ENSE 477 GroupProject #1
Team Name: **VSB_Plus**
Team Members: Xia Hua, Xinyu Liu, Jingkang Yang, Priscilla Chua
Due: **Jan 21, 2021**

Brief project blurb

The development of the Visual Schedule Builder into a better user-friendly design website, that will help the users to organize and plan out their time table wisely. By making the website an interactive course schedule builder, with the advising system of the courses to take, and the course detail visualization that can assist the students to layout the desired course schedule with nicer time arrangement. As well, to assist the advisor with their work, save up time on the unnecessary things and concentrate more on the important ones.

"Show ~~me~~ us what you got"

We are now still working on the coding for a better outcome of our Visual Schedule Builder Plus website interface(html, css, JavaScript, PHP and JSON with the machine learning). The designing and discussing on the Entity Relationship Diagram of how the website will interact with each other and the users. As well, we have started to build up some databases of the information that to be stored/used for our website.

Recall:

Project Charter		
Project Name	Visual Schedule Builder Plus(VSB_Plus)	
Business Case	For the creation of the Visual Schedule Builder to a better user-friendly design website(VSB_Plus), it will help the users to organize and plan out their time table wisely. In addition, it is also to benefit advisors with their work, less effort on the unnecessary work and more focus on the most important things.	
Team Members		
Name	**Role**	**Responsibilities**
Xia Hua	Code developer	- Build the web page frame - Draw the architecture diagrams - Write the web code - Manage github's kanban
Xinyu Liu	Scrum Master	- Organize team with milestones - Organize the project documentation - Set up meeting times - Collect team member's ideas
Jingkang Yang	Code developer	- Set up the AWS Web server - Web page design - Prototype design - Write the web code
Priscilla Chua	Business Analysis	- Documentation stuff - Organize the project's ideas and insight - Organize meeting notes

PROJECT REQUIREMENTS

Project Name	Visual Schedule Builder Plus (VSB_Plus)

Functional Requirements

Home Page:

- Students can choice to sign in to their account with
  - ✧ student name
  - ✧ student ID
- According to their name and SID to determine what faculty they are register in

Academic Page (3 views):

- Default linear term registration views
  - ✧ Plan out the courses list that the students require to take in different semester/term
  - ✧ Recommend the courses according to the faculty requirements
  - ✧ Visualize the different limitations of each course (the prerequisites, when it offers, or the credit hours requires)
  - ✧ Display the course that were completed
- Kanban-style
  - ✧ Separating three parts to show the courses (Already Done, Registered Now, Future will Take)
- Calendar view
  - ✧ Terms as the column, 1st row as course supposed to take, 2nd row as courses chosen to register.
  - ✧ Using the arrowed line to show relationship of courses
  - ✧ Able to drag and put the course in Taking selection
  - ✧ For the elective course, fetch the available elective courses from a file, and put the courses in the corresponding term.

Semester Schedule Page:

- Courses list that are available for the students to take in different semester/term
- Course details(will be link to Course Details Page)
- Building up of time schedule as the students have select a course
- Search bar to search for other course

Courses List Page:

- List out all the courses that are offers in U of R along with the filter button(classify in different category)
  - ✧ faculty
  - ✧ availability
  - ✧ elective classes
- Show up details for the selected course.

Technical/Performance Requirements

Technical requirements:

