



Team capStone: Design Documents

Austin Griffith, Daniel Hacking, Shiva Parajuli, Niki Nicholls

Table of Contents

<u>Table of Contents.....</u>	1
<u>Problem Statement.....</u>	3
<u>Background Information.....</u>	3
<u>Problem.....</u>	3
<u>Applications/Systems Similar to Planned Work.....</u>	3
<u>Limitations.....</u>	3
<u>School of Computing Logistics (2023).....</u>	3
<u>Targeted Users.....</u>	4
<u>Long term goals:.....</u>	4
<u>User Stories.....</u>	5
<u>Extended User Stories.....</u>	10
<u>AUTHENTICATION.....</u>	10
<u>CRUD.....</u>	11
<u>User Story 31.....</u>	11
<u>User Story 36.....</u>	14
<u>User Story 24.....</u>	14
<u>User Story 26.....</u>	14
<u>User Story 25.....</u>	15
<u>Preference Form.....</u>	15
<u>Use Case Diagrams.....</u>	17
<u>Active Schedule.....</u>	21
<u>Activity Diagrams.....</u>	23
<u>A User Logs In.....</u>	23
<u>PC Maintains Schedule.....</u>	24
<u>Student Maintains Preferences.....</u>	25
<u>Class Diagram.....</u>	26
<u>Database ERD.....</u>	27
<u>Sequence Diagrams.....</u>	28
<u>Authentication.....</u>	28
<u>PC Maintains Schedule.....</u>	29
<u>Secretary Prints Report.....</u>	30
<u>Student Submits Schedule Preferences.....</u>	31
<u>UI Diagrams.....</u>	32
<u>User Login.....</u>	32
<u>User Registration.....</u>	33
<u>View Instructors.....</u>	34
<u>Populating Dropdowns on Preference Form.....</u>	36

<u>Active Schedule View - PC Activating a Section to Edit.....</u>	<u>37</u>
<u>Active Schedule View - Viewing Student Preferences for a given Course.....</u>	<u>38</u>
<u>Active Schedule View - PC Selecting a Modality for a Section.....</u>	<u>39</u>

Problem Statement

The School of Computing at Weber State University is in need of an intelligent course scheduling system. The current scheduling is completed through spreadsheets and is primarily instructor-driven. This does not facilitate efficient course scheduling that meets the needs of the program. This is because limited resources (instructors, classrooms, etc.) are not utilized to the best capacity.

Background Information

Problem

Currently, class scheduling for Weber State University's School of Computing is instructor driven, without consideration of what needs the student body has. It is inefficiently and time-consumingly completed through spreadsheets. There is no centralized system for all of the colleges within the university.

Applications/Systems Similar to Planned Work

While there are commercialized applications similar to our planned work (as previously looked into by WSU), it was found that these systems were expensive and not specific to the needs of the college.

Limitations

One of the limitations/constraints in completing this project is time. While this is just a prototype, we are limited in how much time we have to complete the project. To address this, our team will need to work efficiently.

School of Computing Logistics (2023)

A look at the program's logistics gives us a better idea of what the system will need to account for. The School of Computing has about 1200 student majors and consists of 3 programs (CS, WEB, and NET). Class types include online, virtual, hybrid, and in person (WSU/Davis).

The school also has 32 faculty. Each faculty member is contracted annually to teach 24 credits typically over two semesters (usually over Fall and Spring, but Summer is also an option). Of these 24 credits, an instructor may or may not have "release time" which will count towards those credits. This release time is approved by the department chair and/or dean. Furthermore, an instructor is not assigned overload unless they have volunteered **and** all other faculty load has been satisfied first.

Targeted Users

The targeted user bank is many with their permissions varying. The super admin will maintain all access to the system. They will have the permissions to add users (program coordinators, instructors, department chair, secretaries, deans, and any other applicable users). They will also have access to all CRUD/Views and other operations. Deans will have access to reports and any other applicable program information they might need. Department chairs will have access to their program's information while similarly program coordinators will be able to add classes, assign instructors, and other applicable scheduling operations for their department. Instructors will have access to their own accounts and information as well as "read" rights to see the schedule. Students will have access to their wishlist and be able to see a list of courses available to choose from. The secretaries will have read access to the schedule and will be able to change the status of it once they have added it to the banner system. They will also be able to update the CRNs within the schedule.

Long term goals:

Eventually, the goal for this system is to be centralized to all 7 colleges at Weber State University as they do not currently have such a system. It would also be beneficial for the University to host the system internally, allowing it to work directly with other systems. Another goal would be to commercialize and sell the product, which is why it is so important to write the system generically.

User Stories

User Story #	User Stories	Acceptance Criteria
Functional		
1	As a user , when I enter a password that doesn't pass acceptance criteria, the system needs to alert me and tell me to enter a better password.	As the user types in their password during account creation an icon next to the box tells them if the password is secure enough, the account creation button is disabled until password passes inspection.
2	As a user , I need to be able to securely login to my account, so that the system can authenticate me.	When I enter my username and password and select Login, then the data associated with my account is accessible.
3	As a user , I need to be able to retrieve my forgotten password, so that I can access my account.	When I select to retrieve my forgotten password, then a link is sent to my email on file to allow me to reset it.
4	As a user , I need to be able to reset my password, so that I can keep my account secure.	1) When I select to reset my password, then a form is provided to enter my old and new password. 2) When I submit the completed form, my password is updated.
5	As an administrator , I need to be able to maintain users including program coordinators, instructors, dean, secretaries, and others with their permissions, so that the users have correct access to the system.	1) When I select to add a new user, then a form is provided with details including: TBD. 2) When I select to edit an existing user then a form is provided with the current details which can be edited. 3) When I select to submit the form, then the user is created/edited accordingly. 4) When I select to delete/block an existing user, then the user is blocked/removed from the system.
6	As a Student I need to be able to see a list of classes available on the wishlist page, so I know what I can pick	1) the wish list form should have drop down boxes with autocomplete, that the user can select classes from 2) The wishlist row should contain ~8 rows (Number to be determined)
7	As a Student/Instructor I need to be able to choose various toggles on the wishlist page next to the classes I pick to show my preference for campus/time of day or rank if I'm an instructor	Each wish list entry should include a series of dropdown menus, class, campus, time of day, days of week
8	As A Student/Instructor I need to be able to resubmit my wishlist, in case I change my mind, and this new wishlist should replace the old version.	When duplicate emails are detected, the newest version of the wishlist should replace the old one
9	As A Student/Instructor I need to be able to submit my form, so it can be saved to the database	At the bottom of the wishlist a "Submit" button can be clicked. This will save the students wishlist to the database, identified by their unique email.

10	As A Student I need to be able to enter my graduation year and major, so that the information can be used by Program Coordinators	Above the course wishlist is an entry box for Graduation semester as well as major, these are dropdowns to prevent bad input
11	As an Instructor I need to be able to choose classes to add to my wishlist so that they are saved into the system	1) the wish list form should have drop down boxes, that the user can select classes from 2) The wishlist row should contain ~8 rows (Number to be determined)
12	As an instructor I need to be able to maintain my wishlist in case I want to make a change	Instructors can access their wishlist as part of their login, once the page is loaded the selection boxes are automatically propagated with what data is on hand. Once save changes is clicked, the new wishlist replaces the old
13	As an instructor I need to be able to input my desired overtime hours, so that the program coordinator knows to pick me for extra classes.	Part of the instructor form is a "desired overload" dropdown box, this box can select from TO BE DETERMINED BY CLIENT
14	As a program coordinator I need to have wish lists finalized after a certain date, so that the data does not change while I'm assigning classes	Program Coordinators can choose to lock wishlists, after this date no more student wishlists can be entered, and no more instructure lists can be edited
15	As an instructor I need to be able to input my number of release time hours so that I don't get assigned too many hours this semester	Pat of the instructor form is a "release time" drop down box, this box can select TO BE DETERMINED BY CLIENT
16	As a program coordinator , I need to see a list of available instructors, so that I can efficiently create the program schedule.	When I select to view instructors, then I see each instructor with their details such as: current class load, TBD
17	As an administrator/program coordinator , I need to see a list of available classrooms, so I can assign classrooms when creating courses.	When I select to view classrooms, I am able to see a list of classrooms with their campus, building, room number, and if they are preferred for any courses.
18	As a program coordinator , I need to view the details on a class, so I can see information on its required classroom/wishlisted amount/current locations	When I click on a courses name I'm sent to a course details page, that has their info on each section of that course
19	As a program coordinator , I need to view the course load and available schedule of all instructors/professors, so that I can ensure a fair distribution of courses.	When I click on a professor's name I'm sent to a professor details page that has their info and wishlist such as What sections they're assigned to, how many credit hours they have, how much overload they want.
20	As faculty , I need to see a global overview of the current schedule, so that I know what, when, and where classes are being taught.	When I select to view the current schedule, I see can see the current schedule details including: TBD
21	As an instructor , I need to see my schedule, so that I know what classes I'm scheduled for in a semester.	When I select the view schedule, I can see classes that I am registered to teach.
22	As a program coordinator , I need to see tickets sent in by instructors in my department, so that I can manage and respond to them.	When I select view tickets, I can see tickets submitted from any instructors in my department.
23	As an administrator , I need to see tickets created by faculty, so that I can oversee ticket flow.	When I select view tickets, I can see a list of all tickets.

24	As a Secretary , I need to be able to generate a report of courses being offered, so that I can transfer that info to Banner.	When I select the export course list, a csv file is generated and saved locally on my machine. Should be organized in the format that banner takes.
25	As an administrator, I need to be able to generate a budget report, so data can be exported to other systems related to budgeting.	When I select export budget report, a csv file is generated and saved locally on my machine
26	As an administrator , I need to be able to generate a report of historical course demand, so that I update the default initial template as necessary.	When I select to generate a historical course report, a csv file should be exported with courses sorted by demand over some amount of time. The number of classes, student registration, and locations/times should be included in this report.
27	As a program coordinator , I need to view the course preferences of all students, so that I can understand the demand for each course.	When I click on a professor's name I'm sent to a professor details page, that has their info and wishlist
28	As an administrator , I need to be able to generate a report of the 1st and 3rd week enrollment data, so that I can make necessary changes to future course scheduling.	When I select to generate a report of 1st and 3rd week enrollment, a csv file is generated.
29	As an administrator , I need to be able to create a new semester schedule so that it can be edited by the program coordinators.	1) When I select to add a schedule, then I am able to provide a semester template to use 2) when I proved the template, then a new schedule is created according to the template,
30	As an administrator I need to be able to maintain courses to include all information about courses currently being offered in the course catalog including semesters that courses are offered so that I can keep the courses up to date.	1) When I select to add a course, then a form is provided to enter the details of the class including: TBD. 2) When I select to edit a course, then a form is provided with the current details that can be edited. 3) When I submit the form, then the course is created/updated accordingly. 4) When I select to delete a course, then the course is removed from the listing.
31	As an administrator I need the ability to maintain a semester template that includes all the courses and the quantity offered of those courses so that I have the minimum requirements for each semester easily replicated.	1) When I select to create a new semester template, then a form is provided with the following details: course(s), count of each course, TBD. 2) When I select to submit the form, then a new template is created.
32	As a program coordinator , I need to be able to maintain a semester schedule, so that I can prepare the schedule to be put into Banner.	1) A schedule is provided to be with sections to be edited.
33	As an administrator , I need to be able to maintain classrooms so that I can have an accurate listing of available rooms.	1) When I select to add a classroom, then a form is provided to enter the details of the room including: compatible classrooms, TBD. 2) When I select to edit a classroom, then a form is provided with the current details that can be edited. 3) When I submit the form, then the classroom is created/updated accordingly. 4) When I select to delete a classroom, then the room is

