San Francisco State University
SW Engineering CSC 648/848 Fall 2022
Req Check
TEAM #6

Names	**Role**	**Emails**
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Milestone 3

Milestone Version	Date
M3V2	December 1, 2022
M3V1	November 8, 2022

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Data Definitions V3

Entity	**Attributes**
Student	First name: Varchar (30) Last name: Varchar (30) Student ID: Numeric (10) Email: Varchar (30)
Professor	First name: Varchar (30) Last name: Varchar (30) Employee #: float (10) Email: Varchar (30)
Course	Course Number: Numeric (5) Title: Varchar (45) Units/Credit: Decimal (2) Semester: Varchar (10)
Records	Transcripts: BLOB possibly can change*** Student ID: Numeric (10)
Road Map	Course Number: Numeric (5) Course Title: Varchar (45) Semester: Varchar (10)
Enrollment	Credits: Decimal (2) Course Title: Varchar (45) Student ID: Numeric (10)
Grade	Letter: Varchar (10) Student ID: Numeric (10) Course Number: Numeric (5) Course Title: Varchar (45) Semester: Varchar (10)
Transfer Credits	Institution Name: Varchar (45) Course Number: Numeric (5) Course Title: Varchar (45) Units/Credits: Decimal (2) Student ID: Numeric (10)
Equivalency Appeal	Appeal ID: Pk Key Outcome: Boolean

Notification	Email: Varchar (30) Course Number: Numeric (5)
Attendance	Present: Boolean Absent: Boolean Total Count: SUM numeric (2)
Waitlisted Students	First name: Varchar (30) Last name: Varchar (30) Student ID: Numeric (10) Email: Varchar (30)
Dropped Students	First name: Varchar (30) Last name: Varchar (30) Student ID: Numeric (10) Email: Varchar (30)
Deadlines	Last day to add: Date Time Last day to drop: Date Time Semester: Varchar (10)
Course Hierarchy	Course Number: Numeric (5) Course Title: Varchar (45) Semester: Varchar (10)
Request	Request ID: Pk Type: Varchar (20) Description: Varchar (100) Timestamp: Date Time Outcome: Boolean
Student Courses	Course Number: Numeric (5) Title: Varchar (45) Units/Credit: Decimal (2) Semester: Varchar (10)

Prioritized Functional Requirement V3

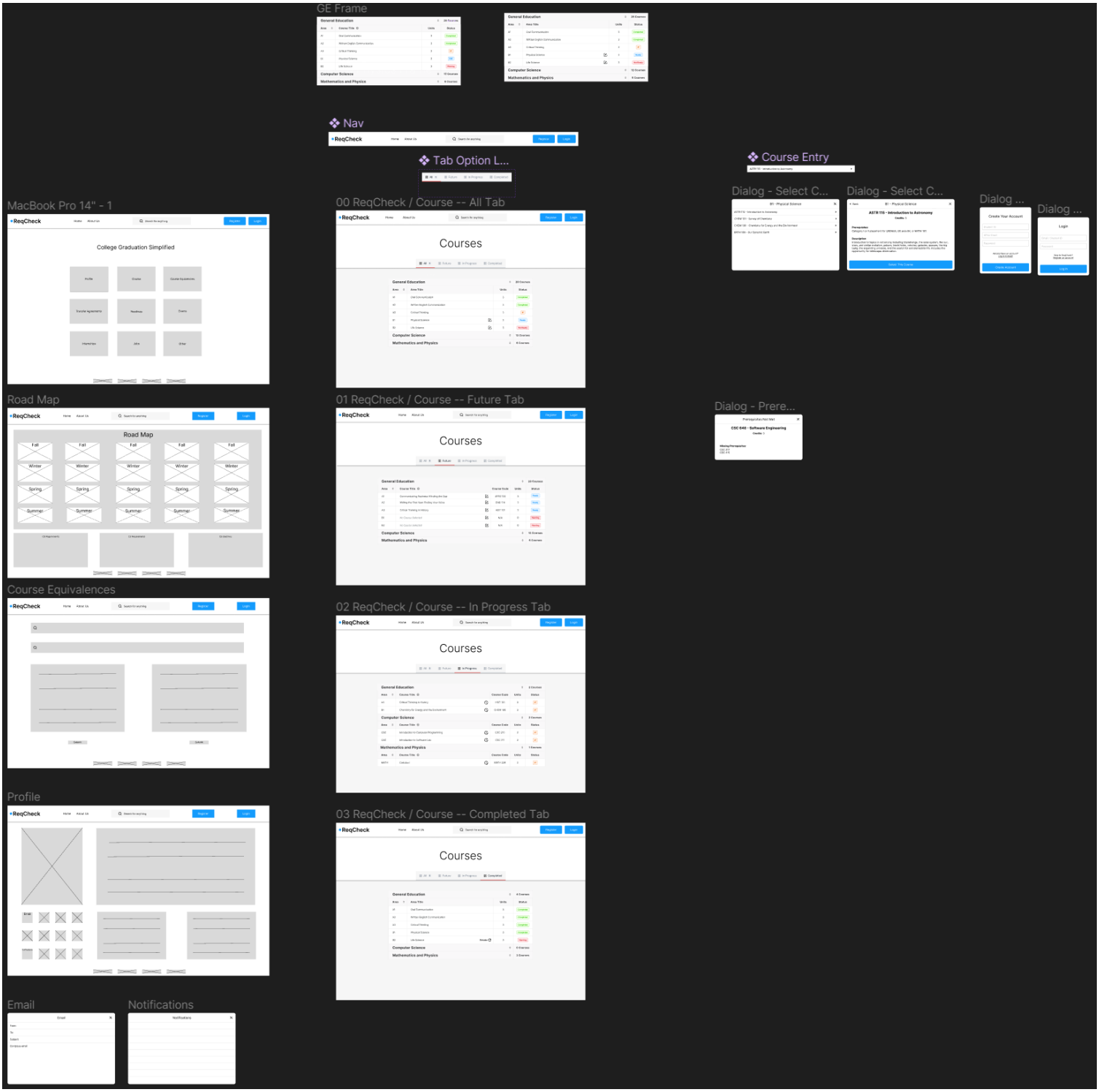
Function	Priority	Actors	Function
4	1	Application	The application should protect the encapsulated user data and disclose information based on roles.
43	1	Course	Each course shall be given a category of major, minor, GE, or elective.
48	1	Course	Each course shall have an enrollment status based whether a grade has been given or not.
1	1	Degree Planner	To use the degree planner feature, students must fill the appropriate subjects that they want to take for their degree.
37	1	Rec Checker	The Req checker shall be available on the WWW platform.
42	1	Requirement	Each requirement change shall update the overall course completion right away.
57	1	System	System will be available during all hours of the day including weekends and holidays.
25	1	System	The system shall display the course requirements for graduation.
26	1	System	The system shall differentiate courses by requirements and electives.
31	1	System	The system shall inform the student any prerequisites required prior to enrolling in a course.
46	1	System	The system shall give numerical status on the number of semesters left before graduating.
3	1	Timeline	The timeline shall depend on how much units a particular student must complete to obtain their degree.
18	1	Student	Students shall have a selection of departments they must choose from.
17	1	Admin	Admin shall add the prerequisite on a defined hierarchy of courses.
20	1	Admin	Admin shall have a list of all the courses.
21	1	Admin	Admin shall have a list of courses taken by a student.
6	2	Application	The application should automatically verify a student's academic records via the administrator.
7	2	Application	The application should be able to authenticate user identity by the university.
51	2	Course	Each course shall display the semester’s it is being offered for.
52	2	Semester	Each semester shall display the courses that can be taken prior to enrollment.
58	2	Student	Students shall be authenticated by the university to use the system.
28	2	System	The system shall update all courses based on students input data.
29	2	System	The system shall inform students of course exemptions.
32	2	System	The system shall update any prerequisite requirements.
34	2	System	The system shall enforce any prerequisites prior to enrolling in courses.
35	2	System	The system shall require satisfaction of prerequisites to enroll in courses.
36	2	System	The system shall give alternatives to satisfying prerequisites if applicable.

