

Software Requirements Specification Document

Academic Early Alert System ; Team 7;
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Brief problem statement

The aim is to develop a user friendly system which will allow faculty and other academic authorities to issue an early warning to the student and the concerned guardian about the deteriorating aspects of the student's academic performance. This will help in identifying at-risk students in time and thus lead to an early realization and relatively earlier progress.

System requirements

The system requirements are quite basic. The system should have a minimum set of basic configuration like 1GB Memory, Windows XP or above / Any stable version of an open source operating system, etc. The system should have an un-obsolete version of good web-browser (Firefox/Chrome/Opera) since the portal will use HTML, CSS for front-end design and Javascript/jQuery for interactive content. The back-end and scheduling algorithms will be implemented in PHP and a MySQL server will be required for database storage.

Users profile

The system will be used primarily by the following people :

- **Administrator** : The admin class will mainly comprise of the Academic office people who will perform the following :
 - Update database at the start of every semester
 - Assign faculty/faculties to the different courses
 - Assign roles namely Faculty, Program Coordinator and Dean
 - Delete warnings on request

These people do have experience with the computer system and can easily operate our system.

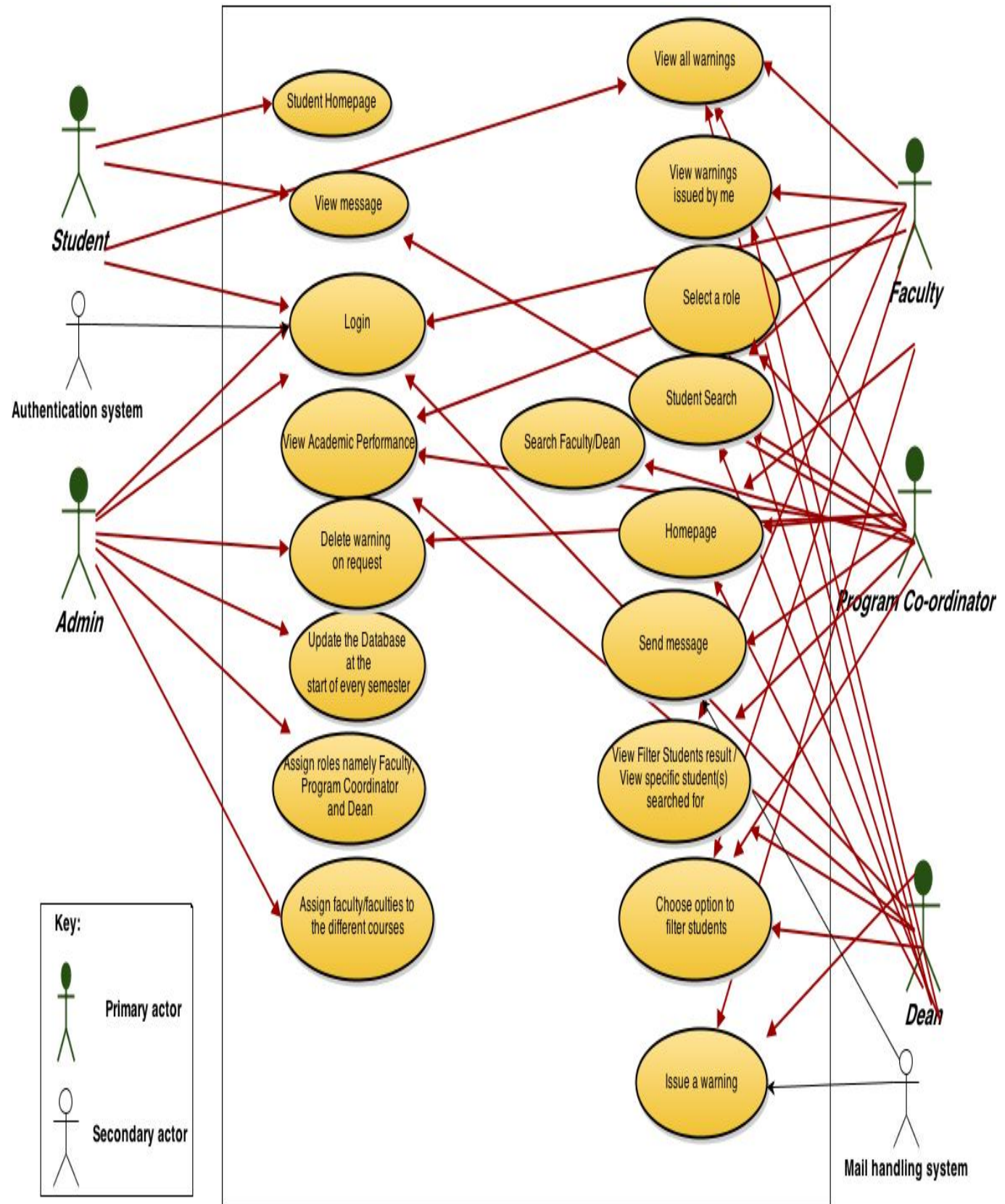
- **Faculty** : These will be the primary users of the system. For these users, the system is designed to facilitate them(faculty) in being able to access the academic profile (previous performance, transcript/grade sheet) of the students undertaking his/her course in the current semester and issue warnings to them based on certain user defined criteria (eg: Attendance, Low Performance in Quiz/Exams, etc.). He/she will be able to see the warnings issued to the students by other Faculties only after issuing his/her first warning. Our general assumption of this user (faculty) is that he/she is acquainted with the computer system. However, the system will provide a very user friendly interface to issue warnings (by providing templates) and manage them efficiently.
- **Dean** : The user (Dean) will be able to view academic profile and warnings issued to **all the students** in the institute. He will also be able to issue warnings to any student of the institute.