		removed from the listing.
34	As a program coordinator I need to be able to maintain sections to include all information about sections being offered so that I can keep the classes up to date.	1) When I select to edit a section, then I am able to edit attributes of the section.
35	As an administrator , I need to be able to maintain schedule time slots, so that I can maintain when course sections can be taught.	1) When I select to add a time slot, then a form is provided to enter the details including: TBD. 2) When I select to edit a time slot, then a form is provided with the current details that can be edited. 3) When I submit the form, the time slot is created/updated accordingly. 4) When I select to delete a time slot, then it is removed from the listing.
36	As a secretary , I need to be able to edit the schedule to add CRN numbers to classes once I've put them into Banner so that the schedule will be kept up to date.	1) When I select to edit a class, then a form is provided allowing me to add a CRN. 2) When I submit the form, then the CRN is updated for the class
37	As a secretary , I need to be able to edit the schedule to add 1st and 3rd week enrollments to the schedule so I can keep an accurate listing	1) When I select to edit the section, then I am able to edit the 1st and 3rd week enrollment values.
38	As an instructor , I need to be able to create a ticket, so that I can ask questions or submit info to my program coordinator.	When I select a ticket, a ticket form is provided to enter details. When I submit the form, the ticket is viewable by my program coordinator.
39	As a user , I need to maintain my profile, so that I can keep it up to date.	1) When I select to edit my profile, then a form is provided allowing me to edit the details provided. 2) When I submit the form, then my profile is updated.
40	As a program coordinator , I need to see a conflict alert when I try to schedule more than one section in the same classroom so that I don't have a conflicting schedule.	When I add a course to a classroom that already has a course assigned to it, I receive a conflict alert.
41	As a program coordinator , I need to see a conflict alert when I try to schedule an instructor for more than one section taught at the same time so that I don't have a conflicting schedule.	When I add an instructor to more than one course schedule at the same time, I receive a conflict alert.
42	As a program coordinator , I need to see a conflict alert when I try to schedule an instructor for too high of a course load.	When I try to schedule an instructor for too high of a load (which is?), then I receive an alert.
43	As a program coordinator , I need a ticketing system to tell me changes needed, so that I know when something needs to be changed.	When I am alerted of a change, then I can see a timestamp and user stamp associated with the change.
44	As a secretary , I need to be able to change the status of the schedule after I input it into Banner, so that it can be marked complete.	When I select to change the status of the schedule, the status reflects my change.
45	As an administrator , I need to see an alert and be able to approve the schedule when it is ready so that the secretary knows when it is ready to be put into Banner.	1) When the status of the schedule is changed to "ready for approval.. etc" , then an alert is sent to an administrator. 2) When I see the alert, I approve/deny it.

46	As an administrator , I need to see an alert and be able to approve release time for instructors so that the program coordinators know how many course credits to assign to each instructor.	1) When an instructor inputs their release time, then an alert is sent to an administrator. 2) When I see the alert, I can approve/deny it.
47	As a program coordinator , I need to see a conflict alert if I try to schedule a course in a classroom that does not have a high enough seat capacity.	When I select to add a course to a classroom with inadequate seats, I receive an error notification.
48	Non-Functional	
49	As a university , I want a generic system so that I can have a centralized process for all of the colleges.	When I add a schedule as a college other than computer science, then the system has the same functionality.
50	As a system , I need to be able to accept any relational database, so that I can be flexible with the needs of the user.	When a client tries to implement their database of choice, then the system functions as expected.
51	As a super admin , I should be able to scale up or down infrastructure based on demand so I can improve performance.	When software has a high load, then the system shouldn't be unresponsive.
52	As a User I need to be able to zoom in and out on the page for visual accessibility, and the UI elements should still be useable	When the user zooms in with the browser, the UI is still functional
53	As a Program Coordinator when viewing a list of courses, I want the ability to sort by an element, so that I can more easily plan the schedule	UI Table elements have the ability to sort when clicking on the column title
54	As a Student , upon registration my email must be validated to prevent spam	Students enter their email first on the splash screen, then a validation email is sent to their weber account. After clicking the link in the email the student is sent to the wishlist creation page
55	As a user , I need my password to be hashed, so that my account will not be compromised.	When I create an account, then the system hashes my password so nobody has access to it.
56	As a System , I need to maintain a log report of edits made, so that I can maintain records of changes.	Whenever an edit is made, the username, description, and time is saved to a changelog on the server

Extended User Stories

AUTHENTICATION

User Story 02

As a **user**, I need to be able to securely login to my account, so that the system can authenticate me.

Scenario 01: User logs in to their account.

Given: The user navigates to the login page

When: The user enters their valid username and password

Then: The system verifies the credentials and logs the user into their account
And: The user is redirected to the home page.

Scenario 02: User enters invalid credentials.

Given: The user navigates to the login page.

When: The user enters invalid username or password.

Then: The system displays an error message indicating invalid credentials

And: The user is not logged in.

User Story 04

As a **user**, I need to be able to reset my password, so that I can keep my account secure.

Scenario 01: User Successfully resets password.

Given: The user is logged into their account.

When: The user navigates to the account settings or profile page.

And: Selects the <Change Password> option.

Then: The system displays the password change form.

And: The user enters their current password and a new password that meets the specified complexity requirements.

And: The user selects the <Save> button.

Then: The system updated the user's new password.

CRUD

User Story 31

As an **administrator**, I need the ability to maintain a semester template that includes all the courses and the quantity offered of those courses so that I have the minimum requirements for each semester easily replicated.

Scenario 01: Admin selects to “**create**” semester template

Given: The admin is logged in and navigates to the semester templates page.

When: The admin selects <*create semester template*> option

Then: The system sends the *semester template upsert* form

Given: The admin receives the semester template upsert form

And: Enters valid input into all fields

And: selects <*submit*>

Then: The system creates the template and adds it to the database

Scenario 02: Admin selects to “**edit**” semester template

Given: The admin is logged in and navigates to the semester templates page.

When: The admin selects <*edit semester template*> option

Then: The system retrieves the selected template’s information from the database

Given: The selected template was found

Then: The system sends the *semester template upsert* form with the current template information

Given: The admin receives the semester template upsert form

And: Enters valid input into all fields

And: selects <*submit*>

Then: The system updates the semester template

Scenario 03: Admin selects to “**delete**” semester template

Given: The admin is logged in and navigates to the semester templates page.

When: The admin selects <*delete semester template*> option

Then: The system sends a *delete confirmation* message

Given: The admin receives the message

And: selects <*confirm delete*>

Then: The system deletes the semester template and removes it from the database

Scenario 04: Admin invalidly submits form (invalid input)

Given: The admin is filling out the semester template *upsert* form.

And: Enters invalid data (or lack of)

When: The admin selects <*submit*>

Then: The system returns an error message

User Story 32

As a **program coordinator** I need to be able to maintain my program's schedule so that I can keep it up to date and prepared to be put into Banner.

Scenario 01: Program Coordinator Selects "Modality" Drop-Down on a section

Given: The PC has selected to edit the section

When: The PC selects the "Modality" drop-down

Then: The System reaches out to the database to populate the drop-down

Given: The PC selects a modality

Then: The system updates the section with the selected Modality

And: Updates the section in the database

If: The modality selected was "ONL Online"

Then: The "Max Enrollment" column is populated to "30"

Scenario 02: Program Coordinator Selects "Instructor" Drop-Down on a section

Given: The PC has already selected a modality

When: The PC selects the "Instructor" drop-down

Then: The System reaches out to the database to populate the filtered drop-down with Instructors who have included the selected section and modality in their preferences.

Given: The PC selects an Instructor

Then: The system updates the section with the selected Instructor

And: Updates the section in the database

And: Updates the Instructor's current course load

And: Populates the "Pay Model" column

And: Populates the "Who Pays"

Scenario 03: Program Coordinator Selects "Location" Drop-Down on a section

Given: The PC has already selected a modality

And: The modality selected requires a location

When: The PC selects the "Location" drop-down

Then: The System reaches out to the database to populate the drop-down with available locations.

Given: The PC selects a Location

Then: The system updates the section with the selected Location

And: Updates the section in the database

Scenario 04: Program Coordinator Selects "Location" Drop-Down on a section

Given: The PC has already selected a modality

And: The modality selected requires a location

When: The PC selects the "Location" drop-down

Then: The System reaches out to the database to populate the drop-down with available locations

Given: The PC selects a Location

Then: The system updates the section with the selected Location

And: Updates the section in the database

Scenario 05: Program Coordinator Selects “Days” Drop-Down on a section

Given: The PC has already selected a modality

And: The modality selected requires a location

When: The PC selects the “Days” drop-down

Then: The System reaches out to the database to populate the drop-down with available days

Given: The PC selects Days

Then: The system updates the section with the selected Days

And: Updates the section in the database

Scenario 06: Program Coordinator Selects the “Time” Drop-Down on a section

Given: The PC has already selected a modality

And: The modality selected requires a location

When: The PC selects the “Time” drop-down

Then: The System reaches out to the database to populate the drop-down with available time-slots

Given: The PC selects a time-slot

Then: The system updates the section with the selected time-slot

And: Updates the section in the database

Scenario 07: Program Coordinator Selects the “Classroom” Drop-Down on a section

Given: The PC has already selected a modality, location, days, and time

And: The modality selected requires a location

When: The PC selects the “Classroom” drop-down

Then: The System reaches out to the database to populate the drop-down with available Classrooms for the given location, days, and time

Given: The PC selects a classroom

Then: The system updates the section with the selected classroom

And: Updates the section in the database

And: Populates the “Max Enrollment” with the selected Classroom’s capacity

Scenario 08: Program Coordinator Selects the “Status” Drop-Down on a section

Given: The PC has selected to edit the given section

When: The PC selects the “Status” drop-down

Then: The System reaches out to the database to populate the drop-down with status

Given: The PC selects a status

Then: The system updates the section with the selected status

And: Updates the section in the database

User Story 36

As a **secretary**, I need to be able to add CRN numbers to classes in the schedule once I've put them into Banner so that the schedule can be kept up to date.

Scenario 01: Secretary Selects to “Add CRN” to a class.

Given: The secretary is logged in and navigates to the schedule.

When: The secretary selects <add CRN> to a given class

Then: The system allows the secretary to input a CRN

Given: The secretary inputs a CRN

And: It is a unique CRN

And: selects <save>

Then: The system updates the class information with the given CRN in the database

And: updates the schedule

Scenario 02: Secretary enters an invalid CRN (not unique)

Given: The secretary has selected <add CRN> to a given class

And: Enters invalid data (or lack of)

When: The user selects <save>

Then: The system returns an error message

And: The schedule is not updated

User Story 24

As a **program coordinator**, I need to see tickets sent in by instructors in my department, so that I can manage and respond to them.

Scenario 01: Admin selects to view Tickets.

Given: The admin is logged in.

When: The admin selects <**Tickets**> option.

Then: The system retrieves and displays tickets displayed as a table.

Given: The admin clicks on a single ticket.

Then: The system retrieves and displays tickets displayed as a table.

User Story 26

As a **Secretary**, I need to be able to generate a report of courses being offered, so that I can transfer that info to Banner.

Scenario 01: Secretary selects to “export” course list. The course has been finalized, and data exists.