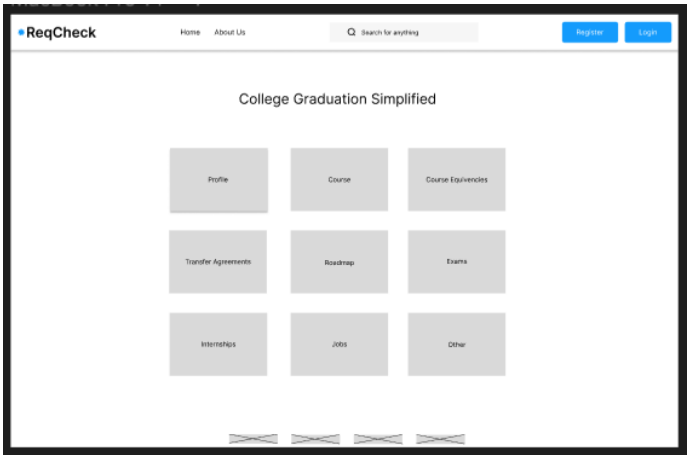
49	2	System	The system shall not allow students to enroll in courses they do not qualify for.
50	2	System	The system shall require students to complete prerequisites to enroll.
30	2	System	The system shall inform the student the number of semesters left to graduate.
14	2	Admin	Admin shall set new records and shall make a hierarchy of prerequisite courses.
15	2	Admin	Admin shall arrange all the courses department wise.
19	2	Course	Course shall have less dependency to any other entity.
45	2	Exemption	Each exemption shall be based on course requirements and student grade level.
53	2	Main Page	The main page shall display the user's schedule and classes with professor’s name, date, and class number.
12	2	Professor	A professor shall fill up a seat once a student had dropped the course.
10	2	Professor	Professors shall only approve a defined number of students to their courses.
11	2	Professor	A professor shall fill in dropped students’ seats using a waitlist of students.
22	2	Student	Students shall see the list of professors for a course.
13	2	Student	Each student shall have a chance to request enrollment and each enrollment seat shall be filled up by a first come first serve basis.
33	2	System	The system shall be notified if a course has not been passed.
23	2	System	The system shall display the student’s grade level (current, transfer, new).
24	2	System	The system shall inform students of any changes in department requirements.
41	2	System	The system shall give a grade level status based on overall course completion.
27	2	System	The system shall notify students of all newly required courses.
47	3	Course	Each course shall have numerical options of perquisites.
44	3	Course	Each course shall be appointed based on a student’s grade level (current, transfer, new).
8	3	System	System shall provide all information on passed courses, professors, grades, and sessions.
16	3	Admin	Admin shall change any courses/prerequisites as per the demand of the admin panel.
61	3	People	The amount of people shall be defined by the college administration.
5	3	User	The user (student) must be given information on whether a specific course is transferable from a certain school.
9	3	System	System shall send notifications of recommended courses and waitlisted courses for users to add.
59	0	N/A	
2	0	N/A	
60	0	N/A	
38	0	N/A	
39	0	N/A	