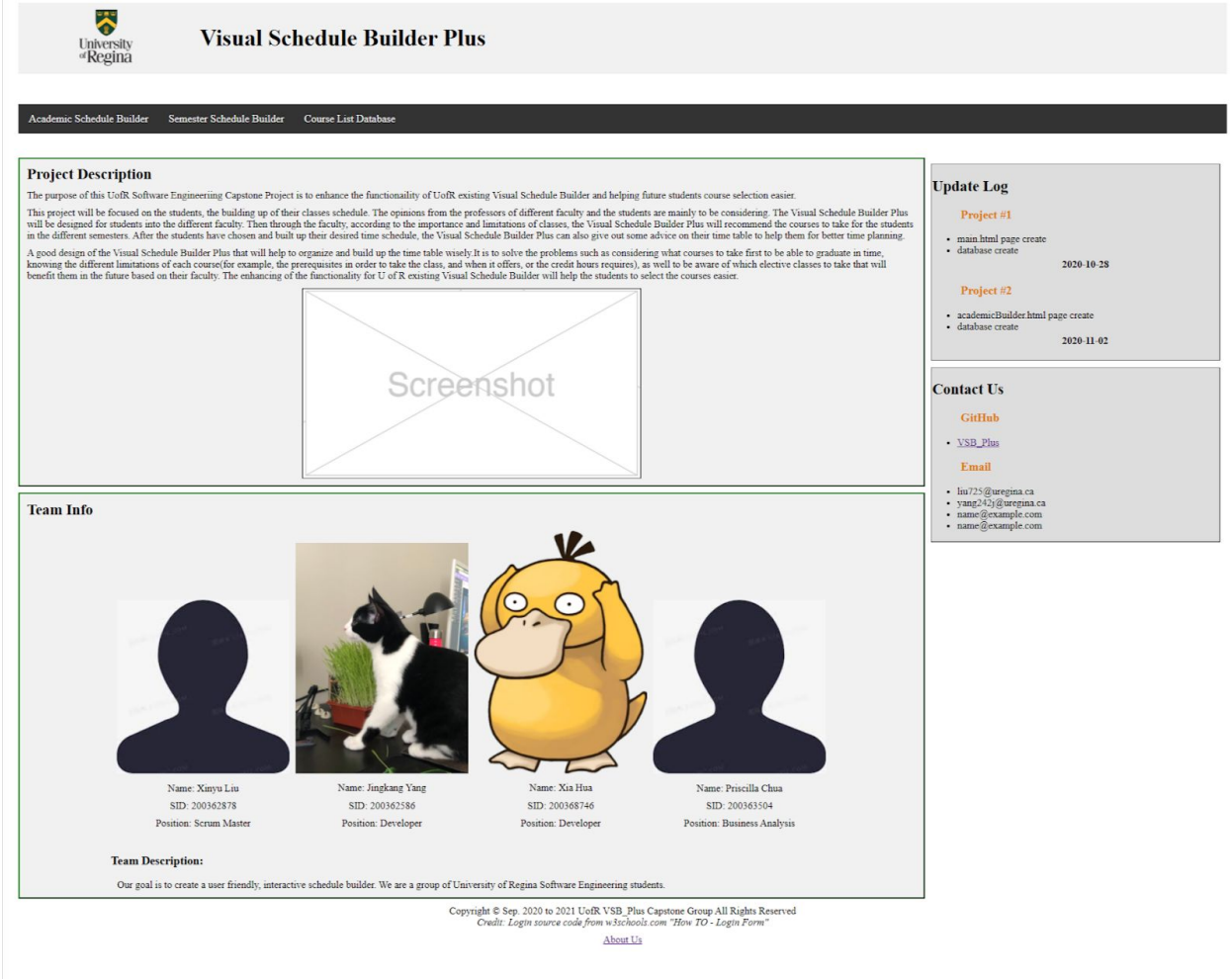
1. Run the back-end server
2. Using JSON to get the course information database
3. Create machine learning model to recommend the course

Performance requirements:

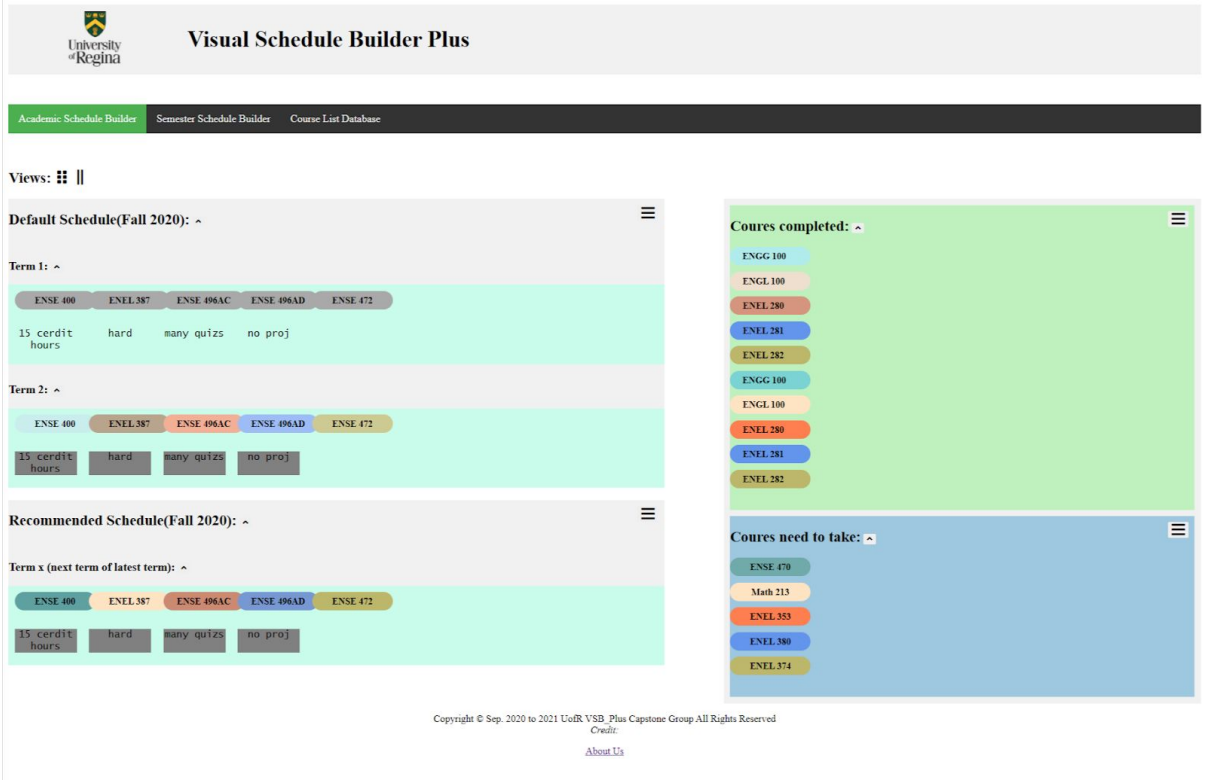
1. Show the course schedule for several semesters.
2. Show up the course details in multiple way
3. Visualize the limitation of course

Project demo (from lofi, to hifi, to coded MVP(s))