Given: The secretary is logged in and navigates to the global course overview page.

When: The secretary selects the <export course list> option.

Then: The system checks if the course list for the semester has any courses which have not been finalized by their program coordinator.

Given: There are no pending courses.

And: Data exists in the course list table.

Then: The system creates the report, and saves it to the users device.

Scenario 02: Secretary selects to “export” course list. The course has not been finalized, or data does not exist.

Given: The secretary is logged in and navigates to the global course overview page.

When: The secretary selects the <export course list> option.

Then: The system checks if the course list for the semester has any courses which have not been finalized by their program coordinator.

Given: There are pending courses.

Then: The system returns a notice to the user that there are unapproved courses, and displays a list of the courses which are in a pending state.

Given: No data exists in the course list table.

Then: The system returns a notice to the user that no data exists to export.

User Story 25

As an **administrator/program coordinator**, I need to be able to generate a report of historical course demand, so that I update the default initial template as necessary.

Scenario 01: User selects to generate historical course demand report. Previous data exists

Given: The user is logged in and navigates to the courses page.

When: The admin selects <export historical demand report> option

Then: The system attempts to retrieve the data from the table.

Given: There is at least one previous semester, or data has been imported.

Then: The system exports reports to users device.

Scenario 02: User selects to generate historical course demand report. No previous data exists

Given: The user is logged in and navigates to the courses page.

When: The admin selects the <export historical demand report> option.

Then: The system attempts to retrieve the data from the table.

Given: There is no data available.

Then: The system displays a message stating there is not any data available for historical demand report.

Preference Form

User Story 11

As a **student/Instructor** I need to be able to maintain a preference form so that the Program Coordinators can know my preferences

Scenario 01: User creates a preference form, previous data does not exist

Given: The user is logged in and navigates to the preference page

Then: The user selects a semester from the dropdown

When: The user clicks submit

Then: The preference form page is loaded, dropdowns are populated with classes from the semester template

When: The user selects their preferences and clicks submit

Then: A new preference form is created associated with that user

Scenario 02: User creates a preference form, previous data does exist

Given: The user is logged in and navigates to the preference page

Then: The user selects a semester from the dropdown

When: The user clicks submit

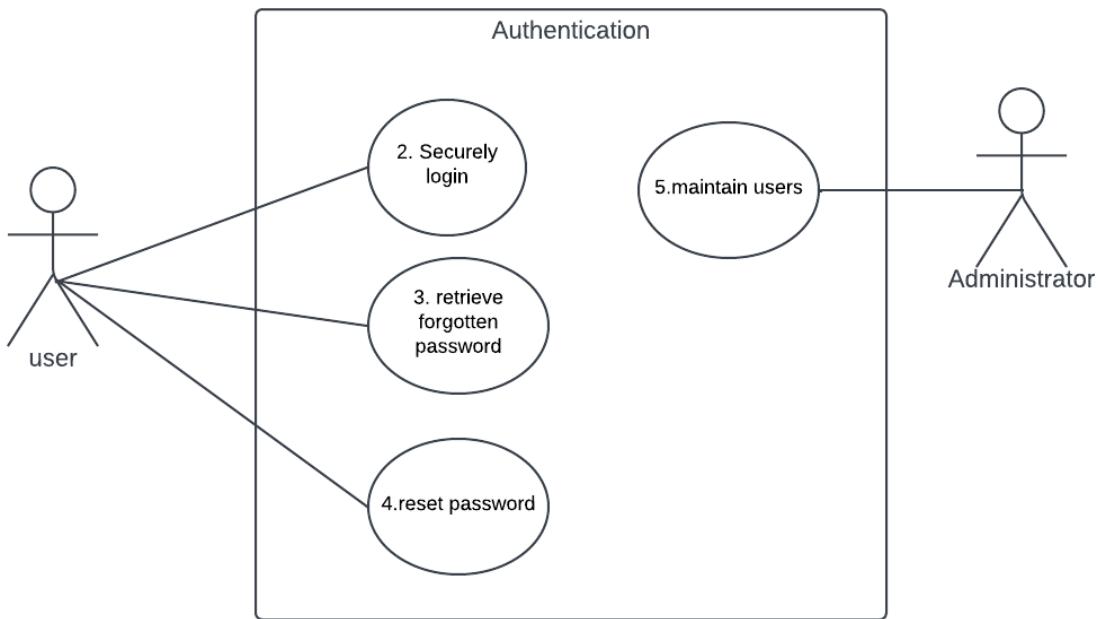
Then: The preference form page is loaded, dropdown boxes are populated with data from previous forms

When: The user selects their preferences and clicks submit

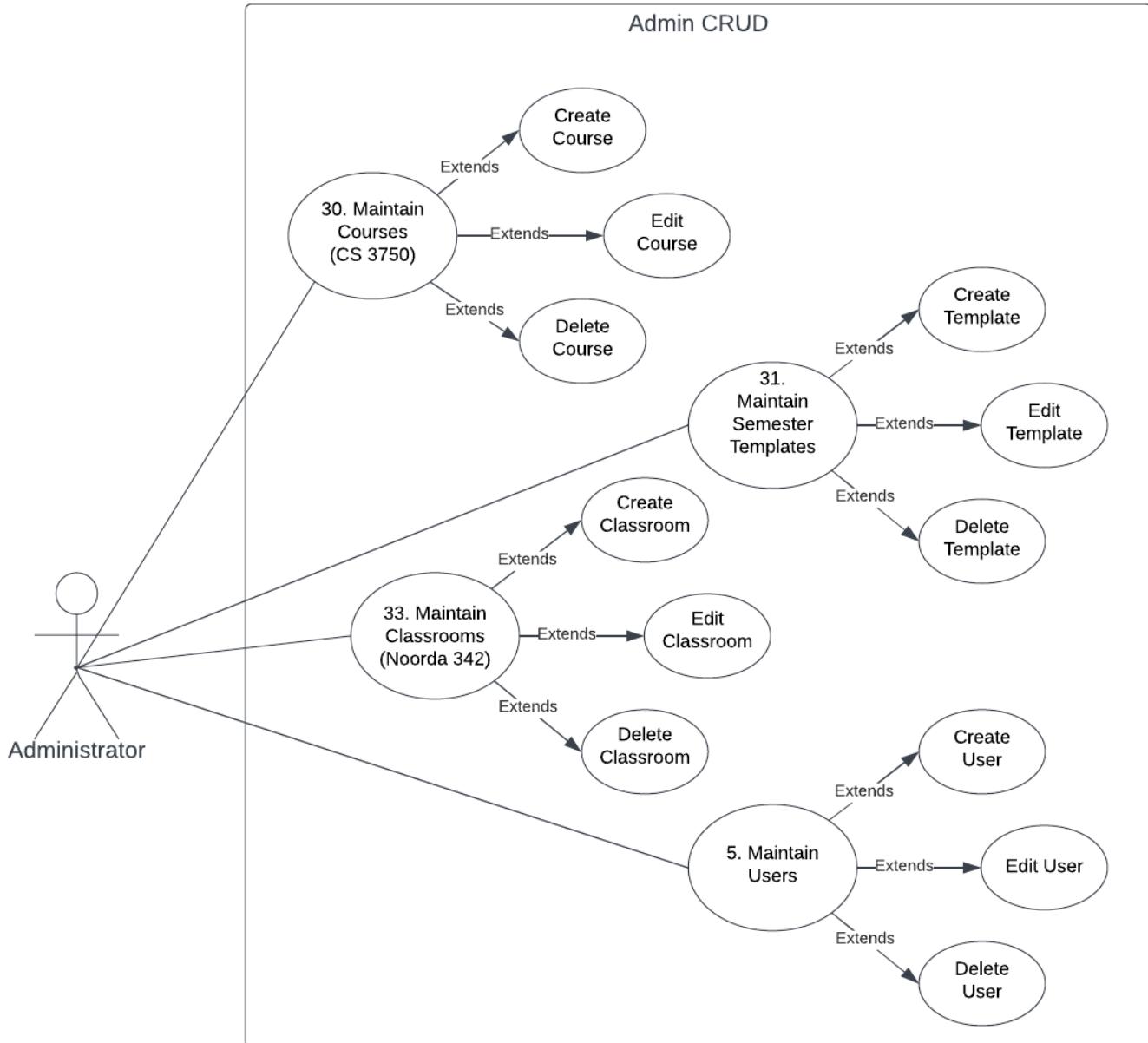
Then: The preference form is updated with the new inputs

