

ANALYSIS DELIVERABLE

FOR

MBA STUDENT PROFILE SYSTEM

(Advanced System Project)

Submitted By:

Eak Narayan Paudel

Email: exp10910@ucmo.edu

Student id: 700641091

1. Description of User

There are three different types of users who will be using this application.

Director: Director acts as super admin in the system. Director is the person who uses overall functionalities of the system. Director's full name, mailing address, phone number, email address and password will be stored in the system. Director provides all login credentials for other users.

Advisor: Advisor is limited to retrieve little information supplied by Director and Student. Advisor's full name, mailing address, Email, phone number, status (Active/Inactive), userid and password will be stored in the system.

Student: Only registered Student can use the system. Student's full name, mailing address, UCMO email address, alternate email, phone number, concentration, GRE verbal score, GRE quantitative score, and GPA is required to register in the system.

2. Domain Analysis

Introduction: The domain is "MBA Student Profile System". The main objective of the domain analysis is to develop a new application with new functionalities which can be use with the existing system. Added functionality should be able to address Communication and coordination between different levels of user.

Glossary: Most of the terminology for the domain will be general academic and administrative in nature. General terms will be used.

Users: In this domain, Student and Professor related to MBA department, has specified roles.

Competent System: Most of the University is using similar kind of application. For example, Blackboard is providing all kinds of functionalities and widely used by academic Institution. We can get much idea from blackboard and standardize the application to achieve accurate and efficient system. Beside other domain, this domain “MBA Student Profile System” is simple and easy to use with required functionalities which are suitable for small group of users.

