Course Planner

1. **Introduction**
2. **System Context**
   1. **Usage Facets**
      1. ***Requirement sources***
         * *Direct Users*: The direct users for the online course planner are students who are admitted to the university and the advisors.
         * *Indirect Users:* The indirect users for the online course planner is the administrator who will be creating new users for the system and maintaining the system.
         * *Existing System:* The existing system for the course planner consists of multiple systems which does different tasks, one for registration of course and course progress and another system for designing the course plan for the students. But, there is no unified system which integrates all the tasks into one system.
      2. ***Context Objects***
         * *User Groups:* The user groups for online course planner are Students and Advisor.
         * *Input modality of user interface:* The user has to enter nuid and password to login to their account. The user should have a valid email address. Upon changing the password for their account, a notification mail has to be sent. Upon receiving any notification, an email has to be sent to the user.
         * *Usage workflow:*
           + Review course plan
           + Add courses to the course plan
           + Seek approval from advisor
           + Register for courses
           + Track term progress
           + Calculate the course credit hours to be finished
           + Track graduation requirement progress
      3. ***Properties and Relationships***
         * The advisor should be able to view all the student who are currently enrolled
         * The advisor should be able to edit course schedule
         * The student should be able to edit course plan by adding or removing courses
         * The student should be able to registers for courses added to the course plan
         * The student or advisor should be able to view the academic progress
   2. **Subject Facets**
      1. ***Requirement Sources***
         * *Domain Experts:* System architect
         * *Stakeholders:*Students, Advisor
3. Goals
   1. Model(i\*)
   2. Description
4. User Stories

Student:

* 1. As a student, in order to view my profile, I want to login
  2. As a student, in order to enroll for the current semester, I want to register for course.
  3. As a student, in order to check my results, I want to view my grades.
  4. As a student, in order to plan my course work, I want to view the course information.
  5. As a student, in order to plan my course work, I want to manage my course plan.
  6. As a student, in order to notify the advisor regarding change in the course plan, I want to email the course plan to my advisor.
  7. As a student, in order to manage my course plan, I want to calculate the number of credits required based on the exit plan for graduation (Thesis, Capstone or Project).
  8. As a student, in order to view my course progress, I want to generate a progress report.
  9. As a student, in order to end the session, I want to logout.

Advisor:

1. As an advisor, in order to view the homepage, I want to login.
2. As an advisor, in order to update the course schedule for every semester, I want to view or edit course information.
3. As an advisor, in order to keep track of a student’s course work, I want to generate a course plan for students.
4. As an advisor, in order to get new updates of course plan from students, I want to get notifications of the updated course plan as a mail.
5. As an advisor, in order to make changes to the existing course plan, I want to edit the course plan of a given student.
6. As an advisor, in order to notify student on modification of course plan, I want to email the course plan to the student.
7. As an advisor, in order to keep track of student’s progress, I want to view or update student’s course information and progress towards graduation.
8. As an advisor, in order to view or update a student’s grade if there is a change, I want to manage students grades on approval of the respective professor of the course.
9. As an advisor, in order to end the session, I want to logout.
10. Scenarios

Feature: Course planner system

As a new student of the university,

I want to enroll for the courses based on the courses available for that particular semester.

As an advisor,

I want to update

**Student**

Scenario: View home page.

When I choose the student login option.

And I login using my credentials provided by the university

Then I will be directed to my homepage which will prompt me to change my password.

Scenario: Change password

When I login to my home page using my login credentials,

And I choose change password option,

Then I will be directed to my profile page where I can edit my credentials and save the changes.

Scenario: View course plan.

When I login to my home page using my login credentials,

And I choose course plan option.

Then I will be directed to my course plan page which displays the plan layout designed by the advisor for each semester, which includes number of credit hours to be taken for each semester and also based on the criteria for selecting a course based on concentration.

Scenario: Adding the course into the course plan

When I login to my home page using my login credentials,

And I choose view course schedule

And I choose the term of semester

Then I will be directed to the page which displays the available courses for that particular semester.

And when I choose the option add-course

Then that course should be added on to my course plan as one of the subject.

Scenario: Removing the course from the course plan

When I login to my home page using my login credentials,

And I choose the option view course plan

And I choose the option remove course from the current semester.

Then that course should be removed from my course plan

When I try to remove a course from the previous semester

Then I get a message warning me that I cannot perform this action.

When I try to remove a course from the current semester after registering for the courses

Then I get a message warning me that I cannot perform this action.