Use Case Diagrams

Authentication



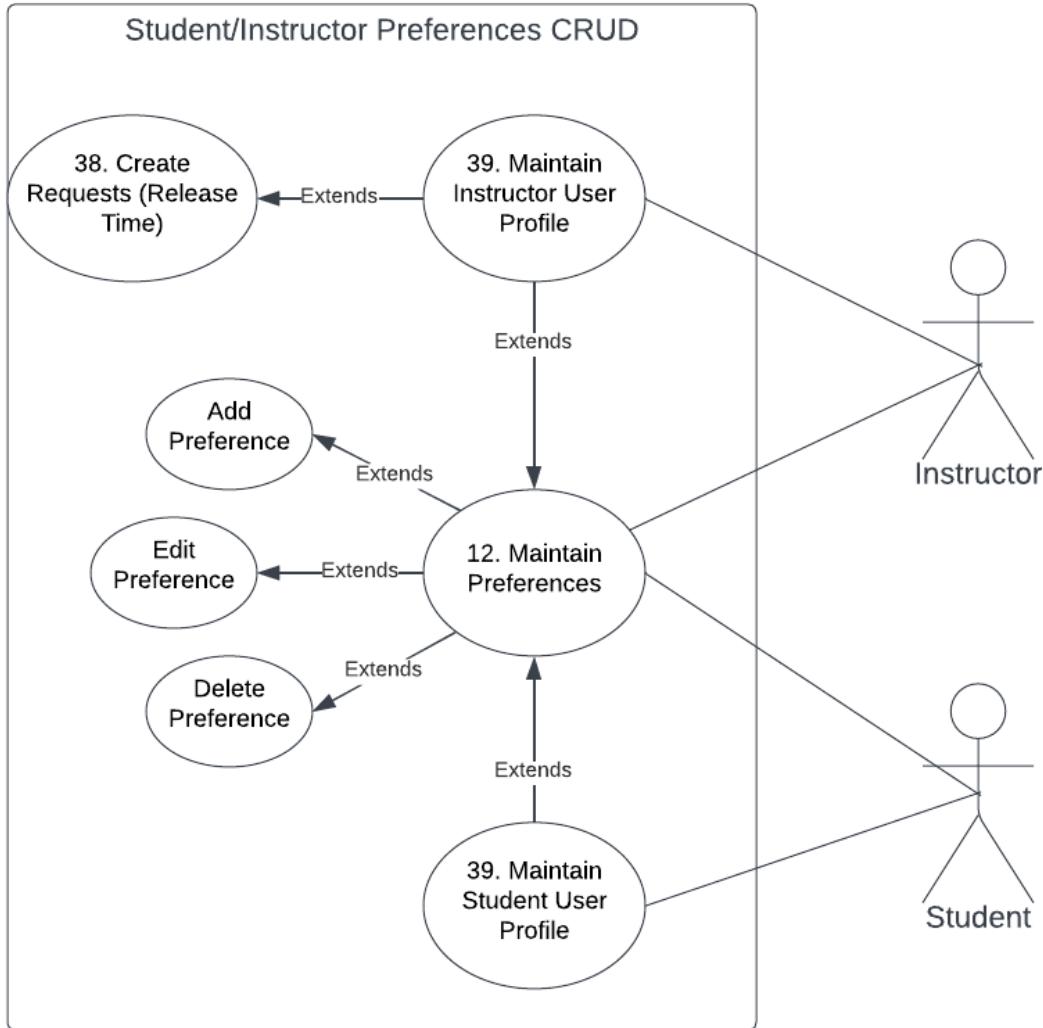
Admin CRUD



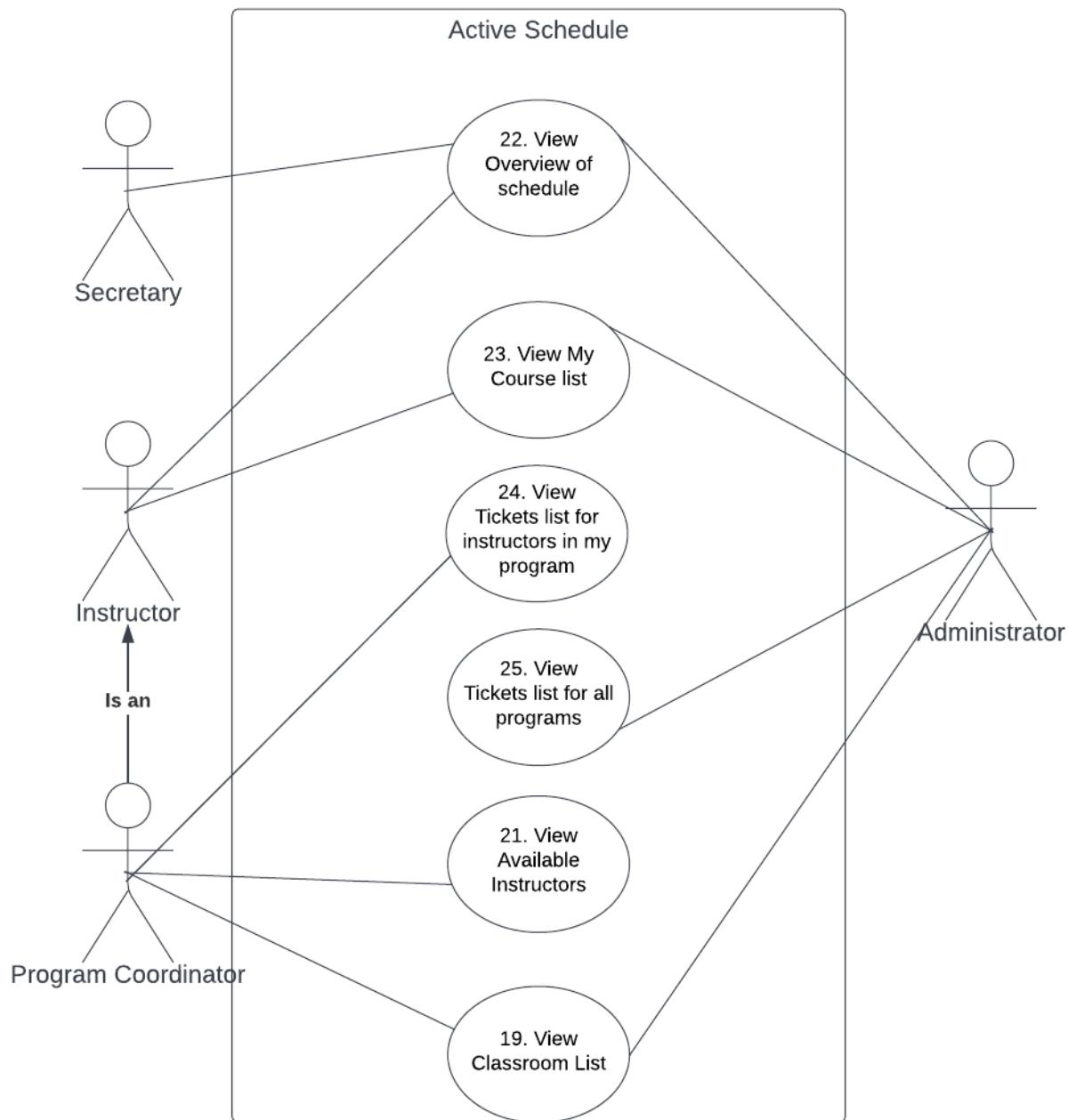
Semester Schedule CRUD



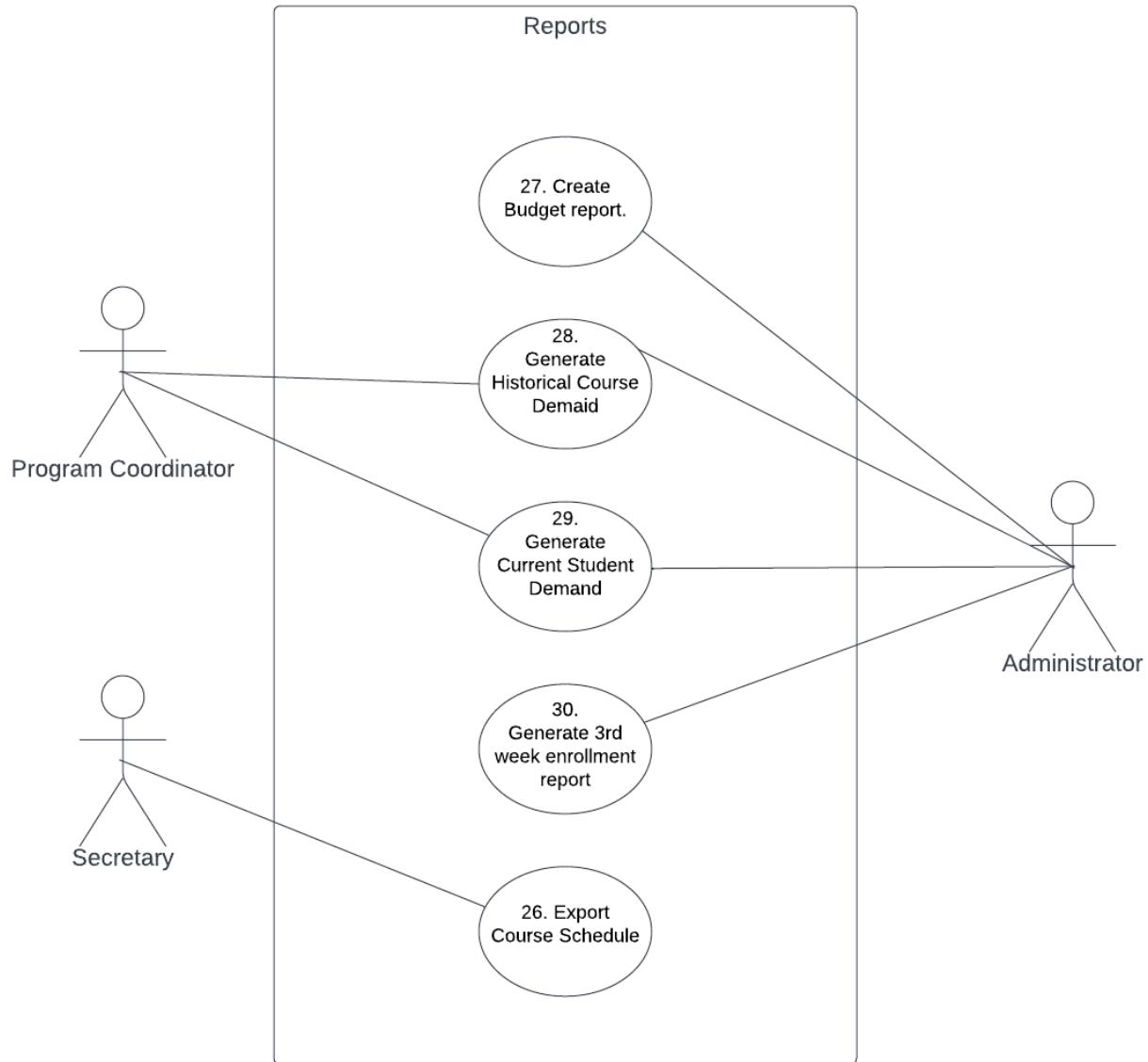
Preferences CRUD