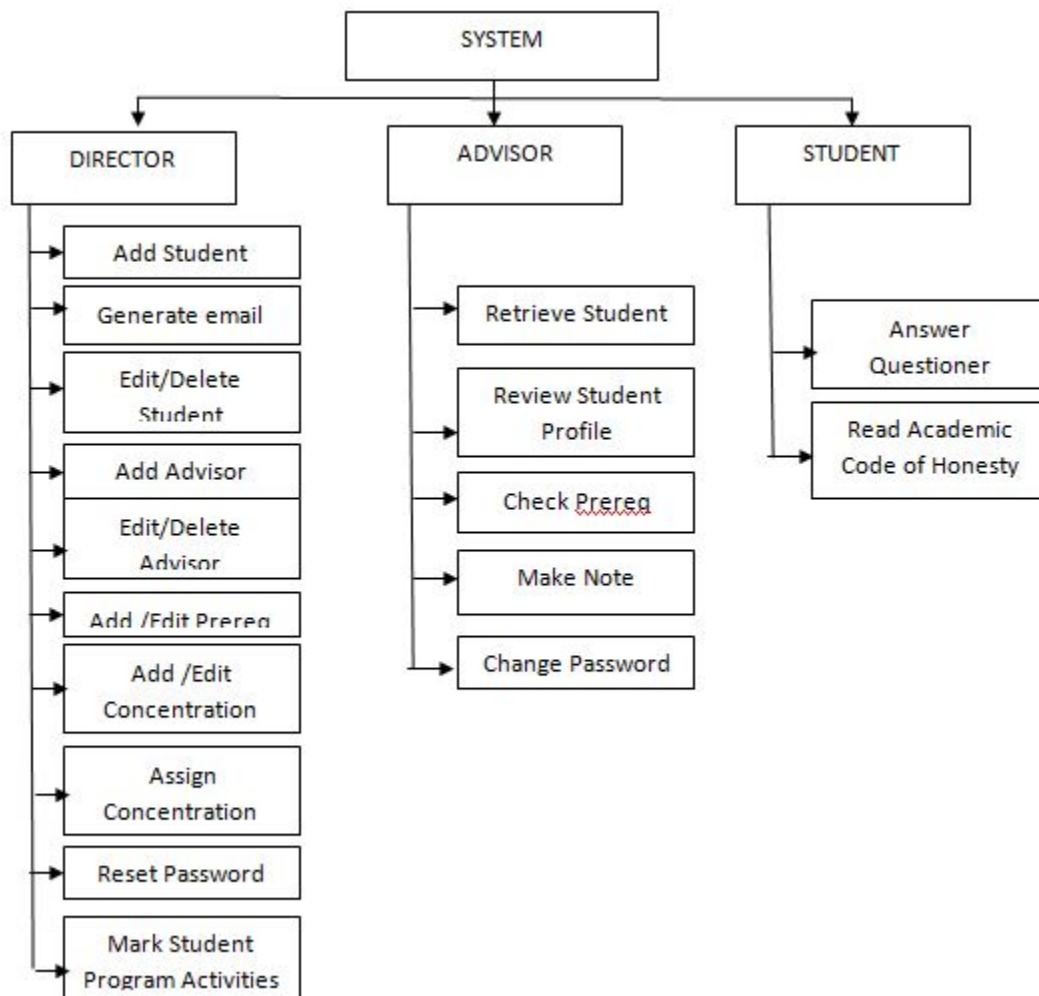


Fig: Over all Functionalities of the System

3. Behavioral Modeling

Use Case Diagram

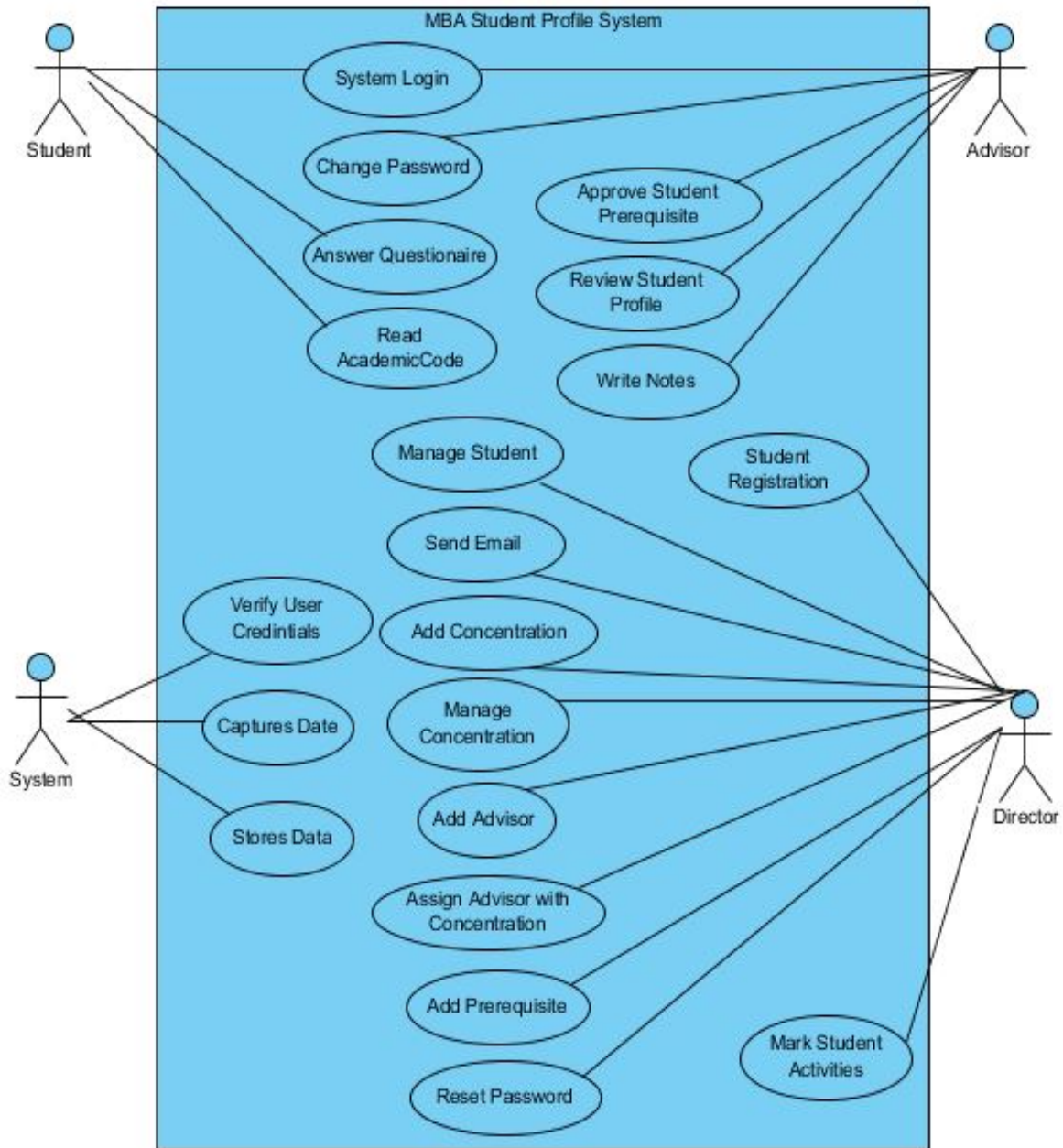


Fig: Use Case diagram for MBA Student Profile system

Use Case Narrative

Use Case: System Login
Use Case ID:01
Brief Description: The use case describes how the users with different roles logs into the system.
Actors: Student, Advisor, Director
Precondition: The Director provides the login credentials for all type of user. Student, Advisor must have username and password.
Main Flow: <ol style="list-style-type: none">1. The use case starts as the system loads and displays the login page with username and password field.2. The User enters username and password.3. The System Verifies the User Credentials.4. While User Input do not match the System Credentials<ol style="list-style-type: none">4.1 The System displays the error message and asks to reenter the username and password.5. While User Input match the System Credentials<ol style="list-style-type: none">5.1 The System Checks the type of user<ol style="list-style-type: none">5.1.1 If user is Student it redirects to WelcomeStudent page.5.1.2 If user is Advisor it redirects to WelcomeAdvisor page5.1.3 If user is Director it redirects to WelcomeDirector page
Post Condition: The Users can view the list of questionnaire. The Advisor and Director can access different functionalities.
Use Case: Answer Questionnaires

Use Case ID:02
Brief Description: The use case allows Student to answer the questionnaire and read the academic code of conduct.
Actors: Student
Precondition: The Student should receive the URL Link from the Director. The Student should be logged into the system.
Main Flow: <ol style="list-style-type: none"> 1. The use case starts as the student successfully login to the system. 2. The system displays the questionnaire related to student profile. 3. All questions must be answer. 4. Student should check the checkbox after reading academic code of conduct. 5. The System checks the validation as Student clicks the submit button. 6. While the required field are not filled <ol style="list-style-type: none"> 6.1 The System displays the error message and asks to fill the entire required field. 7. While System Validates <ol style="list-style-type: none"> 7.1 Data are successfully stored in the system and system displays successfully message. 7.2 The system allows changing the password.
Post Condition: The Student can change the password

Use Case: Change Password
Use Case ID:03
Brief Description: The use case describes how the users change the login password.
Actors: Student, Advisor, Director
Precondition: The Users must be registered in system.
Main Flow: <ol style="list-style-type: none"> 1.0 The User login to the system. 2.0 User clicks the change password. 3.0 Enters the new password. 4.0 Re-enter the password for the confirmation.

5.0 System verifies the specified password parameter including length and type. 6.0 System displays the confirmation message