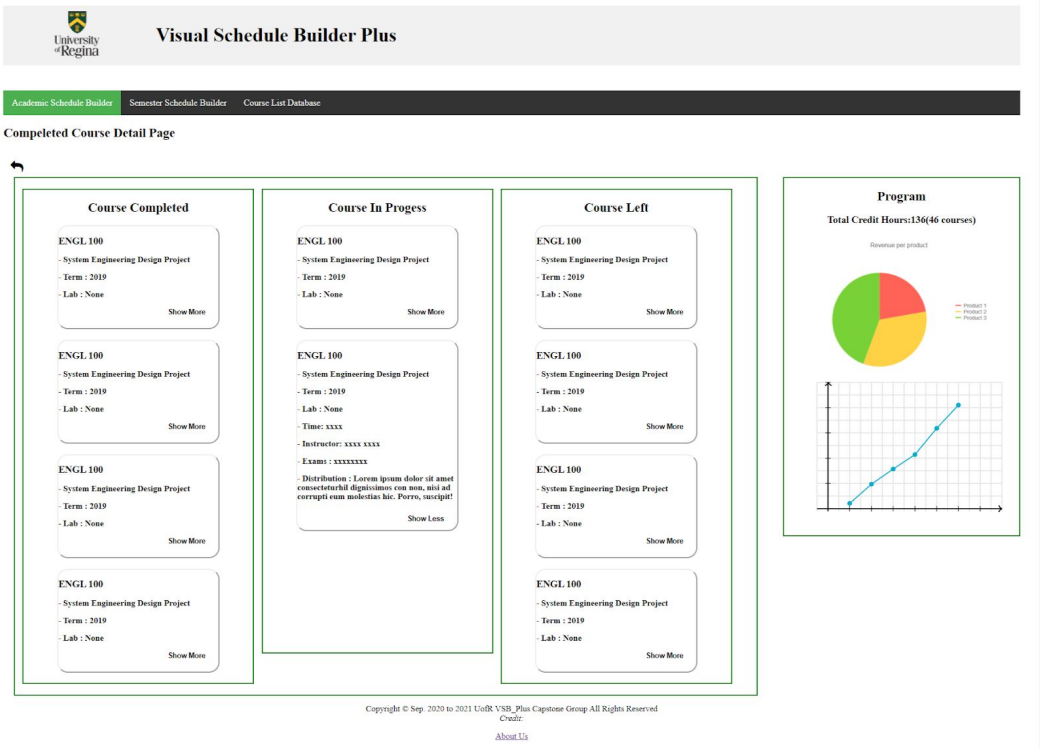
homePage.html



academicBuilder.html



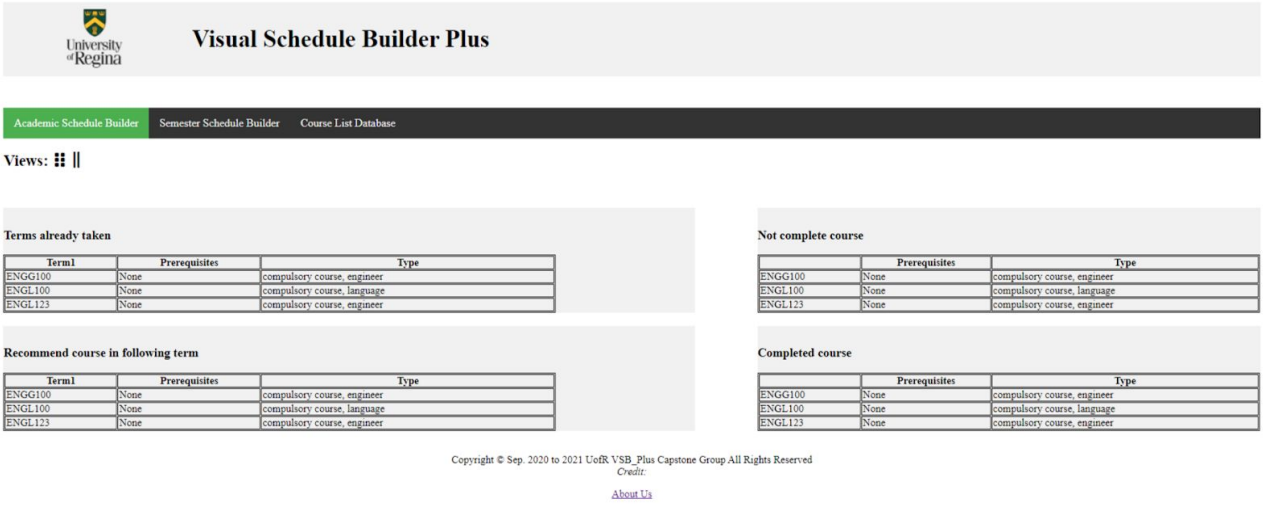
academicBuilderCDetail.html



academicBuilderNCDetail.html(unfinish, in process)

academicBuilderRecDetail.html(unfinish, in process)

academicBuilderTable.html



University of Regina

Visual Schedule Builder Plus

Academic Schedule Builder | Semester Schedule Builder | Course List Database

Views:

Terms already taken

Term1	Prerequisites	Type
ENGG100	None	compulsory course, engineer
ENGL100	None	compulsory course, language
ENGL123	None	compulsory course, engineer

Not complete course

	Prerequisites	Type
ENGG100	None	compulsory course, engineer
ENGL100	None	compulsory course, language
ENGL123	None	compulsory course, engineer