Active Schedule

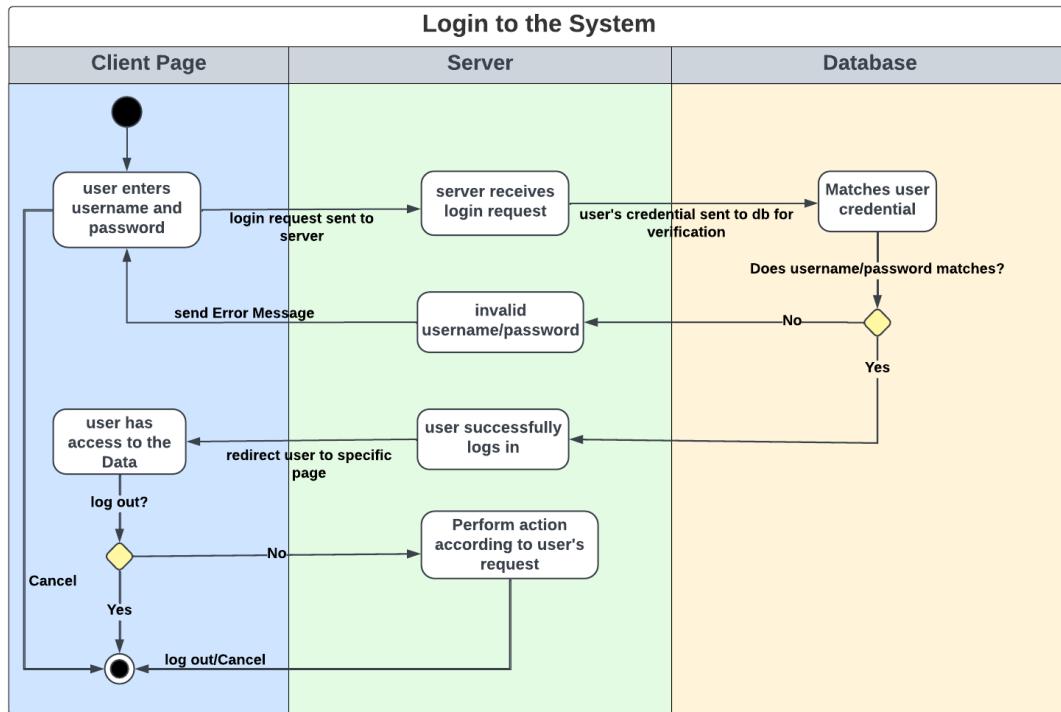


Reports

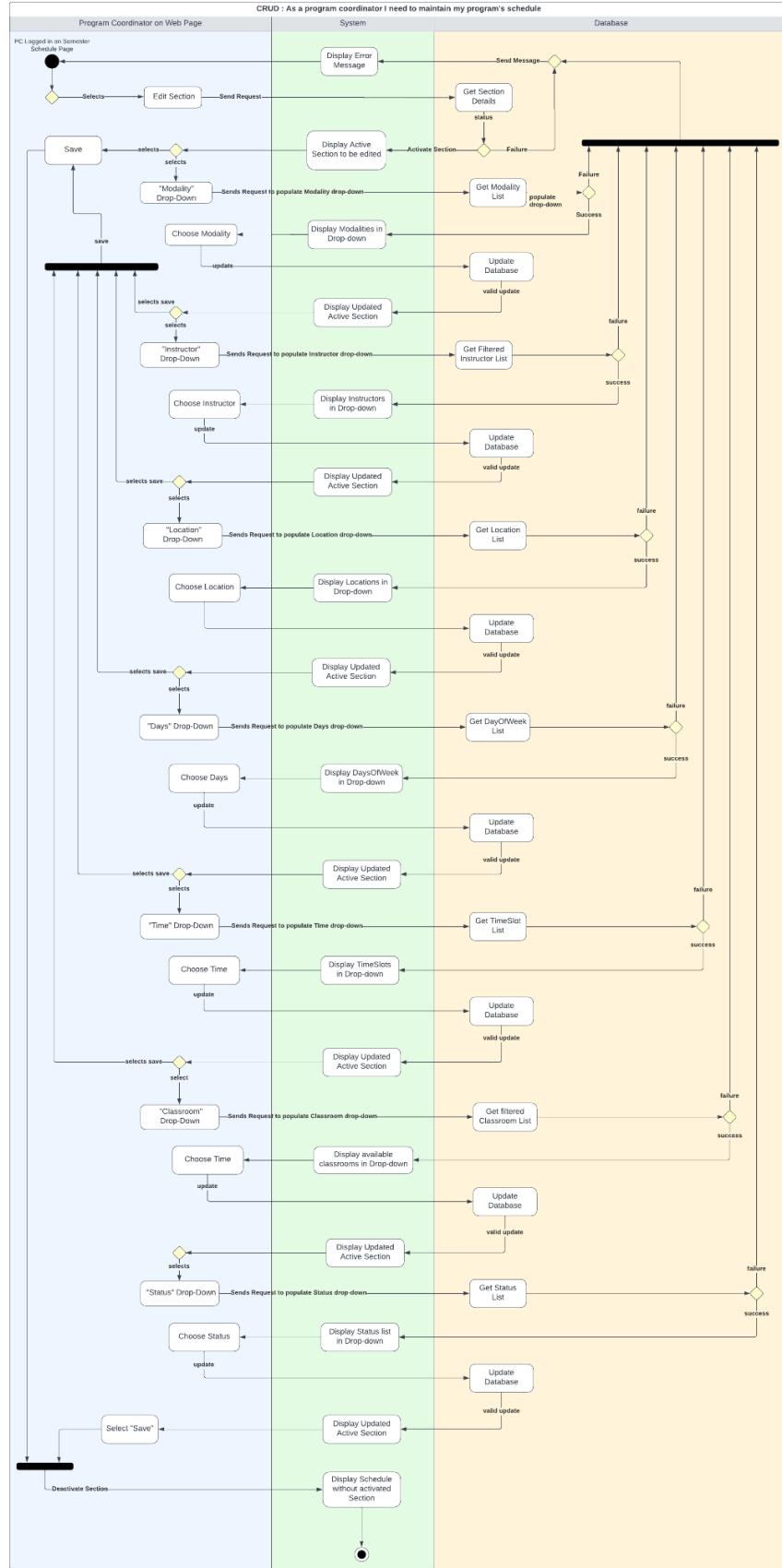


Activity Diagrams

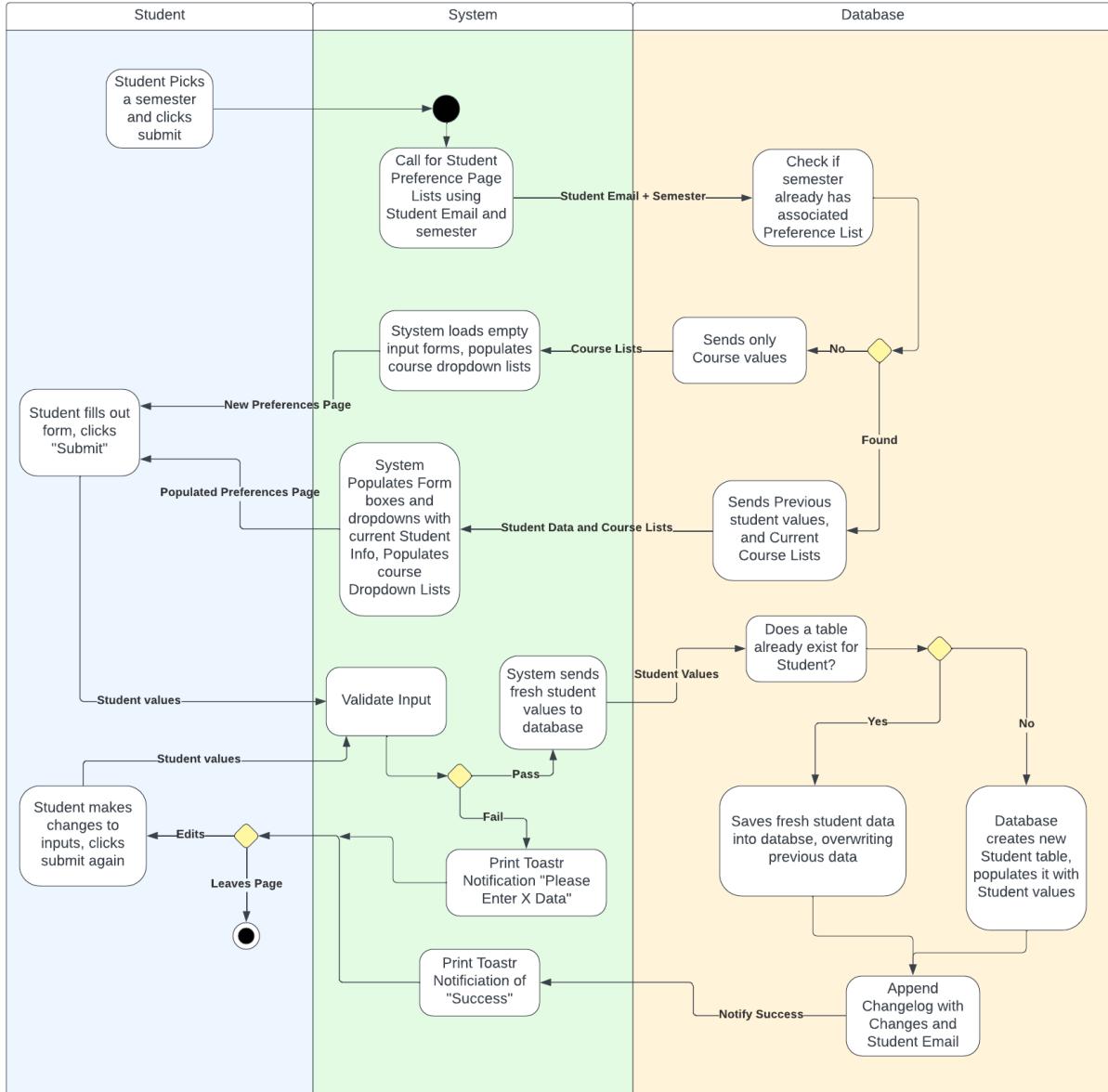
A User Logs In