- **Program Co-ordinator** : The role of a Program Co-ordinator is that he/she can view students in his/her program, their academic performance, the courses he/she has picked up in the current semester, warnings issued to him/her, notify student for a personal counselling meeting and also, the program coordinator can notify the parents/guardian and alert them too.
- **Student** : The user can view the history of warning(s) issued to him/her along with his/her academic profile. The user receives notifications about the warnings via email and has to login to our system to view the warning message and reply to the same.

Feature requirements (described using use cases)

No.	User Case Name	Description	Release
1.	Login	The user has to Login everytime to use the system	R1
2.	Student Homepage	The user selects one of the three tabs : View warnings, view messages or view academic performance.	R1
3.	Homepage	The user selects one of the two tabs : Filter students or student search	R1
4.	Choose options to Filter Students	A combination or atleast one of Batch ,Course Program is chosen to filter a list of required students	R1
5.	Student search	A user can search for a student(s) by entering student name , student roll number or substring	R2
6.	View Filter Students result /View specific student(s) searched for	A student list consisting of student name, his CGPA, total number of warnings received , warning issued by me is generated	R1
7.	View Academic Performance	The complete academic profile of the selected/logged in student is displayed.	R1
8.	Issue a warning	The user can issue a warning(notification via email)to the student,and in extreme conditions notify the dean and parent too	R1 parent (R2)
9.	Search Faculty/Dean	The user can search the Faculty/Dean to whom he/she wants to send the message	R2
10	Send message	The user can send a message to the faculty,students,and the parents via the system	R2
11.	View Message	The user can view the messages he/she has received	R2
12.	View all Warnings	The user can view all warnings datewise	R1
13.	View Warnings issued by me	The user can view all the warnings issued by him/her	R1
14.	Select a Role	The user, after logging in, decides the role of action	R2
15.	Assign faculty/faculties to the different courses	The user can assign faculty/faculties to the different courses at the start of every semester.	R2
16.	Assign roles namely Faculty, Program Coordinator and Dean	The user can assign roles to the staff members of the institute.	R2
17.	Update the Database at the start of every semester	The user can update the database after every semester with the updated academic performance of all students of the latest semester	R2
18.	Delete warning on request	The user can delete a warning from the database on request by a faculty,dean, program coordinator	R2