Scenario: Notifying the course plan to the advisor

When I login to my home page using my login credentials,

And I choose view course plan option

And I choose email course plan to advisor

Then I will be provided with options to choose to which of the advisor’s to send to.

And when I choose send option

Then the system should email the course plan to the selected advisor.

Scenario: Registering for the course

When I login to my home page using my login credentials,

And I choose view course plan option

And I receive approval from the advisor

And I choose register option

Then the system should register my courses.

When I try to register for other courses

And I choose register option

Then the system should register the courses which are newly added

Scenario: Dropping a course

Given: I have already registered for courses.

When I login to my home page using my login credentials,

And I choose view course plan option

And I choose drop course option

Then the system should allow me to choose a course to be dropped

And I choose the drop option next to the course

Then the course should be removed from my course plan.

Scenario: Generate reports for graduation

Given: I have already registered for courses.

When I login to my home page using my login credentials,

And I choose reports option

Then the system should be able to display my grades for each semester course wise and also display the calculate CGPA.

Scenario: Graduate exit requirements

When I login to my home page using my login credentials,

And I choose Exit requirements

And I choose the Exit requirements as one of the options (Thesis, Capstone or Project)

Then the system should display the information about the course credit hours take, with the remaining credit hours to be completed in a tabular form. It should also display the progress using a progress bar with appropriate value in percentage form.

**Advisors,**

Scenario: View home page.

And I choose login option

And When I login to my home page using my login credentials,

Then display home page

Scenario: View students

Given: students are admitted to university

When I login to my home page using my login credentials,

And I choose an option student’s info

And I choose an option form a dropdown list for all students

Then, display a list of are students who are yet to graduate.

Scenario: View currently enrolled students

Given: Students register for the courses

When I login to my home page using my login credentials,

And I choose the option student’s info

And I choose an option from the dropdown list for currently enrolled students.

Then the system displays all the students who are enrolled currently for the semester.

Scenario: View a student’s information

When I login to my home page using my login credentials,

And I choose the option search student

Then the system opens a page where it prompts for NUID to be entered

Then after entering the NUID, the system displays the student’s record which includes his grades for all the courses.

Scenario: Update student’s grade

When I login to my home page using my login credentials,

And I choose the option search student

Then the system opens a page where it prompts for NUID to be entered to display student’s info

And I choose update grades form the student’s info page.

Then the system prompts to enter a new grade.

Scenario: To view student’s progress towards graduation

When I login to my home page using my login credentials,

And I choose the option search student

Then the system opens a page where it prompts for NUID to be entered to display student’s info

And I choose degree works option

Then the system displays a page which show the student’s progress towards his / her degree completion in the form of progress bar and along with an unofficial transcript of grades for each course completed.

Scenario: To view course plan

When I login to my home page using my login credentials,

And I choose the option search student

Then the system opens a page where it prompts for NUID to be entered

Then after entering the NUID, the system displays the student’s info

And I choose course plan option

Then he system displays the course plan for that student.

Scenario: To update course plan

When I login to my home page using my login credentials,

And I choose the option search student

Then the system opens a page where it prompts for NUID to be entered

Then after entering the NUID, the system displays the student’s info

And I choose course plan option

Then he system displays the course plan for that student

And I choose edit option

Then the system allows the advisor to add/remove courses to the course plan

Scenario: View course information

When I login to my home page using my login credentials,

And I choose the option course information

Then the system displays the list of courses with the section numbers along with instructors

Scenario: Edit course information

When I login to my home page using my login credentials,

And I choose the option edit course information

Then the system displays a popup to add a new course or update existing course information or remove course.

When I choose add new course option

Then a form is displayed where the information about the new course are added

When I choose update option

Then a form with dropdown is displayed where the form is filled with the dropdown for the course and the section number is displayed and the respective fields are updated accordingly.

When I choose the remove option

Then a form is displayed which prompts the advisor to enter the course number and section number to be deleted.

Scenario: Notification from students about course plan

When I login to my home page using my login credentials,

And I choose notification option from the home page

Then a dropdown list is generated, showing all the notifications from the students.

And I choose a student’s notification

Then the system should display that student’s information page for course plan.

Scenario: Approving the courses for registration

When I login to my home page using my login credentials,

And I choose the notification of a particular student from the notification list

And that student’s course plan is displayed

And next to the courses for current semester choose approve or disapprove option

And choose send option

Then the system notifies the student about the courses in the course plan

1. Data model

../../../../Downloads/University_Database_ER-Diagram.png

1. Dynamic model
   1. Use case Diagram

../../../../Downloads/Usecase%20Diagram%20-%20Student

* 1. Sequence diagram
  2. State chart diagram