Post Condition: The user record is updated with new password into the system.

Use Case: Student Registration
Use Case ID:04
Brief Description: The use case describes how the director registers new student.
Actors: Director
Precondition: The Director must log into system.
Main Flow: 1.0 The use case starts when director clicks add new student button. 2.0 The system provides the registration form which includes first name, last name, mailing address, UCMO email address, alternate email, phone number, concentration, GRE scores. 3.0 The system checks the format of email address. 3.1 If the email format is not match, system shows the error message with "Invalid email address". 4.0 The system checks the entire mandatory field. 5.0 If the required field are not filled 5.1 The system asks for missing information. 5.2 The director provides the respective information 6.0 System generates the default password for each student. 7.0 System stores the data and return confirmation message.

Post Condition:
The Director can email the link to student with student userid and password.

Use Case: Send Email
Use Case ID:05
Brief Description: The use case describes about sending email by director to the student.
Actors: Director
Precondition: The Director must log into system. Student Information must be available from the system.
Main Flow: 1.0 The use case starts when director selects the students from the student list displayed in director's interface. 2.0 The director clicks the "send email" button. 3.0 The system creates the email form loading with respective student email address, subject field, message field with student userid and default password. 4.0 The director can change the email address, subject and message body. 5.0 The director clicks the submit buttons. 6.0 The system sends the email and return successful message.
Post Condition: None

Use Case: Add Advisor
Use Case ID:06
Brief Description: The use case describes how the director can add new advisor.
Actors: Director
Precondition:

The Director must log into system.
<p>Main Flow:</p> <ol style="list-style-type: none"> 1.0 The use case begins when director clicks “Add Advisor”. 2.0 The system provides the registration form which includes first name, last name, mailing address, UCMO email address, phone number, department name, role (Advisor/Director), status (Active/Inactive), and password. 3.0 The system checks the format of email address. <ol style="list-style-type: none"> 3.1 If the email format is not match, system shows the error message with”Invalid email address”. 4.0 The system checks the entire mandatory field. 5.0 If the required field are not filled <ol style="list-style-type: none"> 5.1 The system asks for missing information. 5.2 The director provides the respective information. 6.0 System stores the data and return confirmation message.
<p>Post Condition:</p> <p>The Director can email the advisor with advisor userid and password.</p>