Use Case Diagram



Use Case Description

Use Case Number:	1
Use Case Name:	Login
Overview:	The user has to Login everytime to use the system
Actors:	Faculty,Dean,Program Coordinator,Student
Pre condition:	The user must exist in the college database and must have a valid Login id and password
Flow:	<ol style="list-style-type: none"> 1. User visits Academic Early Alert System 2. He is redirected to Central Authentication Page 3. System requires the user to enter his credentials 4. User enters correct login id and password
	<p>Alternate Flows:</p> <ol style="list-style-type: none"> 4. The user enters incorrect login id and/or password <p>Post Condition: The user is redirected to the Login Page with an error message</p>
Post Condition:	The user is redirected to his home page where he can perform actions according to his user category

Use Case Number:	2
Use Case Name:	Student Home Page
Overview:	The purpose of Student Home Page is to display general instructions, Warnings tab, Messages tab and view Academic Performance tab. The user can Logout also.
Actors:	Student
Pre condition:	User must be logged in.
Flow:	User may choose to either view warnings, view messages or view academic performance.
Alternate Flow:	<p>The user can Logout</p> <p>Post Condition: Redirected to CAS Logout page and a message is displayed on successful logout</p>
Post Condition:	The results according to the selected tab is displayed.

Use Case Number:	3
Use Case Name:	Home Page
Overview:	The purpose of Home Page is to display general instructions, student filter tab and student search bar plus if the user is a Program Coordinator Faculty/Dean search bar and View message tab must also be displayed. The user can Log out also.
Actors:	Faculty, Dean, PC
Pre condition:	User must be logged in.
Flow:	User may choose to either Filter Student or Search Student by name/roll no or Search Faculty by name or View his/her received messages
Alternate Flow:	The user can Logout Post Condition: Redirected to CAS Logout page and a message is displayed on successful logout
Post Condition:	The user is redirected to the page corresponding to the action

Use Case Number:	4
Use Case Name:	Choose option to filter students
Overview:	A combination or atleast one of Batch ,Course Program is chosen to filter a list of required students
Actors:	Faculty,Dean,Program Coordinator
Pre condition:	The user must be logged in
Flow:	The user selects Batch and/or Course and/or Program if he is the Dean
Alternate Flow 1	The user may select both Batch or Program or none if he logs in as a Faculty. It is mandatory for him to select a Course.
Alternate Flow 2	The user may select both Batch or Course or none of them if he is the Program Coordinator.However selection of program is

	mandatory for him.
Post Condition:	The user is directed to the page where a list of required students is generated

Use Case Number:	5
Use Case Name:	Student Search
Overview:	A user can search for a student by entering student name or student roll number.
Actors:	Faculty, Dean, PC
Pre condition:	User is logged in.
Flow:	1. User types in character (alphabetic/numeric) 2. Clicks submit
Post Condition:	If alphabets are entered, student names whose sub-strings match this string of characters, gets listed. If numeric keys are entered, matching list of student roll numbers is generated.

Use Case Number:	6
Use Case Name:	View Filter Students result /View specific student(s) searched for
Overview:	A student list consisting of student name, his CGPA, total number of warnings received , warning issued by me(for Dean and Faculty only) is generated
Actors:	Faculty, Dean, PC
Pre condition:	User is logged in.
Alternate Flow 1	The user clicks on student name
Post Condition 1	The user is redirected to view academic performance.
Alternate Flow 2	The user can click on Total warnings received if he has just issued a first warning. (This option available only for a time period of 24 hours from issuing the first warning.)