40	0	N/A	
54	0	N/A	
55	0	N/A	
56	0	N/A	

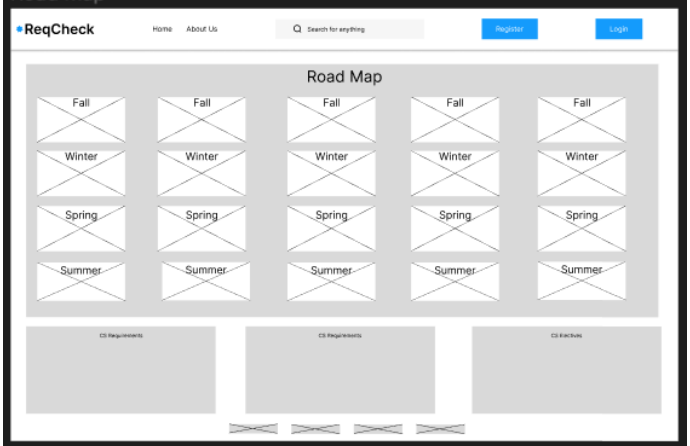
Wireframes based on Mockups and Storyboards

https://www.figma.com/file/NgvaVTZ5rMJ4zJlmch3yOS/Courses-Page-(Copy)

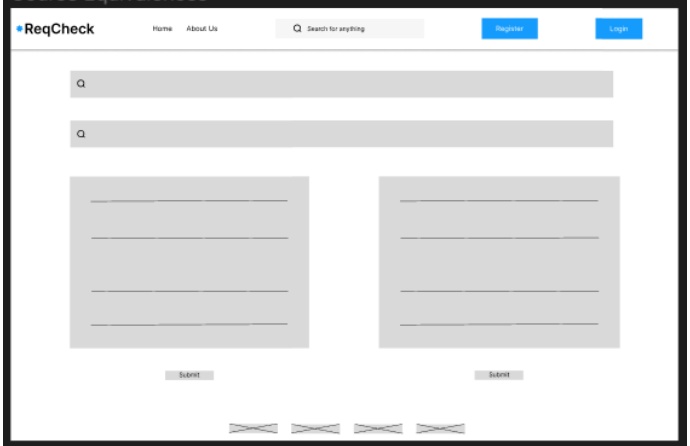




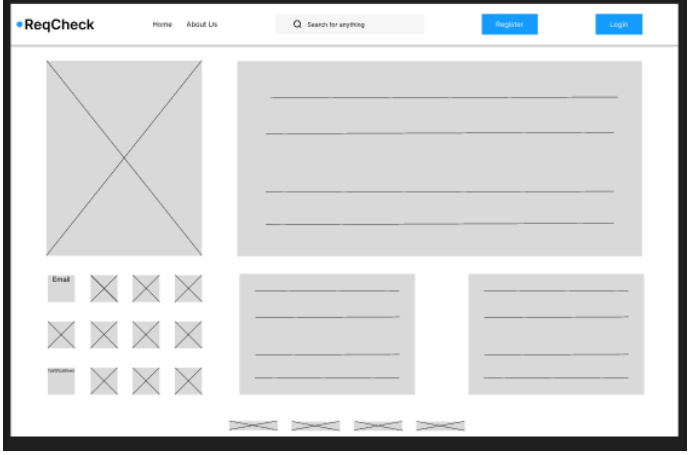
Road Map

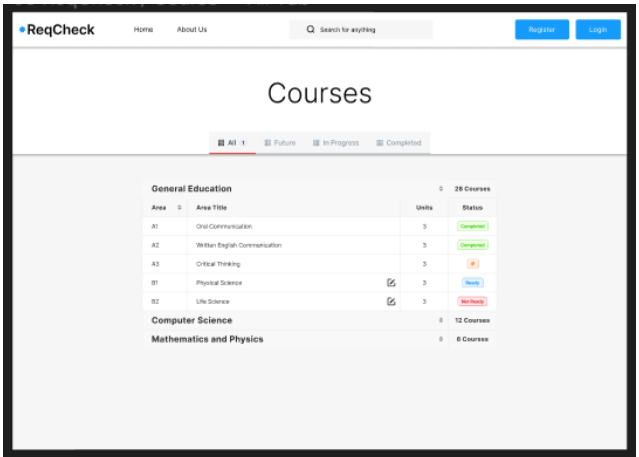


Course Equivalences

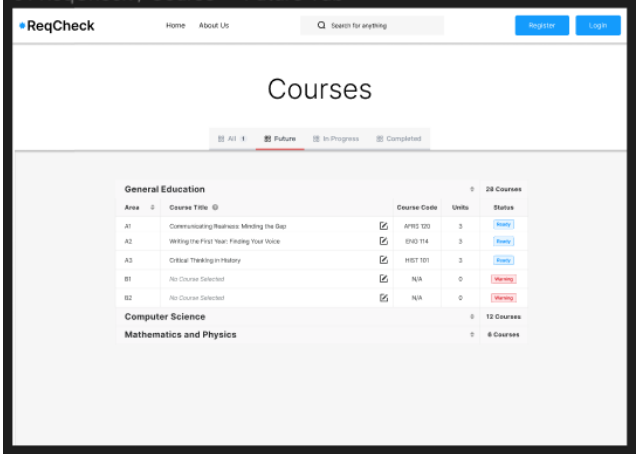


Profile

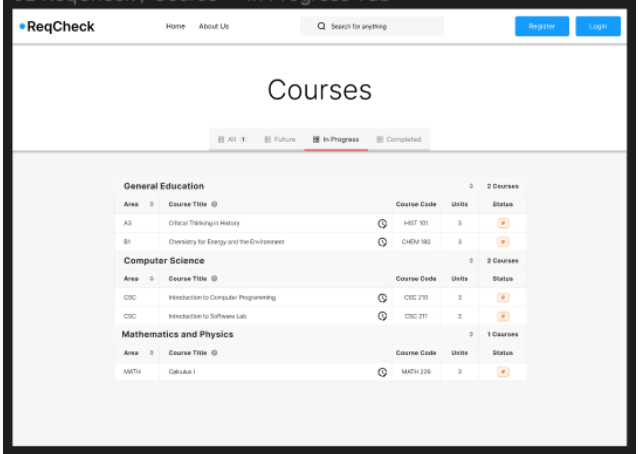




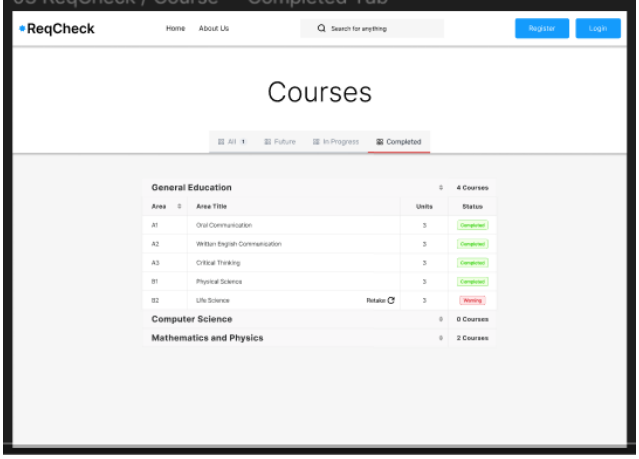
01 ReqCheck / Course -- Future Tab