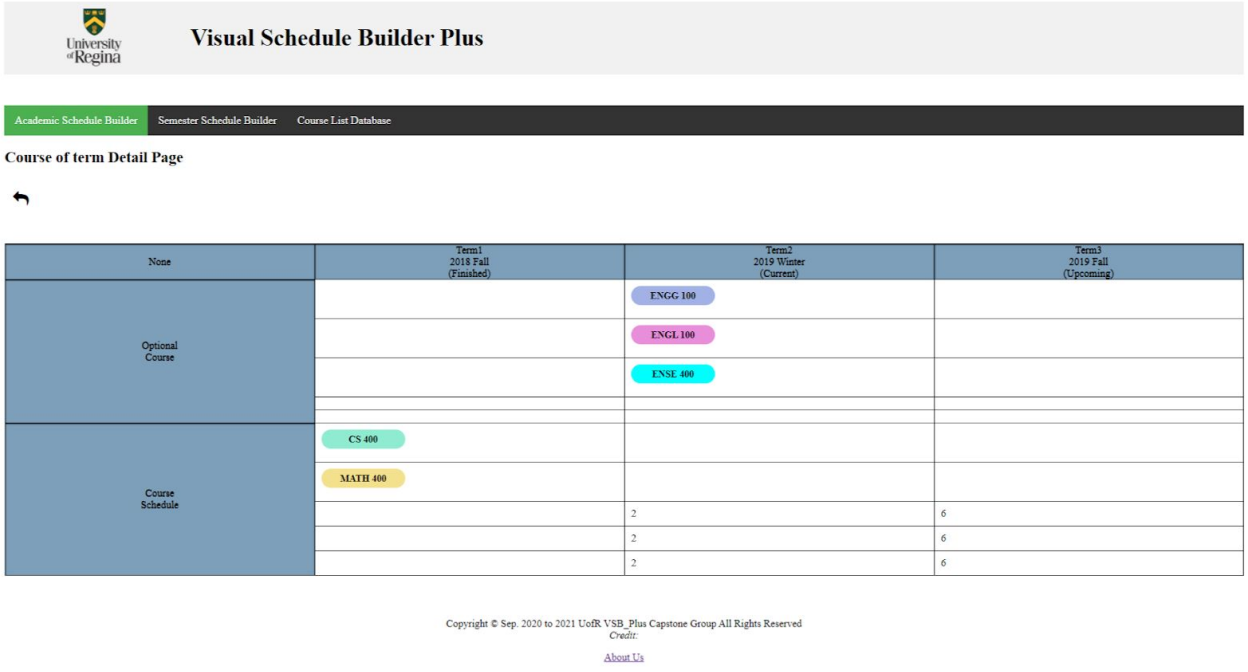
Recommend course in following term

Term1	Prerequisites	Type
ENGG100	None	compulsory course, engineer
ENGL100	None	compulsory course, language
ENGL123	None	compulsory course, engineer

Completed course

	Prerequisites	Type
ENGG100	None	compulsory course, engineer
ENGL100	None	compulsory course, language
ENGL123	None	compulsory course, engineer