Post Condition 2	The user is redirected to a page containing total warnings.
Alternate Flow 3	The user clicks on total warnings issued by me.
Post Condition 3	The user is redirected to the page where all warnings issued by him/her are displayed

Use Case Number:	7
Use Case Name:	View Academic Performance
Overview:	The complete academic profile of the selected/logged in student is displayed
Actors:	Faculty, Dean, Program Coordinator, Student
Pre condition:	The user must be logged in.
Flow:	1. Selects “Issue a warning” (if user is Dean/Faculty) or “Send a Message” (if user is a Program Coordinator)
Alternate Flow 1	The user selects to go back to previous page
Post Condition 1	The user goes to the home page(incase of student) or goes to the page where list of students were displayed (in case of others)
Alternate Flow 2	The user can Logout
Post Condition 2	Redirected to CAS Logout page and a message is displayed on successful logout
Post Condition:	If issue a warning or send a message is selected the user is redirected to the page corresponding to issuing a warning or sending a message respectively.

Use Case Number:	8
Use Case Name:	Issue a Warning
Overview:	The user issues a warning to the student and program coordinator and an authority at the Academic Office(default options). The option of forwarding it to the Dean or Parent would also be available.

Actors:	Faculty , Dean
Pre condition:	The user must be logged in. The user must be either the Dean or Faculty of some course the student has taken/is undertaking .
Flow:	<ol style="list-style-type: none"> 1. The user selects the category/categories of complaint. 2. Options of forwarding the notification of warning to the Dean and/or parent can be selected. 3. A default template is provided , the user can edit it if necessary and send a warning to the concerned students' account in our system. A notification of the warning is concurrently sent to the student' s mail account by the system.
Post Condition:	The user is redirected to his/her homepage and message of successful issuing of warning is displayed.

Use Case Number:	9
Use Case Name:	Search Faculty/Dean
Overview:	The user can search the Faculty/Dean to whom he/she wants to send the message
Actors:	Program Coordinator
Pre condition:	The user is logged in
Flow:	<ol style="list-style-type: none"> 1. User types in alphabets 2. Clicks submit
Post Condition:	Faculty names along with the courses they take/Dean name whose sub-strings match this string of characters, gets listed with a send message option.

Use Case Number:	10
Use Case Name:	Send Message
Overview:	The user can send a message to the faculty, students and the parents via the system
Actors:	PC

Pre condition:	User must be logged in.
Flow:	1. He/She types the message. 2. Clicks on “Send”
Alternate flow 1:	User clicks on “Back” Post Condition : User is redirected to the homepage.
Alternate Flow 2:	The user can log out Post Condition : Redirected to CAS Logout page and a message is displayed on successful logout
Post Condition:	1.Message is sent to the receiver’s account through the system. 2.A notification about the sent message is sent concurrently to the receiver’s mail account by the system. 3. User is redirected to his homepage and message of successful sending is displayed.

Use Case Number:	11
Use Case Name:	View Message
Overview:	The user can view the messages he/she has received
Actors:	Student,Program Coordinator
Pre condition:	The user must be logged in
Flow:	1.The user can click on the subject of the message to view the detailed message and the conversation thread 2.The user may choose to send a reply on the warning thread, a textbox appears, he/she can fill in and Click Send
Post Condition:	1.The user is redirected to the same page . The detailed message and the thread is displayed 2. After sending the reply the user is redirected to the same page with the latest message being displayed in the thread

Use Case Number:	12
Use Case Name:	View all warnings
Overview:	A user can view all the warnings issued to the student
Actors:	Faculty, Dean, Program Coordinator, Student
Pre condition:	User is logged in.
Flow:	<p>1.The user can click on the subject of the warning to view the detailed warning and the conversation thread</p> <p>2.The user (excluding faculty)may choose to write on the warning thread, a textbox appears, he/she can fill in and Click Send</p>
Alternate Flow 1	The user can go back to the previous page
Post Conditon 1	<p>The user is redirected to the homepage in case of Student.</p> <p>The user(others) is redirected to the page where the list of required students were generated.</p>
Alternate Flow 2	The user can Logout
Post Condition 2	Redirected to CAS Logout page and a message is displayed on successful logout
Post Condition:	<p>1.The user is redirected to the same page . The detailed warning and the thread is displayed</p> <p>2. After sending the message the user is redirected to the same page with the latest message being displayed in the thread</p>