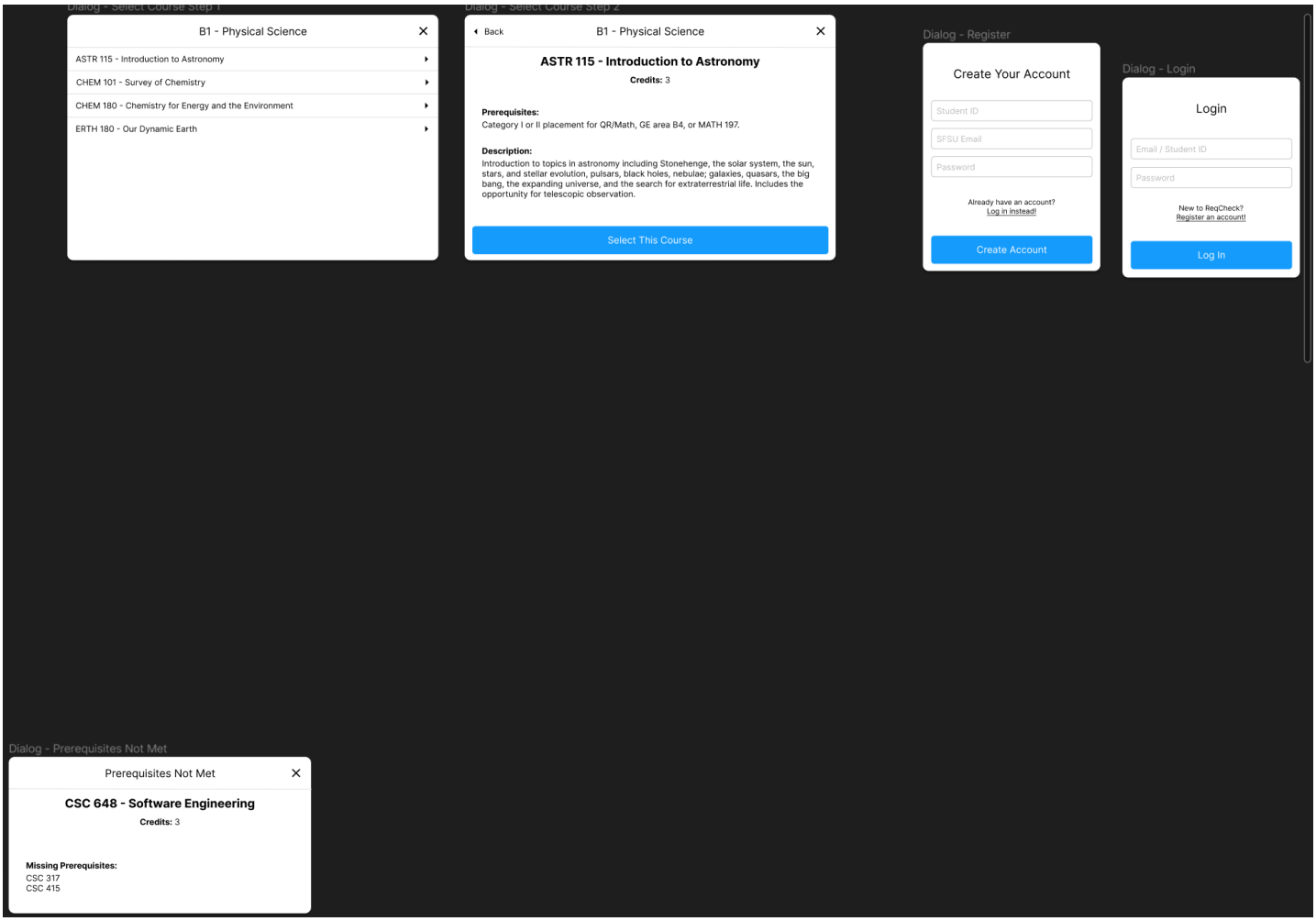


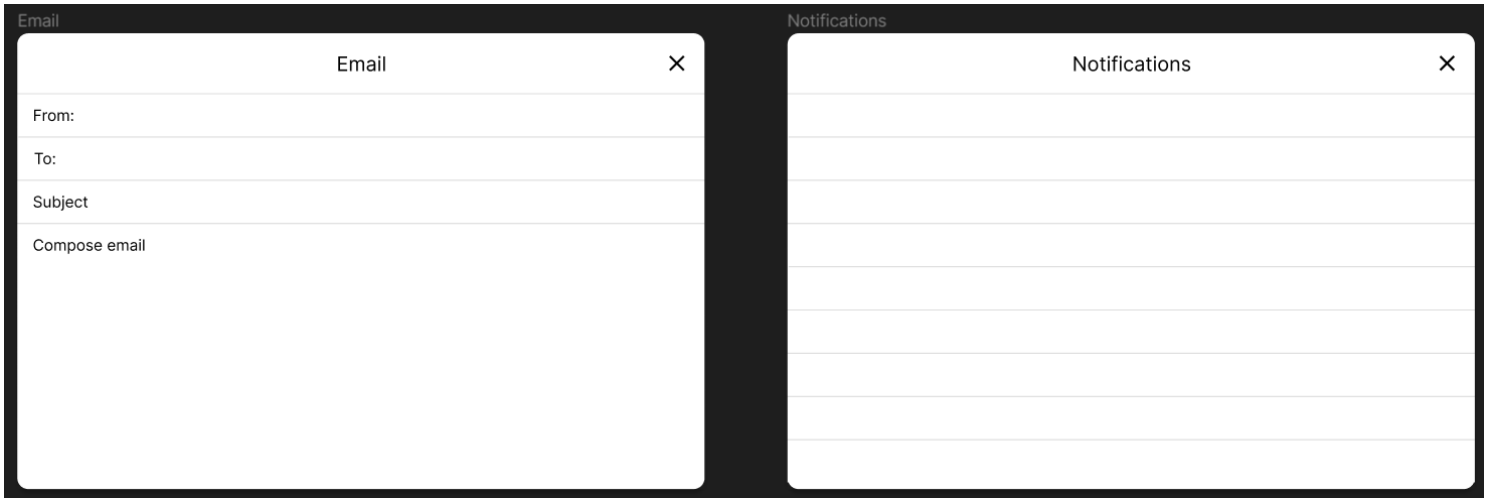
02 ReqCheck / Course -- In Progress Tab



03 ReqCheck / Course -- Completed Tab

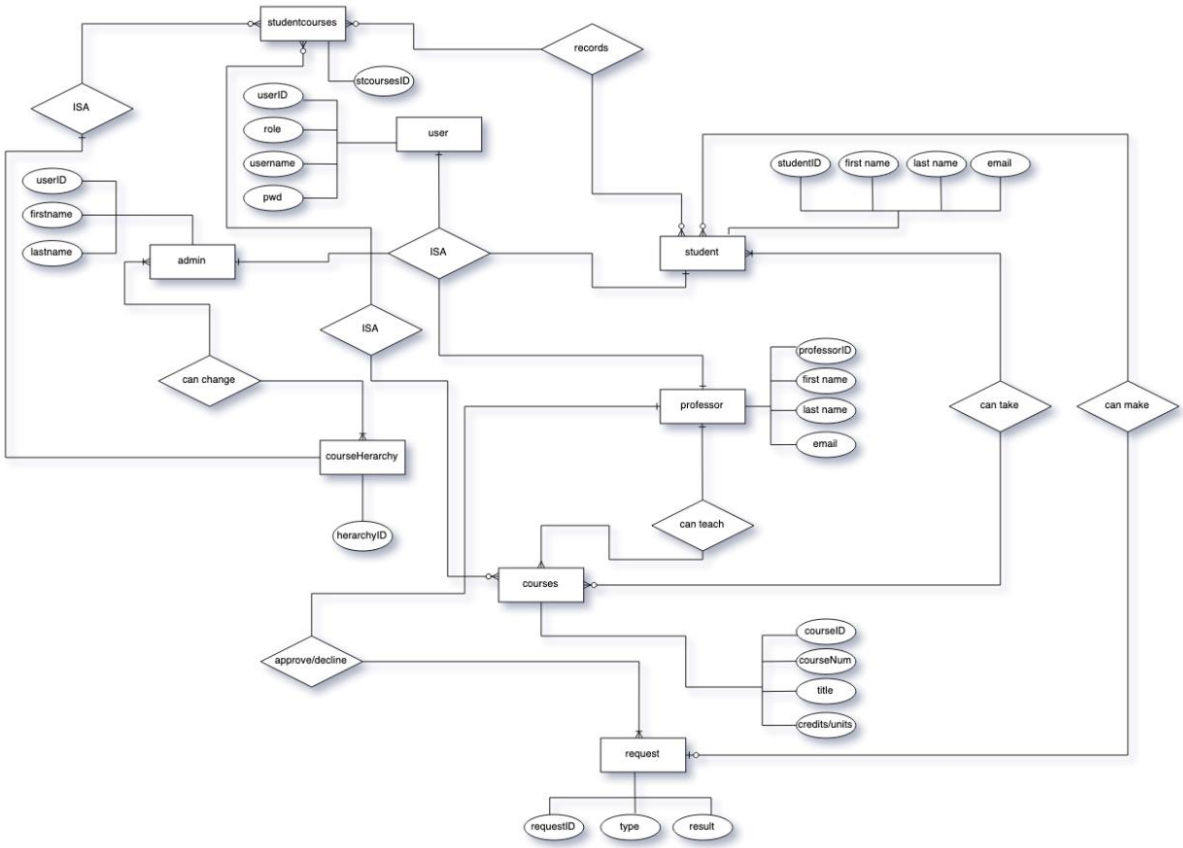



B1 - Physical Science
ASTR 115 - Introduction to Astronomy
CHEM 101 - Survey of Chemistry
CHEM 180 - Chemistry for Energy and the Environment
ERTH 180 - Our Dynamic Earth
Back
B1 - Physical Science
ASTR 115 - Introduction to Astronomy
Credits: 3
Prerequisites:
Category I or II placement for QR/Math, GE area B4, or MATH 197.