Use Case: Add Concentration
Use Case ID:07
Brief Description: The use case describes how the director can add new concentration.
Actors: Director
<p>Precondition:</p> <p>The Director must log into system.</p>
<p>Main Flow:</p> <ol style="list-style-type: none"> 1.0 The use case begins when director clicks “Add New Concentration”. 2.0 The system provides the registration form which includes Concentration name, degree code, and status (Active/Inactive) 3.0 The system checks the entire mandatory field.

<p>4.0 If the required field are not filled</p> <p>4.1 The system asks for missing information.</p> <p>4.2 The director provides the respective information.</p> <p>5.0 System stores the data and return confirmation message.</p>
<p>Post Condition:</p> <p>The Director can assign concentration for advisor.</p>

Use Case: Assign Advisor with Concentration
Use Case ID:08
Brief Description: The use case describes how the director can assign concentration to advisor.
Actors: Director
<p>Precondition:</p> <p>The Director must log into system.</p>
<p>Main Flow:</p> <p>1.0 The use case begins when director clicks “Assign Concentration”.</p> <p>2.0 The system provides the dropdown options with list of active advisors and list of concentration.</p> <p>3.0 The director selects the advisor.</p> <p>4.0 The director selects the concentration to be assign.</p> <p>5.0 If the required field are not filled</p> <p>5.1 The system asks for missing information.</p> <p>5.2 The director needs to select the option.</p> <p>6.0 System stores the data and return confirmation message.</p>
<p>Post Condition:</p> <p>The Director can view the advisor list with assign concentration.</p>

Use Case: Manage Concentration
Use Case ID:09
Brief Description: The use case describes how the director can edit, delete and update concentration for advisor and student.
Actors: Director
Precondition: The Director must log into system.
Main Flow: 1.0 The use case begins when director clicks “Manage Concentration”. 2.0 The system generates the table with attribute concentration, advisor, edit option, delete option. 3.0 The director selects the row. 4.0 If director clicks delete option 3.1 The selected row is deleted from the system 5.0 If director clicks edit option. 5.1 The director can reassign the concentration to advisor. 6.0 System stores the data and return confirmation message.
Post Condition: System updates the database regarding the option selected.

Use Case: Retrieve Student Data
Use Case ID:10
Brief Description: The use case describes how the advisor and director can retrieve the student profile data.
Actors: Advisor, Director
Precondition:

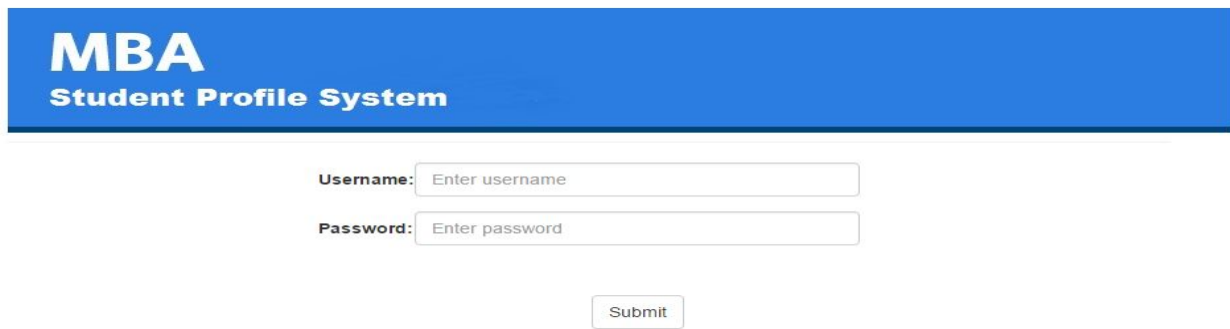
The Advisor, Director must log into system.
<p>Main Flow:</p> <ul style="list-style-type: none"> 1.0 The use case begins when user successfully login to the system. 2.0 The system generates the student list within advisor's concentration. 3.0 The user can select the student id. 4.0 If the user is Director <ul style="list-style-type: none"> 3.1 All information is retrieved 5.0 If the user is Advisor <ul style="list-style-type: none"> 5.1 .Retrieved Information is limited to student name with related concentration. 6.0 User can view the Information.
<p>Post Condition:</p> <p>None</p>

