarding option selected will be opened and amount in that file will be replaced by amount entered. If amount entered is negative or it is string then admin is asked to re-enter the amount.	Same as expected	Pass	Corresponding file will be updated.	Verified

4.5 Semester Fee Payment

Total Process for Paying Semester Fees by Admin:-

For this Student has to select option "1" which is on Student Homepage.

When the student has logged in , we have stored his ID which will be used in further processes.

identifyObject() function will be called , in this function Student is identified in file by his ID which is stored already. And his caste, program and ID will be stored in student class temporary variables. takeInputDetails() function , in this function if caste and program of student is GEN/OBC and Btech function will be called in which student is asked to

select his family income among three categories.then processSemfee() will be called in this calculateFees() functions for diff caste and program is called and variable named “fees” will be upadted . then it is asked to enter 1 for proceed to payment and enter any integer for cancelling payment if user select option 1 then if student already paid fee then it is shown message “already paid”else updation of sem fee status will be made and procees completes.Now on pressing any key student will be back to his homepage.

Step	Test step	Input	Intended Result	Expected Result	Pass / Fail	Comments	Verification
1.	IdentifyObject()	None.	Student will be searched in file and his caste , program is stored in student object.	Same as expected.	Pass		Verified
2.	takeInputDetails()	ex.Option “2” Students family income is bet 1 to 5 lacs.(give n students Btech Gen/OBC.)	The selected option will be given as parameter in calculateFees() function of Btech Gen/OBC. For other students this function doesn’t do any changes.	Same as expected.	Pass		Verified
3.	processDetails()	“1” to proceed for payment. Any other key to cancel payment.	Value of semester fees is calculated for that student and stored in variable This fees will be displayed on screen.. And on selecting “1” the bool of isSemFeePaid is made true in	Same as expected	pass	Bool of isSemFeePaid is made true in student database file.	Verified

			student database file and payment is done.				
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4.5 Mess Fee Payment

Total Process for Paying Mess Fees by Student:-

For this Student has to select option “2” which is on Student Homepage.

When the student has logged in , we have stored his ID which will be used in further processes.

makeMessPayment() is called , in this function mess fee is displayed and asked to select “1” to proceed and any other key to back to student homepage.If Student Selects “1” then upadteMessFeeDetails() function is called in this funnction student is searched in database file by ID and status of mess fee is made true.Now on pressing any key student will be back to his homepage.

Step	Test step	Input	Intended Result	Expected Result	Pass / Fail	Comments	Verification
1.	makeMessFee Payment()	Option “1” to proceed for payment .	Mess fee is displayed and asked to select “1” to proceed and any other key to back to student homepage.	Same as expected.	Pass		Verified
2.	updateMessFeeDetails()	None.	Student will be searched in file and status of mess fee is made true.	Same as expected.	Pass	Status of mess fee is made true for that particular student.	Verified

4.6 View Fee Receipt

Total Process for Viewing Fee Receipt by Student:-

For this Student has to select option “3” which is on Student Homepage.

When the student has logged in , we have stored his ID which will be used in further processes.

takeInputToSeeReceipt() is called , in this function student is asked which receipt he wants to select , Sem or mess . If he wants Sem then he should select “1” and “2” mess fee receipt . After pressing “1” viewSemFeeReceipt() is called , Student is searched in database file by ID and his name ,ID , caste ,program and status of sem fee is printed.After pressing “2” viewMessFeeReceipt() is called , Student is searched in database file by ID and his name ,ID , caste ,program and status of Mess fee is printed. Now on pressing any key student will be back to his homepage.

Step	Test step	Input	Intended Result	Expected Result	Pass / Fail	Comments	Verification
1.	takeInputToSeeReceipt()	“1” for Sem Fee Receipt “2” for Mess fee receipt .	viewSemFeeReceipt() is called viewMessFeeReceipt() is called Else if any other input is given student is asked to re-enter.	Same as expected.	pass		Verified
2.	1.viewSemFeeReceipt() 2.viewMessFeeReceipt()	none.	Student is searched in database file by ID and his name ,ID , caste ,program and status of sem fee is printed.	Same as expected.	pass		Verified

			Student is searched in database file by ID and his name ,ID , caste ,program and status of mess fee is printed.				
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4.8 Change Password

Total Process for changing his own password by Student:-

For this Student has to select option “4” which is on Student Homepage.

When the student has logged in , we have stored his ID which will be used in further processes.

takePassword() is called , in this function new password is taken and it is asked to re-enter. If these two password matches and are of “8” characters then updatePassword() is called. Else in any other condition password is asked to re-enter. updatePassword() - in this function database file is opened and students password is replaced with new password.

Now on pressing any key student will be back to his homepage.

Step	Test step	Input	Intended Result	Expected Result	Pass / Fail	Comments	Verification
1.	takePassword()	1.Sdfgjhab Sdfgjhab 2.asdfg asdfg 3.sdfab txhbc	1.updatePassword() will be called. 2..Re-enter 3.Re-enter	Same as expected.	Pass		Verified
2.	updatePassword()	none.	New password will be updated in file for that student.	Same as expected.	Pass	Database will now contain new password for that student.	Verified

5 Unresolved Test Instances

All errors are resolved successfully.