Description:
Introduction to topics in astronomy including Stonehenge, the solar system, the sun, stars, and stellar evolution, pulsars, black holes, nebulae; galaxies, quasars, the big bang, the expanding universe, and the search for extraterrestrial life. Includes the opportunity for telescopic observation.
Select This Course
Dialog - Register
Create Your Account
Student ID
SFSU Email
Password
Already have an account?
Log in instead!
Create Account
Dialog - Login
Login
Email / Student ID
Password
New to ReqCheck?
Register an account!
Log In
Dialog - Prerequisites Not Met
Prerequisites Not Met
CSC 648 - Software Engineering
Credits: 3
Missing Prerequisites:
CSC 317
CSC 415

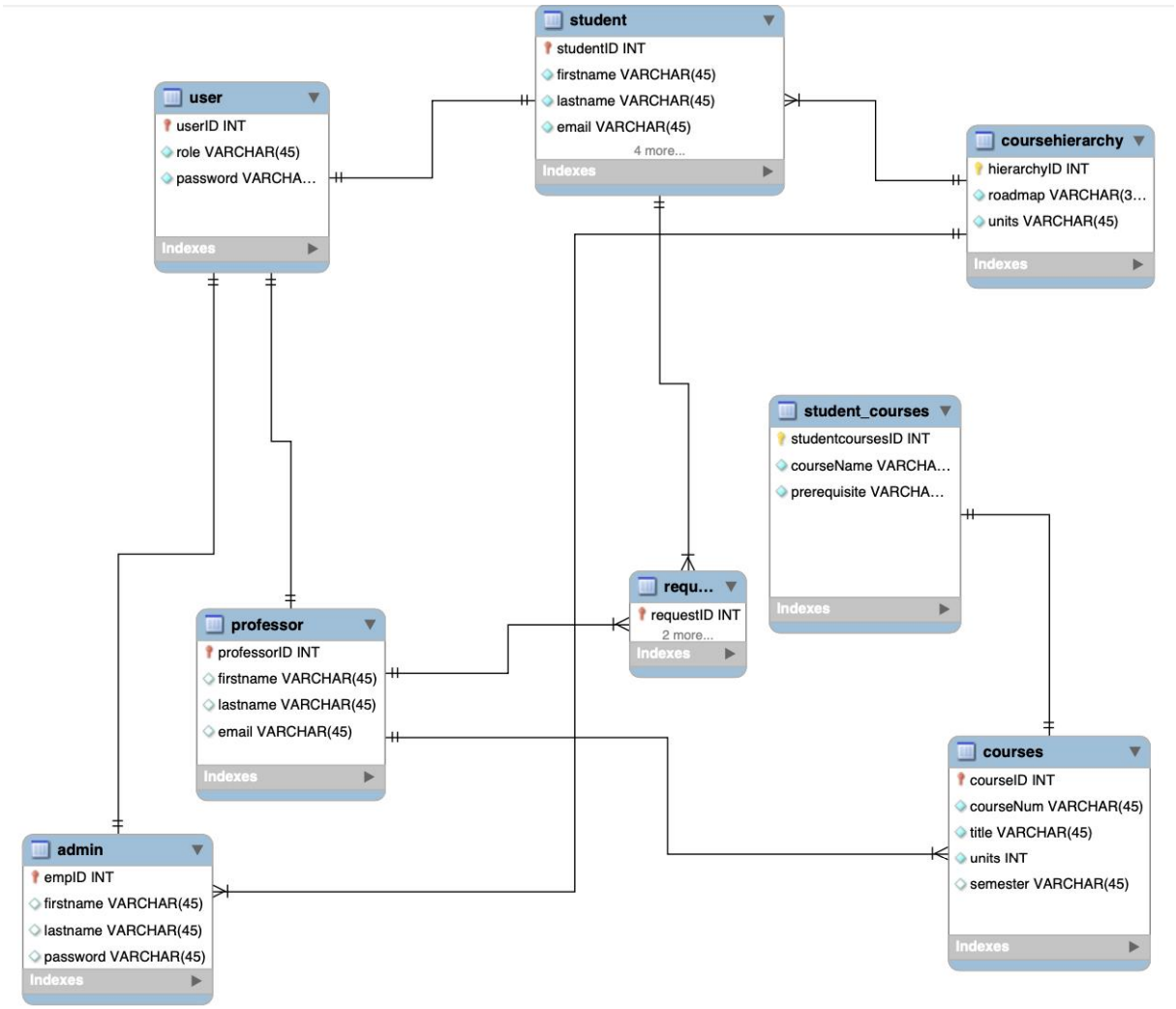

Email
Email
From:
To:
Subject
Compose email
Notifications
Notifications

High-level DB Architecture and Organization V2

Entity Relation Diagram



Enhanced Entity Relation (EER) Diagram



Entities and Attributes

Entity 1: courses
courseID, primary key.
courseNumber, varchar.
title, varchar.
Units, int.
Semester, varchar.