Use Case: Review Student Profile
Use Case ID:10
Brief Description: The use case describes how the advisor can review the student profile.
Actors: Advisor
<p>Precondition:</p> <p>The Advisor must log into system.</p>
<p>Main Flow:</p> <ul style="list-style-type: none"> 1.0 The use case begins when Advisor successfully login to the system. 2.0 The system generates the student list provided by director. 3.0 The advisor can select the student id. 4.0 The advisor can view the questionnaire submitted by student. 5.0 The advisor can check the status of prerequisites courses for selected student. 6.0 The advisor can mark the prerequisites and make note. 7.0 If prerequisites is marked as "met" <ul style="list-style-type: none"> 7.1 The system captures the date and advisor details 8.0 If advisor enters a note <ul style="list-style-type: none"> 8.1 The system captures the date and advisor details
Post Condition:

The advisor can review the previous notes.

4. Interfaces for Use Cases

Login page



The login page features a blue header with the text "MBA Student Profile System". Below the header, there are two input fields: "Username:" with a placeholder "Enter username" and "Password:" with a placeholder "Enter password". A "Submit" button is located below the password field.

Fig: Login page

This is the interface for login page. Student, Director and Advisor can use their login credentials to get logged. Each user is directed to their respective page after successful login.

Student Registration Page

MBA
Student Profile System

Student

Add Student

Edit/Delete Student

Advisor

Add Advisor

Assign Concentration

Edit Advisor Details

Reset Password

Add New Concentration

Add Student

First name:

first name

Last name:

Last name

Address:

Address

phone number:

phone

alternate email:

Ucmo email:

E@ucmo.edu

Concentration:

select Concentration ▾

gre_verbal:

gre_quantitative:

gpa:

Add

In above figure, Director can click to add student to add new student. All required field need to be filled too insert data.

Add Advisor page

This page is Add Advisor page. Director can add new advisor simply clicking navigation link, filling all required fields.

Student

[Add Student](#)[Edit/Delete Student](#)

Advisor

[Add Advisor](#)[Assign Concentration](#)[Edit Advisor Details](#)[Reset Password](#)[Add New Concentration](#)

Add Advisor

First name:

Last name:

Email:

phone number:

Department:

Password:

Confirm Password:

Active/Inactive:

Role:

Fig: Add Advisor Page

Add Concentration

MBA
Student Profile System

Student

Add Student

Edit/Delete Student

Advisor

Add Advisor

Concentration List

Edit Advisor Details

Reset Password

Welcome, Sam||Logout

Add Concentration

Concentration name:

Degree Code:

Active/Inactive:

Choose Advisor:

Add

Fig: Add Concentration Page

Student Page

MBA
Student Profile System

Please Complete all the Questions

What is your Full name?

What is Your Major?

Write any three subjects related to this course.

Academic code of conduct.
☐ I accept all academic code of conduct

Submit

Fig: Student Page

Retrieve Advisor

MBA Student Profile System										
Student	Add Student									
	Edit/Delete Student									
Advisor	Add Advisor									
	Assign Concentration									
	Edit Advisor Details									
	Reset Password									
	Add New Concentration									
Id	First Name	Last Name	Department	Email	Phone	Status	Role	Edit	delete	
1	Sam	ramunujna	cis	ll	23.0	Active	advisor	Edit	Delete	
2	Sam	ramunujna	cis	ll	23.0	Active	director	Edit	Delete	
3	Sam	ramunujna	cis	ll	23.0	Active		Edit	Delete	
4	Sam	ramunujna	cis	ll	23.0	Inactive		Edit	Delete	
5	lalu					select		Edit	Delete	
6	kamal	khanal	CIS	khanal@ucmo.edu	1.23456799E8	Active		Edit	Delete	
7	lalu	prashad	CS	lalau@gmail.com	6.30888123E8	Active		Edit	Delete	
8	shankar					Active		Edit	Delete	
9	lalbabau	pandit	cs	lal@gmail.com	1234.0	Active	director	Edit	Delete	
10	Ram Laxman	Sharma		sharma@ucmo.edu		Active	advisor	Edit	Delete	

Fig: Retrieve All Advisor

Advisor Page

MBA Student Profile System										
Student List	Student List with Concentration						Welcome, Sam Logout			
	Change Password									
Id	First Name	Ucmo Email	Concentration	Review Profile						
700001	eak		pm	Review Profile						

Fig: Advisor Page

After successful login as advisor, It directs to advisor page. In this page advisor can retrieve student, change password and review profile.