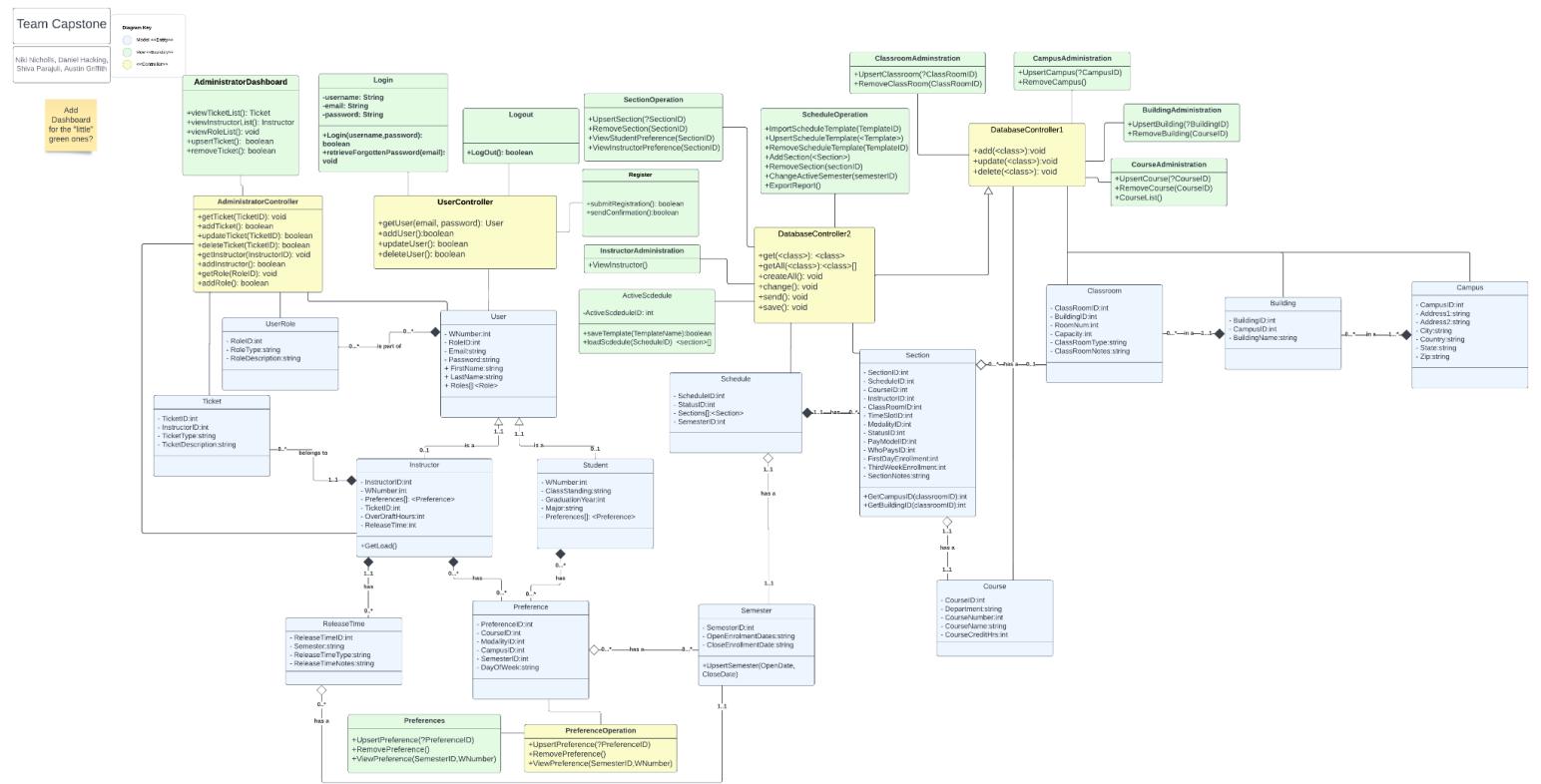
PC Maintains Schedule



Student Maintains Preferences

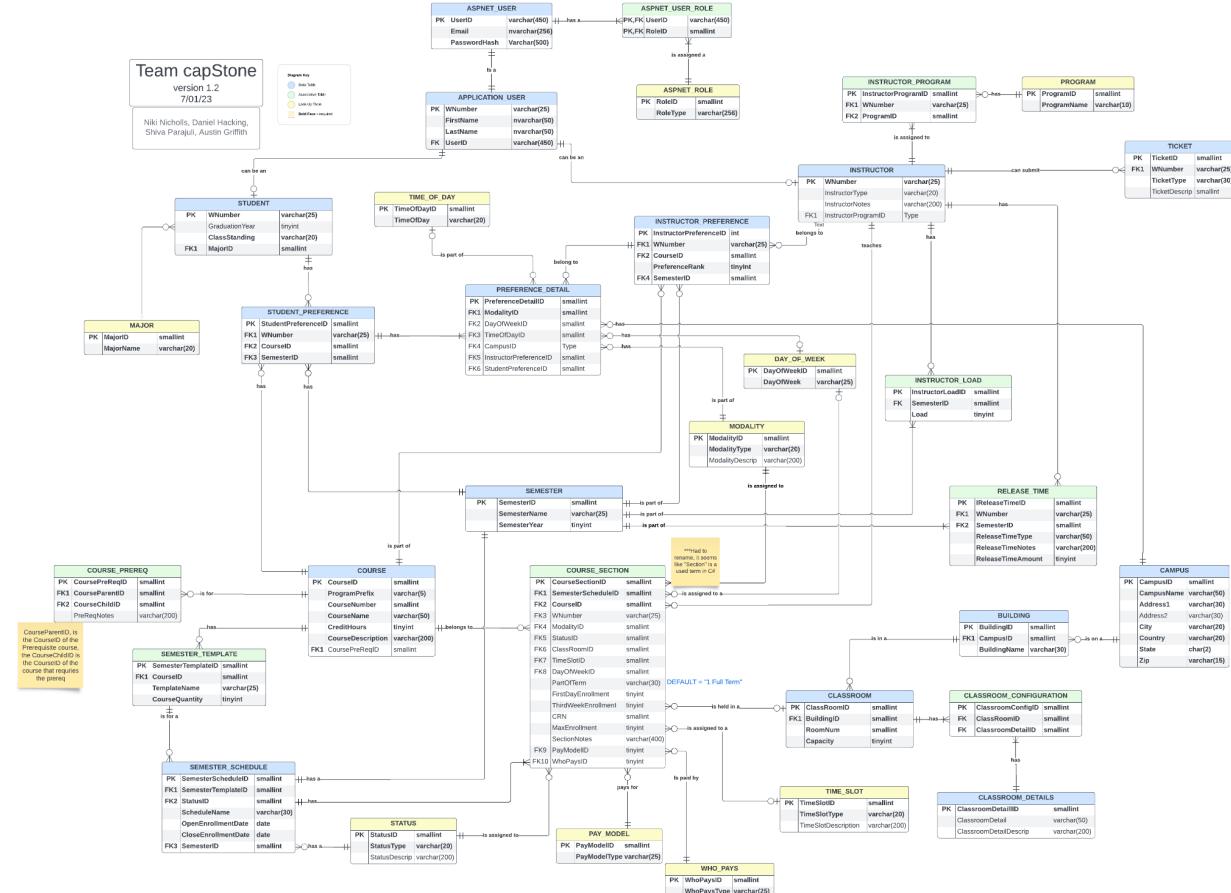


Class Diagram



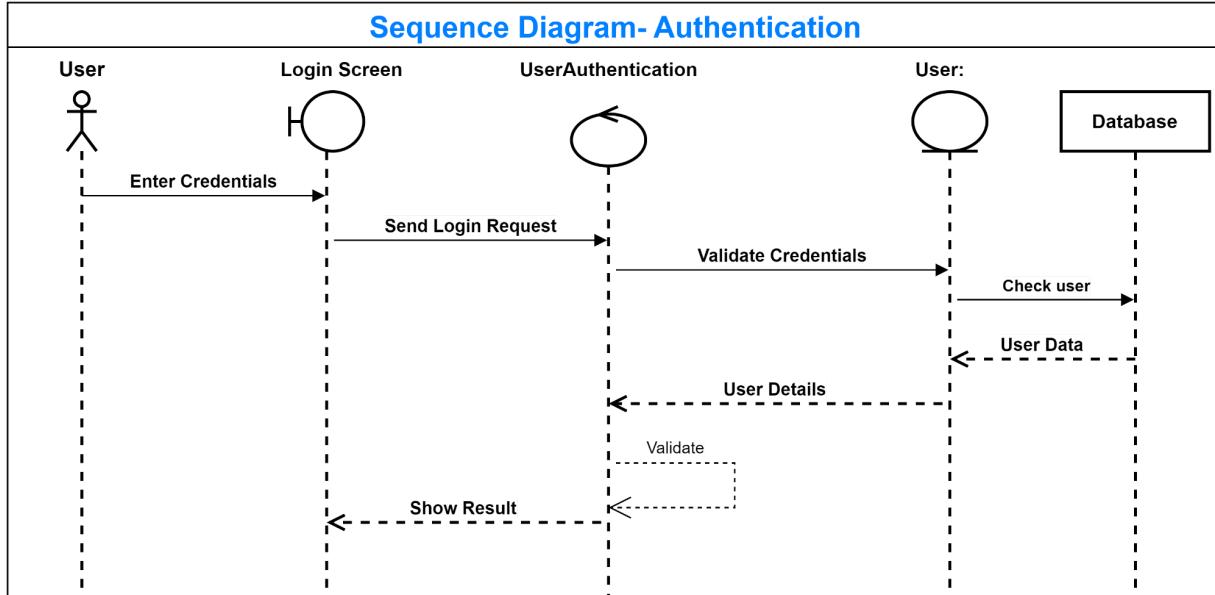
Database ERD

[Link to chart](#)