Entity 2: admin
empID, primary key.
First name, varchar.
Last name, varchar.
Password, varchar.

Entity 3: user
userID, primary key.
Role, varchar.
Password, varchar.

Entity 4: student
studentID, primary key, unique.
First name, varchar.
Last name, varchar.
Email, varchar.
Level, varchar.
Units completed, int.
Courses taken, varchar.
Grade, varchar.

Entity 5: professor
professorID, primary key, unique, and not null.
First name, varchar alphanumeric.
Last name, varchar alphanumeric.
Email, varchar alphanumeric.

Entity 6: student-courses
student_coursesID, primary key.

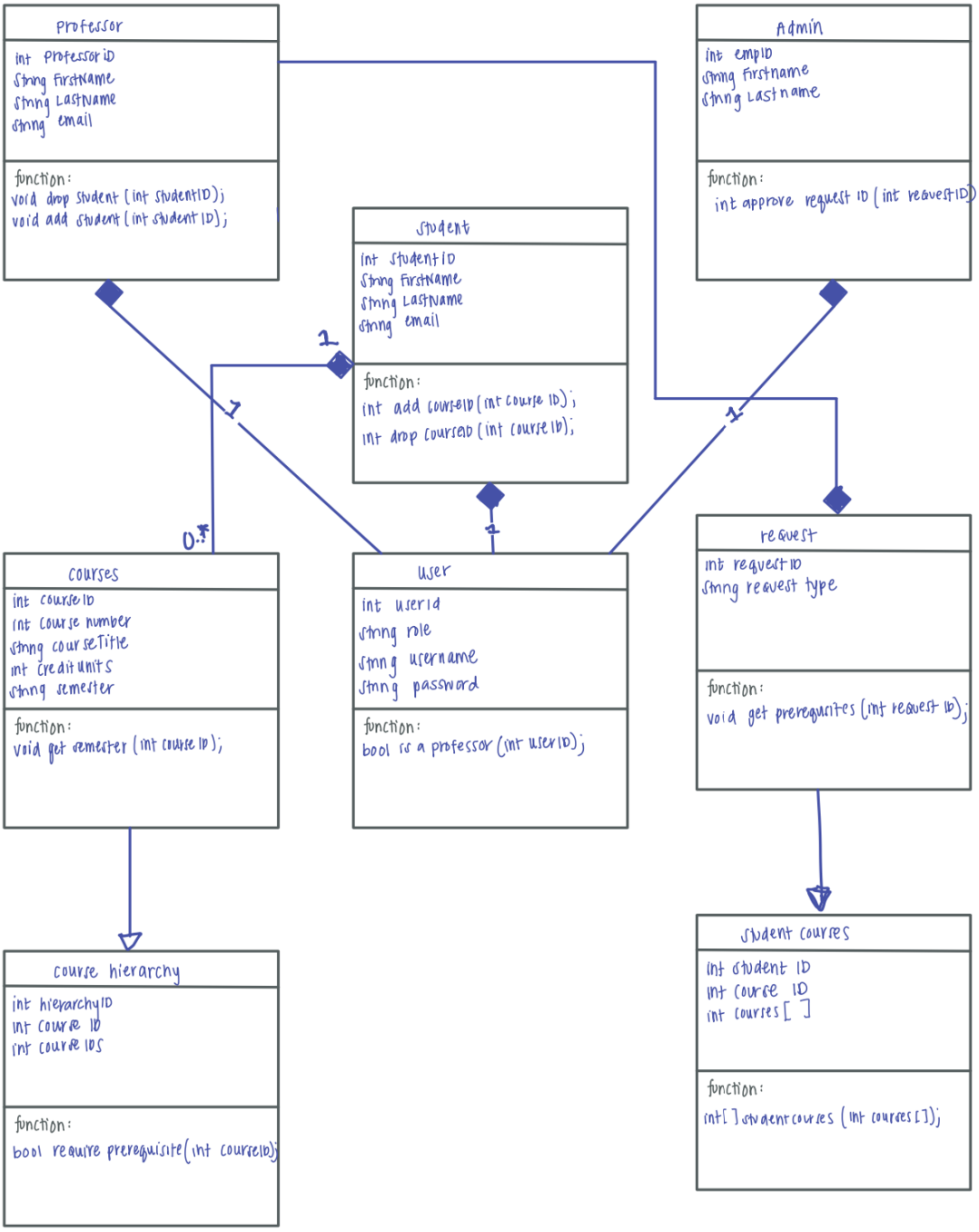
Course name, varchar.
Prerequisite, varchar.

Entity 7: request
requestID, primary key
type, varchar.
outcome, bool.