5. Non- functional Requirement

NF-ID	Details	Type	Priority
NR-1.	The MBA Student Profile System should be compatible with commonly used browser.	Compliance To Standard	Must
NR-2.	The MBA Student Profile System be fit all kind of screen size.	Compliance To Standard	Must
NR-3.	The MBA Student Profile System should be built in responsive model.	Compliance To Standard	Must
NR-4.	The MBA Student Profile System shall be written using JSP, servlet in MVC Standard (using spring framework).	Compliance To Standard	Must
NR-5.	The MBA Student Profile System shall support 10000 transactions per day.	Capacity	Should
NR-6.	The MBA Student Profile System shall support peak transaction rate of 5 transactions per second.	Capacity	Should
NR-7.	The Site must be available 24 hours a day through the year.	Availability	Must
NR-8.	At least 30 users must be able to login at same time duration.	performance	Must
NR-9.	The MBA Student Profile System server shall respond within 5 second after login.	performance	Should
NR-10.	The performance of the System should be considerable regarding page load and user clicks.	performance	Should
NR-11.	The MBA Student Profile System should scale correctly to support high traffic loads.	scalability	Should
NR-12.	The MBA Student Profile System shall authenticate all users of the system who are not registered users.	Security	Must
NR-13.	The Student data must be stored with encrypted format.	security	Must

6. Test Cases

For Login page

Case Number	Description	Expected Results	Actual Results	Passed
1	Test for registered user to login successfully	When username and password field is filled and press submit button, User must successfully login to page		
2	Test when user enters wrong username or password	Error message is displayed and ask to reenter username and password		
3	When user submit empty username and password	Error message must be displayed and ask to enter the username and password		
4	Password field	Password should not be visible, visible as * on screen		

For Student Registration

Case Number	Description	Expected Results	Actual Results	Passed
1.	Enter empty for First Name and submit	Display error message "First name required"		
2.	Enter empty for last name	Display error message "Last name required"		
3.	Enter empty for email address	Display error message "email required"		

4.	Enter text in email address field	Display error message “email format did not match”		
5.	Enter empty for mailing address	Display error message “address required”		
6.	Do not Select concentration	Display error message “ select concentration”		
7.	Enter empty for GRE Verbal	No error		
8.	Enter empty for GRE Quant	No error		
9.	Enter empty for GPA	Display error message “ GPA required”		
10.	Submit empty form	Display error for all required field		

Test cases for Advisor registration

Case Number	Description	Expected Results	Actual Results	Passed
1.	Enter empty for First Name and submit	Display error message ”First name required”		
2.	Enter empty for last name	Display error message ”Last name required”		
3.	Enter empty for email address	Display error message ”email required”		
4.	Enter text in email address	Display error message “email format did not match”		

	field			
5.	Enter empty for mailing address	No error		
6.	Empty for Department field	Display error message “ enter Department name”		
7.	Enter empty for password	Display error ”password required”		
8.	Enter empty for Confirm password	Display error ”password required”		
9.	Enter different value in password and confirm password field	Display error message “ password did not match		
10.	Do not select active/Inactive	Insert default value as ”active”		
11.	Do not select role	Display error” must be selected”		
12.	Submit empty form	Display error for all required field		

Test Cases for Add Concentration

Case Number	Description	Expected Results	Actual Results	Passed
1.	Submit empty form	Display error message in all required field		
2.	Enter empty for Degree Code	Display error message ”concentration code required”		
3.	Do not select	Insert default value as “active”		

	status			
4.	Do not select advisor	Display error message “ must be selected”		

Test Cases For Add Prerequisites

Case Number	Description	Expected Results	Actual Results	Passed
1.	Submit empty form	Display error message in all required field		
2.	Enter empty Prereq Name	Display error message ”prereq name required”		
3.	Enter empty prereq prefix	Display error message ”prefix name required”		
4.	Enter empty for prereq code	Display error message “ prereq code required”		
5.	Do not select status	Insert default value as “active”		
6.	Do not select advisor	Display error message “ must be selected”		

Test Cases for Change password

Case Number	Description	Expected Results	Actual Results	Passed
1.	Submit empty	Display error message in all		

	form	required field		
2.	Enter empty New Password	Display error message "password required"		
3.	Enter random text in confirm Password	Display error message "password miss match"		
4.	Enter password	Password must be visible as *****		

→

→ Reset Password

→ Mark Student
Program Activities