Use Case Number:	13
Use Case Name:	View warnings issued by me
Overview:	The user can view all the warnings issued by him/her
Actors:	Faculty,Dean
Pre condition:	The user must be logged in
Flow:	1.The user can select “Issue a Warning”

Alternate Flow 1	<p>1. The user can click on the subject of the warning to view the detailed warning and the conversation thread</p> <p>2. The user may choose to send a message/reply on the warning thread, a textbox appears, he/she can fill in and Click Send</p>
Post Condition 1	<p>1. The user is redirected to the same page . The detailed warning and the thread is displayed</p> <p>2. After sending the message the user is redirected to the same page with the latest message being displayed in the thread</p>
Alternate Flow 2	1. The user can select the option of going to previous page
Post Condition 2	The user is redirected to the page where the list of students was generated
Alternate Flow 3	The user can logout
Post Condition 3	Redirected to CAS Logout page and a message is displayed on successful logout
Post Condition:	The user is redirected to “Issue a Warning” page

Use Case Number:	14
Use Case Name:	Select a Role
Overview:	If a user plays multiple roles in the academic system, then on logging in he/she will be asked to choose the user mode that he/she would like to work in.
Actors:	Faculty, Dean, PC
Pre condition:	User is logged in. User has multiple roles.
Flow:	He/she would get option to choose which mode he/she would like to use the system in. He/she selects a particular mode of action.
Post Condition:	The user interacts with the system in the mode that he/she selected.

Use Case Number:	15
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Use Case Name:	Assign faculty/faculties to the different courses
Overview:	The user can assign faculty/faculties to the different courses at the start of every semester.
Actors:	Admin
Pre condition:	The user is logged in. The user is Admin.
Flow:	1. User selects a particular course 2. User selects the faculty/faculties who will take that course for that semester. 3. User clicks “Submit”
Alternate flow :	User clicks “Back” Post Condition : User is redirected to the homepage.
Post Condition:	The faculty/faculties get assigned to the course. User is redirected to the same page.

Use Case Number:	16
Use Case Name:	Assign roles namely Faculty, Program Coordinator and Dean
Overview:	The user can assign roles to the staff members of the institute.
Actors:	Admin
Pre condition:	The user is logged in. The user is Admin.
Flow:	1. User selects a staff member 2. User selects one or more roles from Faculty, Program Coordinator and Dean 3. User clicks “Submit”
Alternate Flow:	User clicks “Back” Post Condition : User is redirected to the homepage.
Post Condition:	The roles are assigned to the staff member. The user is redirected to the same page

Use Case Number:	17
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Use Case Name:	Update the Database at the start of every semester
Overview:	The user can update the database after every semester with the academic performance of all students of the latest semester and the courses taken by different faculties
Actors:	Admin
Pre condition:	The user is logged in. The user is Admin.
Flow:	Steps: 1. User Request Update DB form. 2. upload the csv files. 4. Submit.
Post Condition:	Database is updated. The user is redirected to the homepage

Use Case Number:	18
Use Case Name:	Delete warning on request
Overview:	The user can delete a warning from the database on request by a faculty, dean, program coordinator
Actors:	Admin
Pre condition:	The user is logged in. The user is Admin.
Flow:	1. User searches for the particular student through “student search” 2. Clicks on the desired student 3. Clicks on the “number of total warnings” issued to him/her. 4. Selects the desired warning. 5. Clicks on delete
Alternate flow 1:	User clicks on “Back” Post condition : User is redirected to the previous page.
Alternate Flow 2:	The user can Logout Post Condition: Redirected to CAS Logout page and a message is displayed on successful logout
Post Condition:	The warning gets deleted from the database and

	is not displayed anywhere henceforth. The user is redirected to homepage.
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