academicBuilderTermDetail.html



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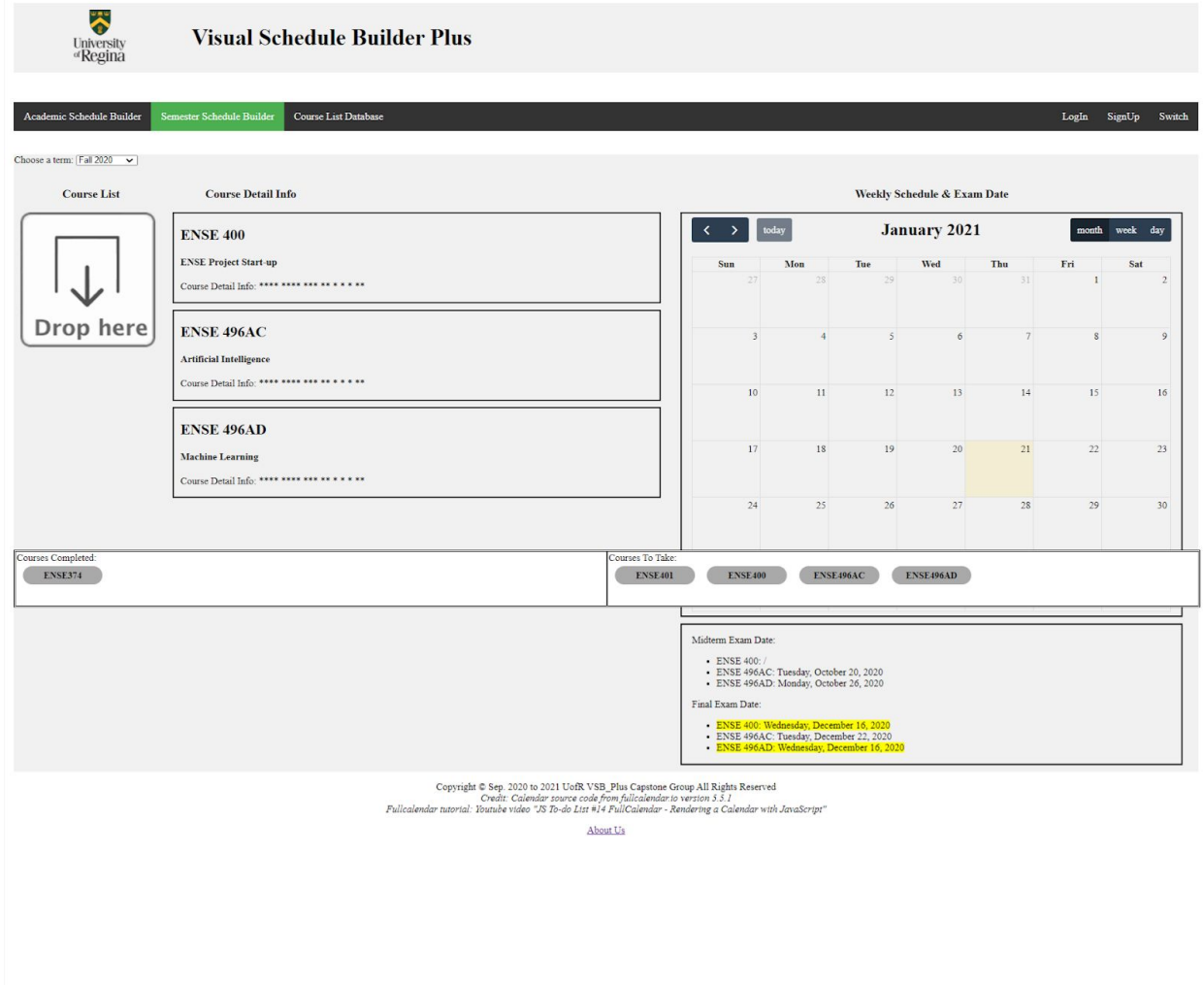
Visual Schedule Builder Plus

Academic Schedule Builder | Semester Schedule Builder | Course List Database

Course of term Detail Page

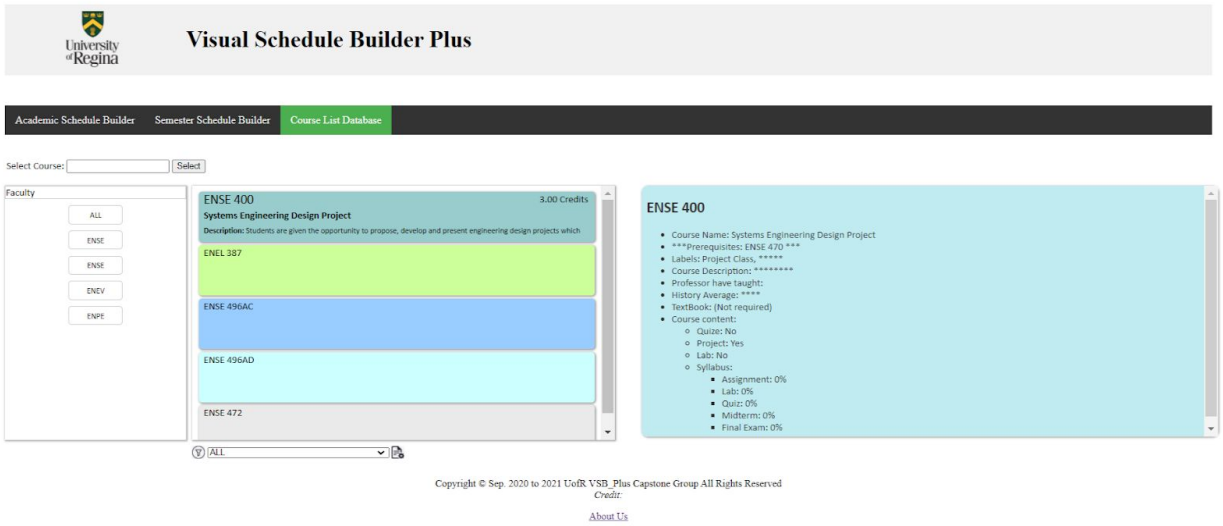
None	Term1 2018 Fall (Finished)	Term2 2019 Winter (Current)	Term3 2019 Fall (Upcoming)
Optional Course		ENGG 100	
		ENGL 100	
		ENSE 400	
Course Schedule	CS 400		
	MATH 400		
		2	6
		2	6
		2	6