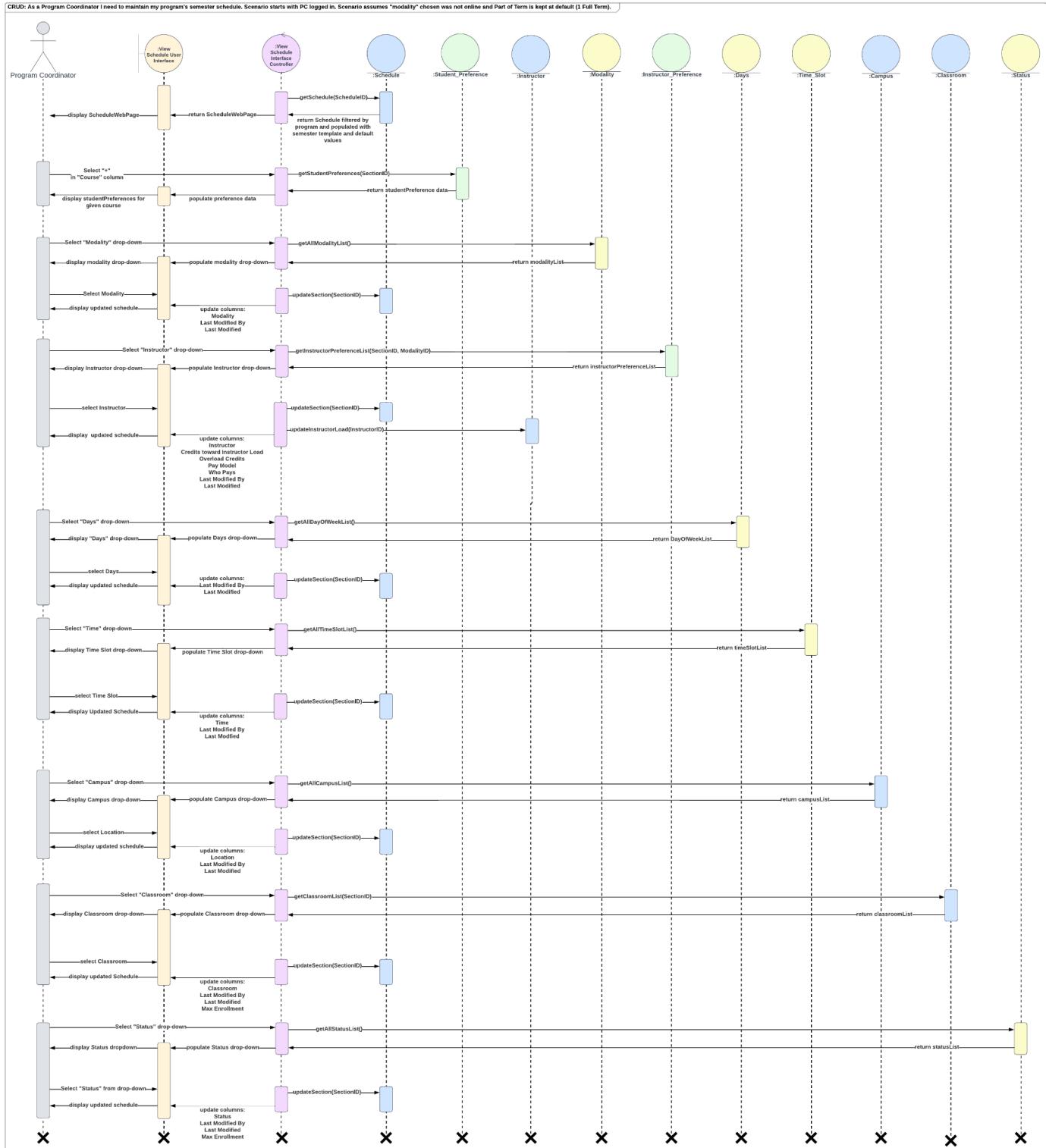


Sequence Diagrams

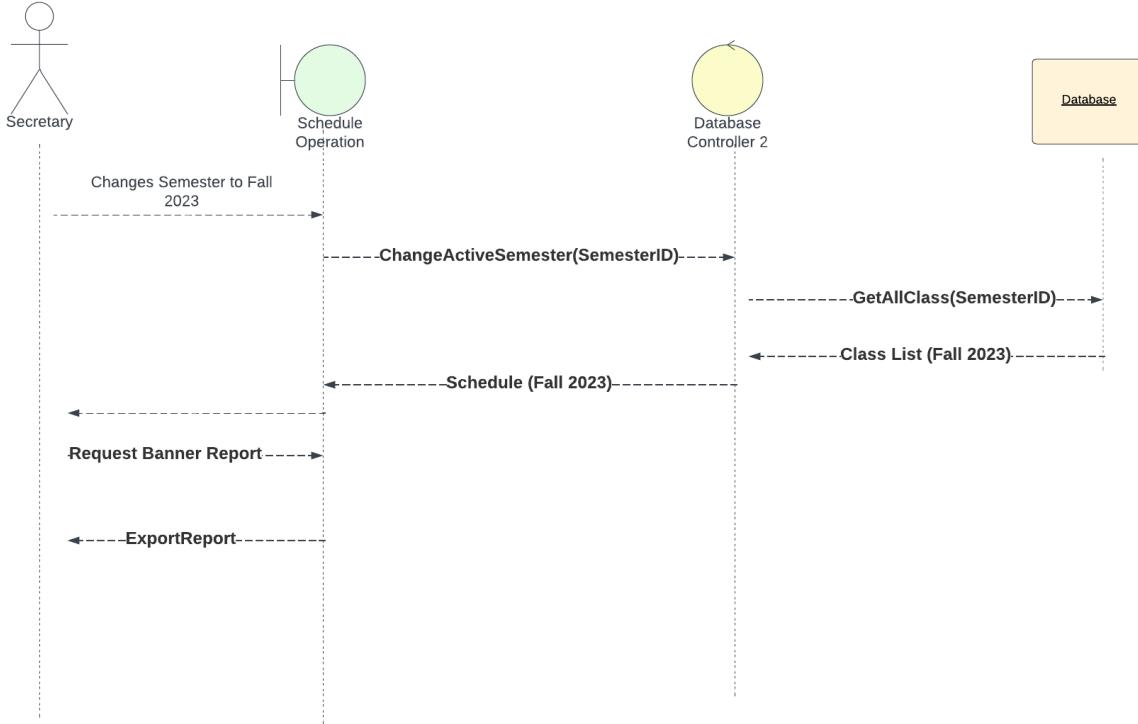
Authentication



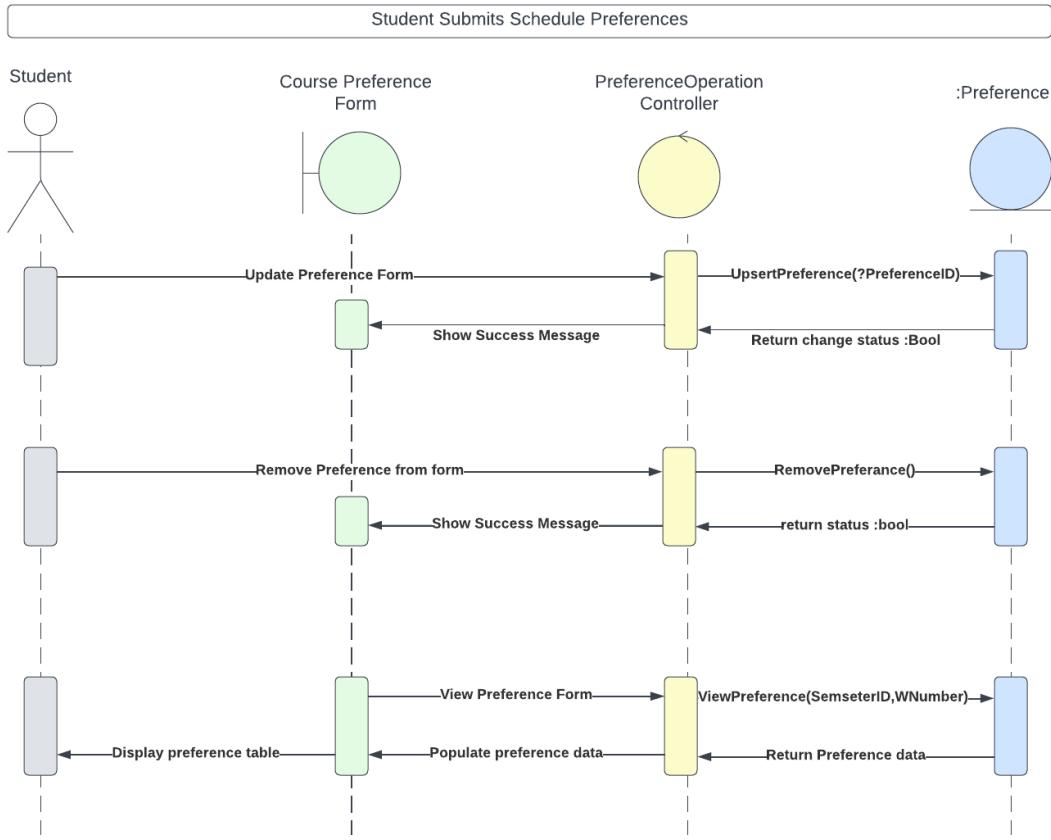
PC Maintains Schedule



Secretary Prints Report

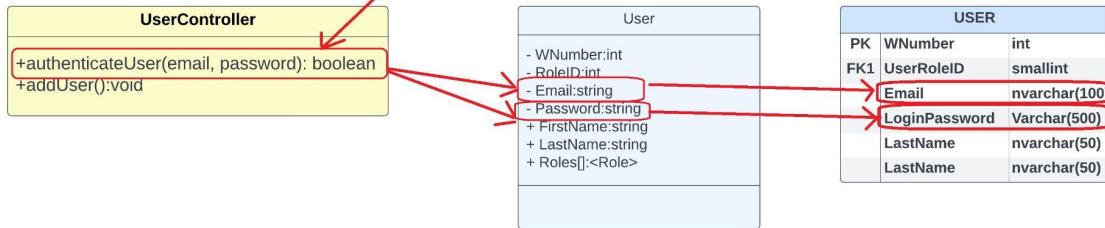
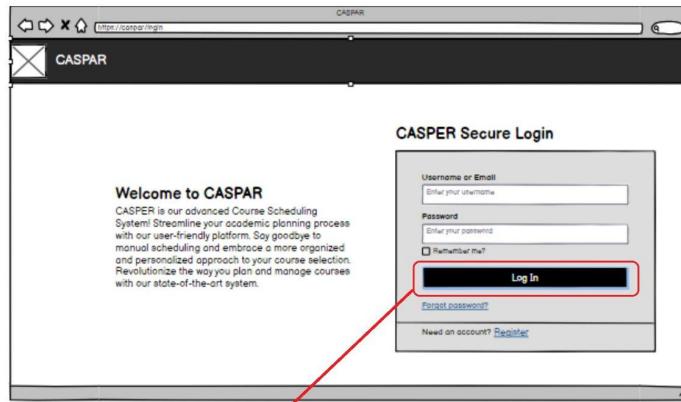