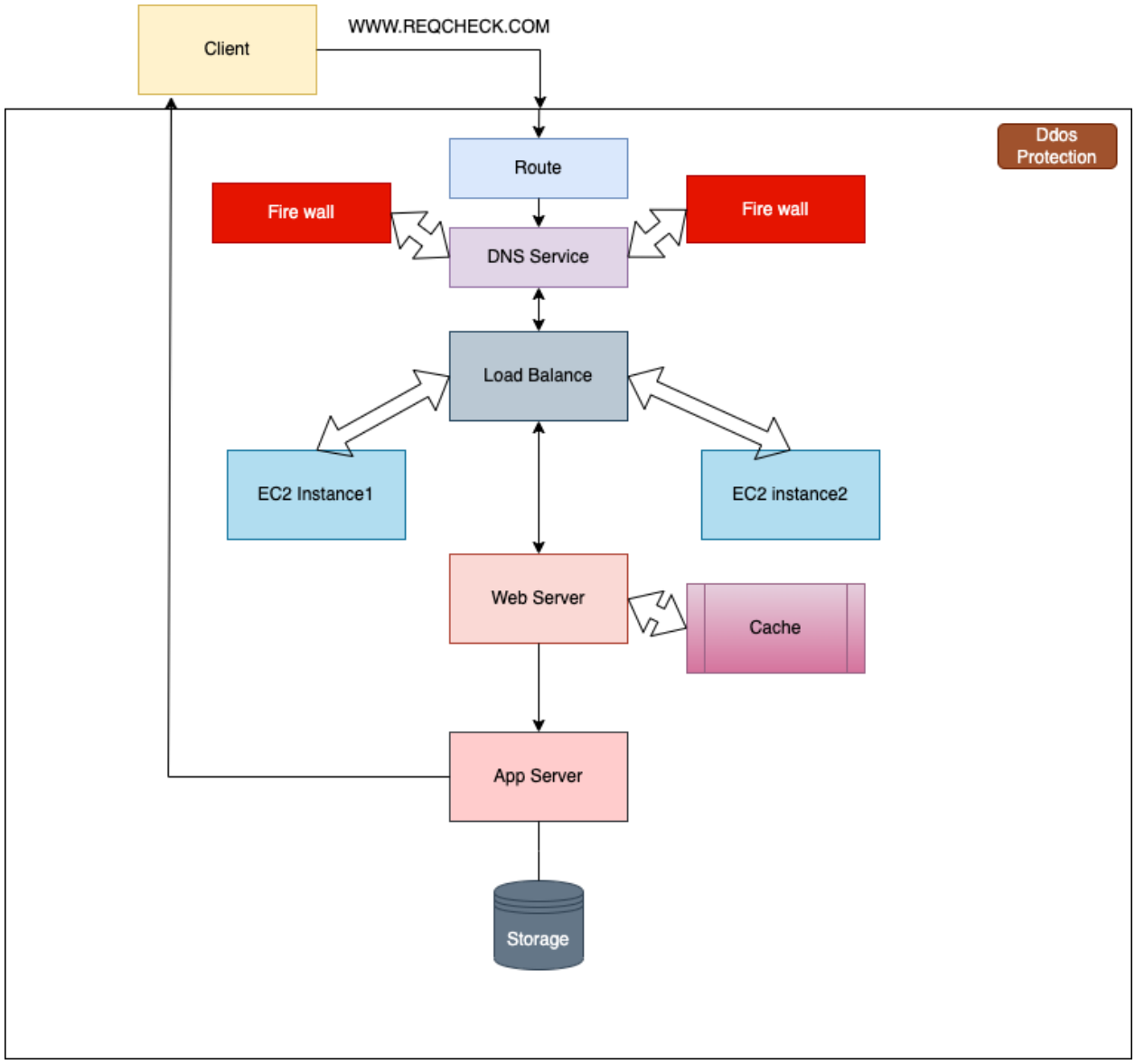
Entity 8: courseHierarchy
hierarchyID, primary key
Roadmap, varchar.
Units varchar.

We will use MySQL workbench to manage the backend/database search algorithm. The database already has tables with sample data to help users get recommendations for search when they click on the search bar. In addition, we will use %s and %i to retrieve data in the workbench to verify backend data. Furthermore, there will not be any media such as images or videos in the database hence we will not be using blob to avoid memory storage problems.

High Level Diagram V2



High Level Application Network & Deployment Diagram



List of Contributions

To be filled by team lead only:

Team Member Name	Role	Rating
Syed Faiz	Backend Lead	9/10
Victoria Wilson-Anumudu	Github Master	7/10
Eric Falk	Frontend Lead	10/10
Vivek Santoki	Frontend	6/10
Erik Rodriguez	Frontend	7/10

- Syed Faiz
  - Documentation
    - Task Assigned: 1,2, 4
  - Prototype
    - Maintain backend database, confirmation of insertion data from vertical prototype.
  - Rating: 9/10
    - Good communication, always giving feedback and can depend on to carry out task when assigned. Sometimes needs a reminder or two for some rework though.
- Victoria Wilson-Anumudu
  - Documentation
    - Task Assigned:1, 2, 5
  - Prototype
    - No coding, but had review m2v2 usecase's, and m3 Figma work is consistent with the horizontal prototype.
  - Rating: 7/10
    - Consistent work and can depend on doing assigned task. Though communication and participation needs to be improved going forward.
- Eric Falk
  - Documentation
    - Task Assigned: Task 3
  - Prototype
    - Maintain and coded the majority of Team 06 webapp; full deployment, and maintenance of the code as well as implementing task 03 Figma mockups.
  - Rating: 10/10

        - Great communication: consistent with schedule and timeline, always giving feedback, can depend on to carry out work. No criticism. Promoted to Frontend lead.
- Vivek Santoki
    - Documentation
        - Task Assigned: 5
    - Prototype
        - Implemented the vertical prototype coding with confirmation of backend insertion. No coding in horizontal prototype.
    - Rating: 6/10
        - Not consistent with a schedule, will always need to be reminded constantly to carry out assigned task, will not double check work to confirm objectives, uncertain if able to complete task if given. Uncertain in his role and responsibilities.
- Erik Rodriguez
    - Documentation
        - Task Assigned: 2, 3
    - Prototype
        - No coding done.
    - Rating: 7/10
        - Consistent with work and communication. No coding work on horizontal prototype. Collaborated with EricF on horizontal prototype due to coding experience. Will need to step up on coding next milestone.