Student Submits Schedule Preferences

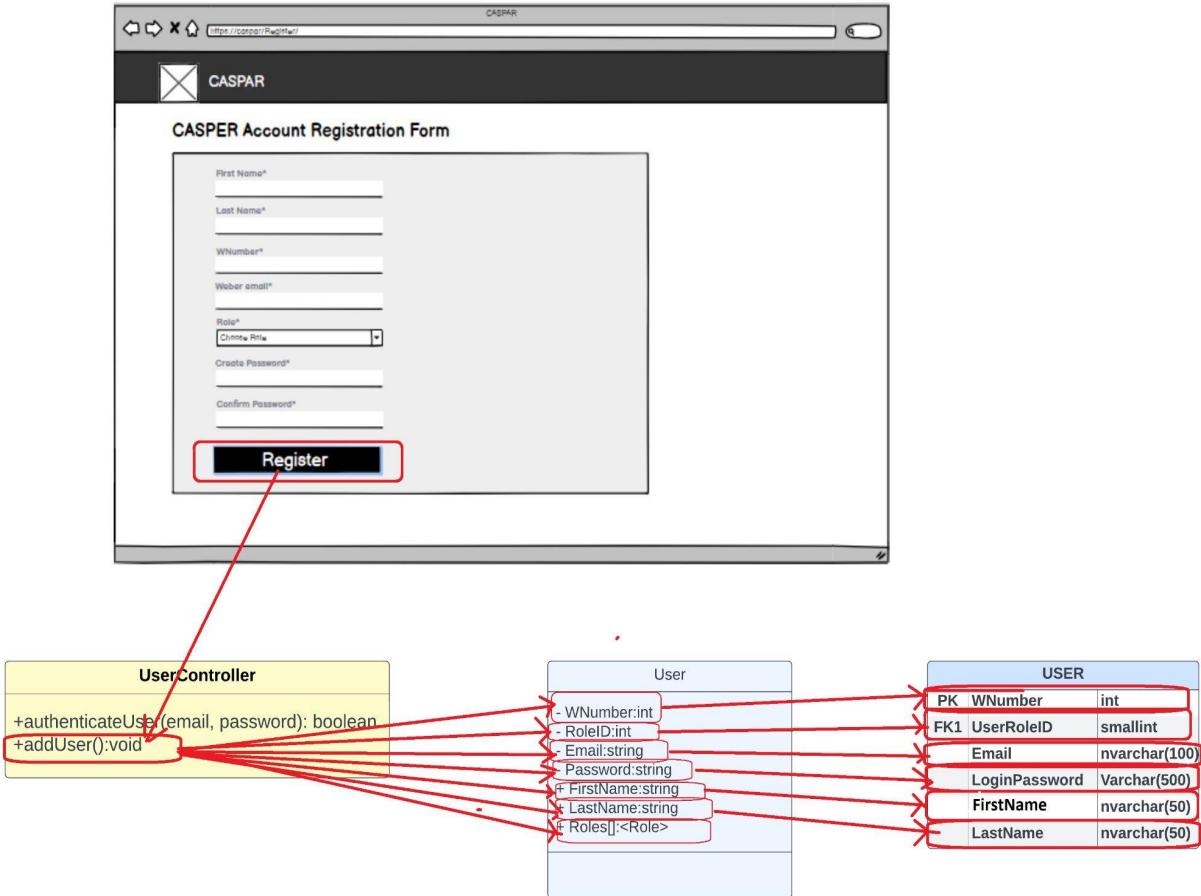


UI Diagrams

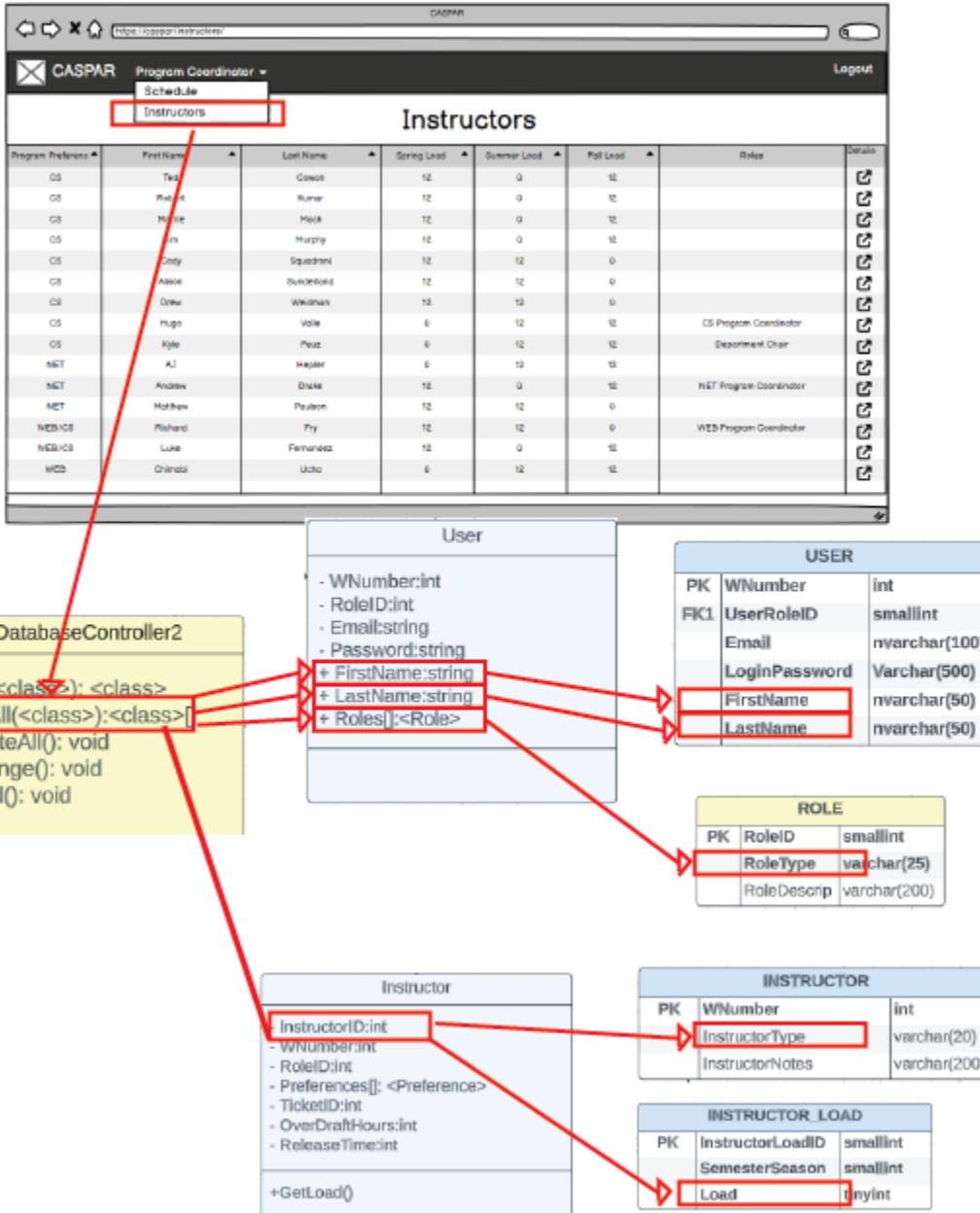
User Login



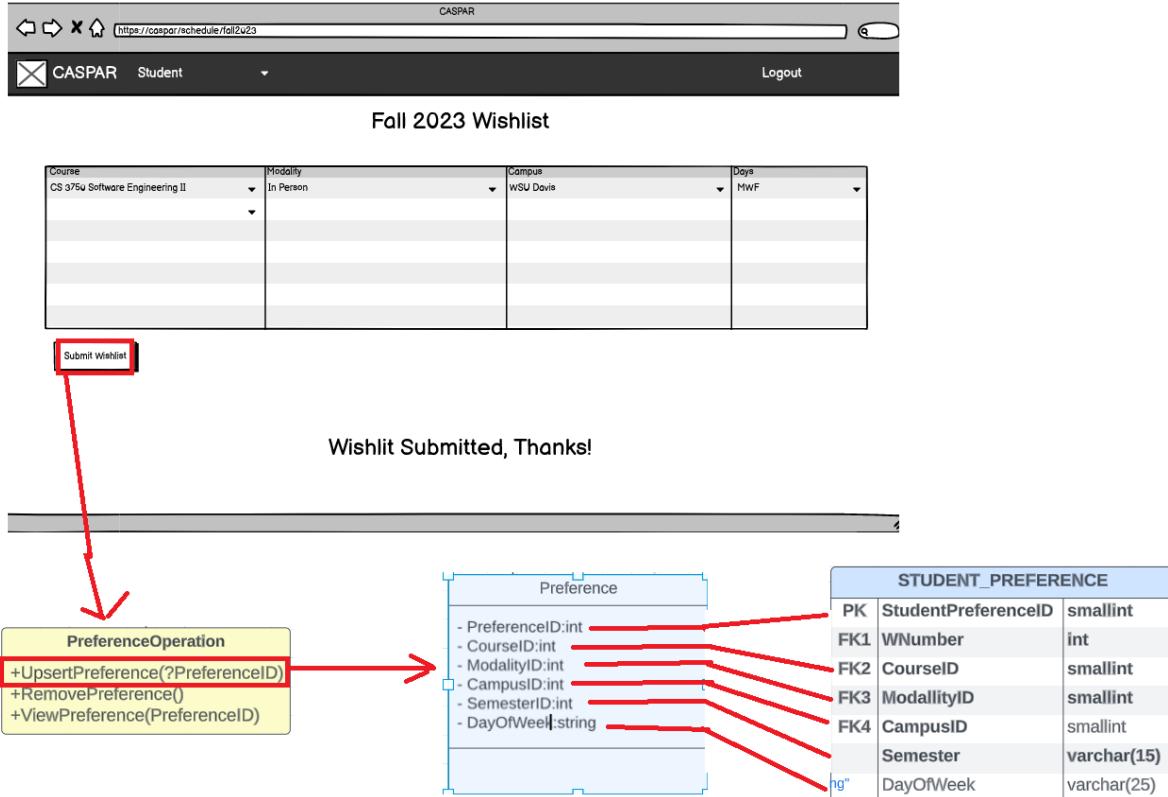
User Registration



View Instructors

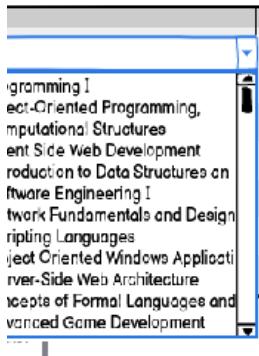


Submitting Preference Form



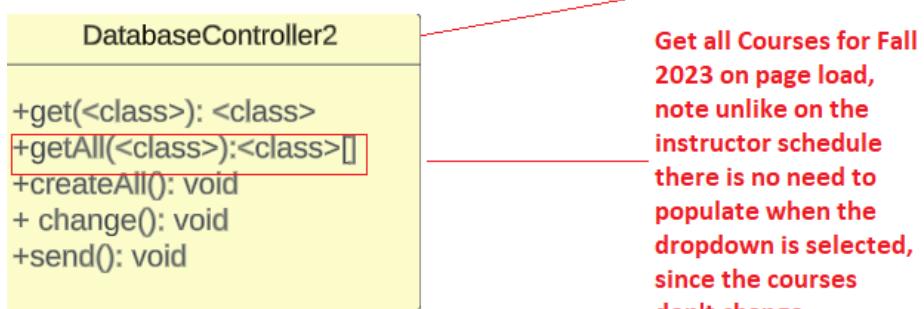
Populating Dropdowns on Preference Form

Fall 2023 Wishlist



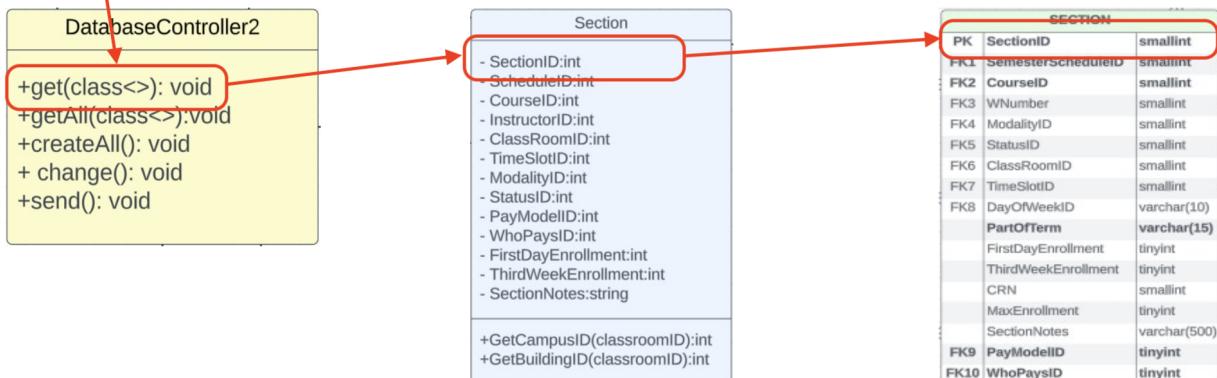
	Modality	Campus	Days
Object-Oriented Programming I			
Object-Oriented Programming, Data Structures			
Front Side Web Development			
Introduction to Data Structures and Algorithms			
Software Engineering I			
Network Fundamentals and Design			
Scripting Languages			
Object Oriented Windows Applications			
Server-Side Web Architecture			
Theory of Formal Languages and Automata			
Advanced Game Development			

On Page Load



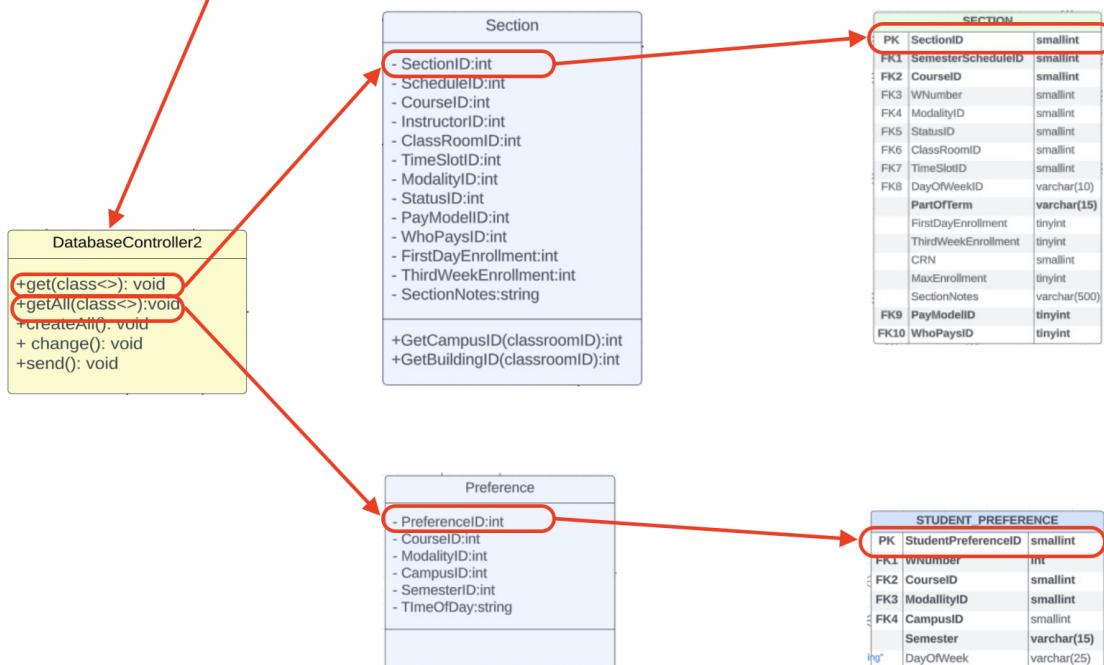
Active Schedule View - PC Activating a Section to Edit

The screenshot shows a table of course sections for Fall 2023. The columns include Edit, POT, Course, Modality, Instructor, Location, Days, Time, Classroom, Max Enrol, Status, CRN, Pay Model, and Who Paid. The 'Edit' column contains icons for each row. Two specific rows for CS 1030 are circled in red: the first row (Modality: ONL Online, Instructor: Brad Peterson) and the second row (Modality: FTF Face-to-face, Instructor: Richard Fry). Both circled rows have their 'Edit' icons highlighted.



Active Schedule View - Viewing Student Preferences for a given Course

The screenshot shows the CASPAR application interface. On the left, a list of courses for Fall 2023 is displayed. A modal window titled "CS 1030 Student Preferences" is open, showing a grid of student preferences categorized by modality (Online, Face-to-Face, Hybrid, Virtual) and time of day (Morning, Afternoon, Evening). A red circle highlights the "+" button next to the third course in the list, which likely triggers the modal. A red arrow points from the "Section" class diagram below to the "Section" table in the database schema.



Active Schedule View - PC Selecting a Modality for a Section

The screenshot shows a web-based application interface for managing course schedules. At the top, there's a header bar with the CASPAR logo, a navigation menu, and a 'Logout' link. Below the header is a title 'Schedule: Fall 2023'. The main content area is a grid table with columns for Course, Modality, Instructor, Location, Days, Time, Classroom, Max Enrol, Status, CRN, Pay Model, and Who Paid. A specific row for 'CS 1030 - Foundations of Computing (4)' is selected, and its 'Modality' field is open, displaying a dropdown menu with options: ONL Online, FTF Face to Face, HYB Hybrid, and VIRT Virtual. A red circle highlights the dropdown menu, and a red arrow points from the 'Modality' column of the table towards the DatabaseController2 class diagram below.