semesterBuilder.html



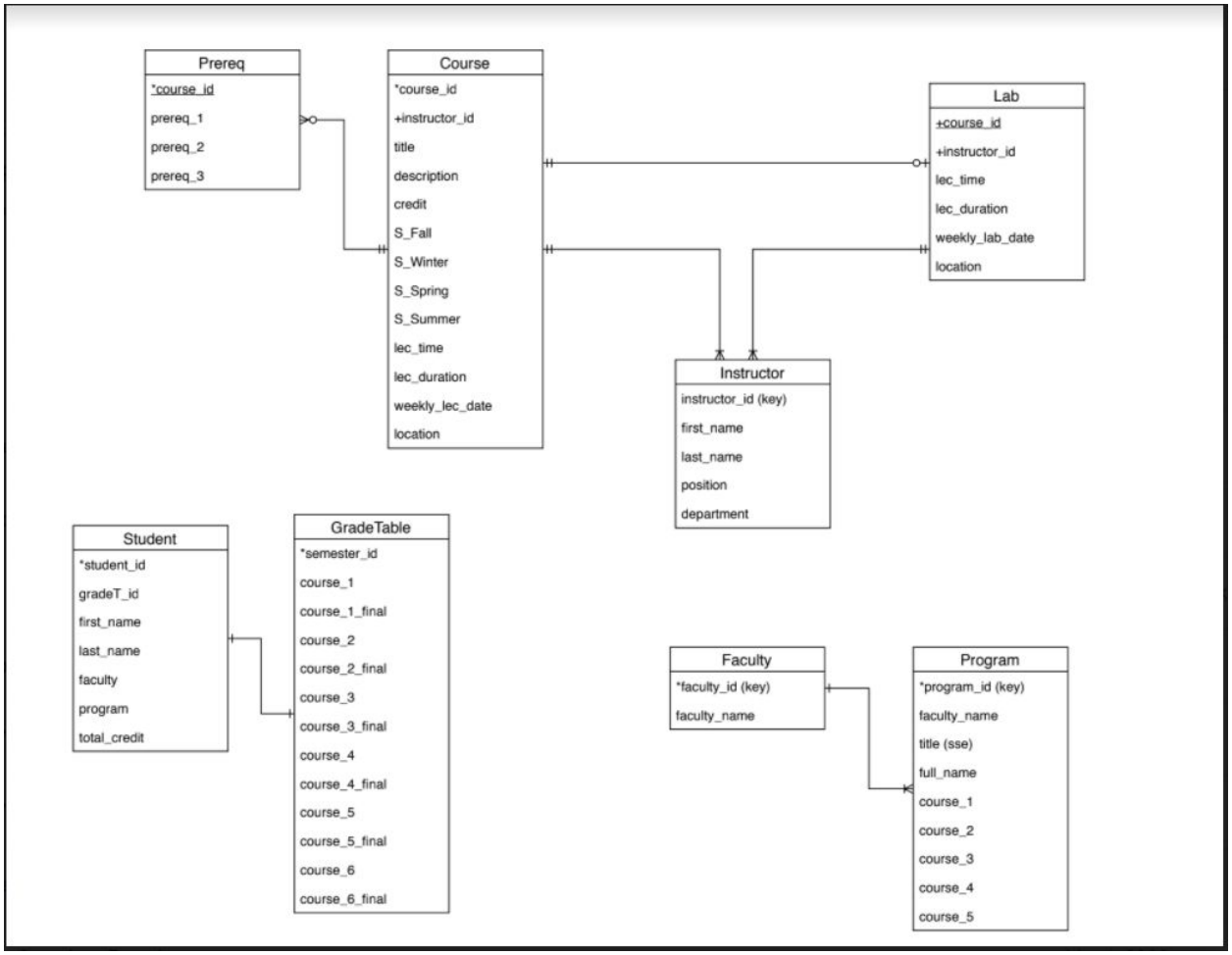
semesterLogin.html(unfinish, in process)

courseDB.html

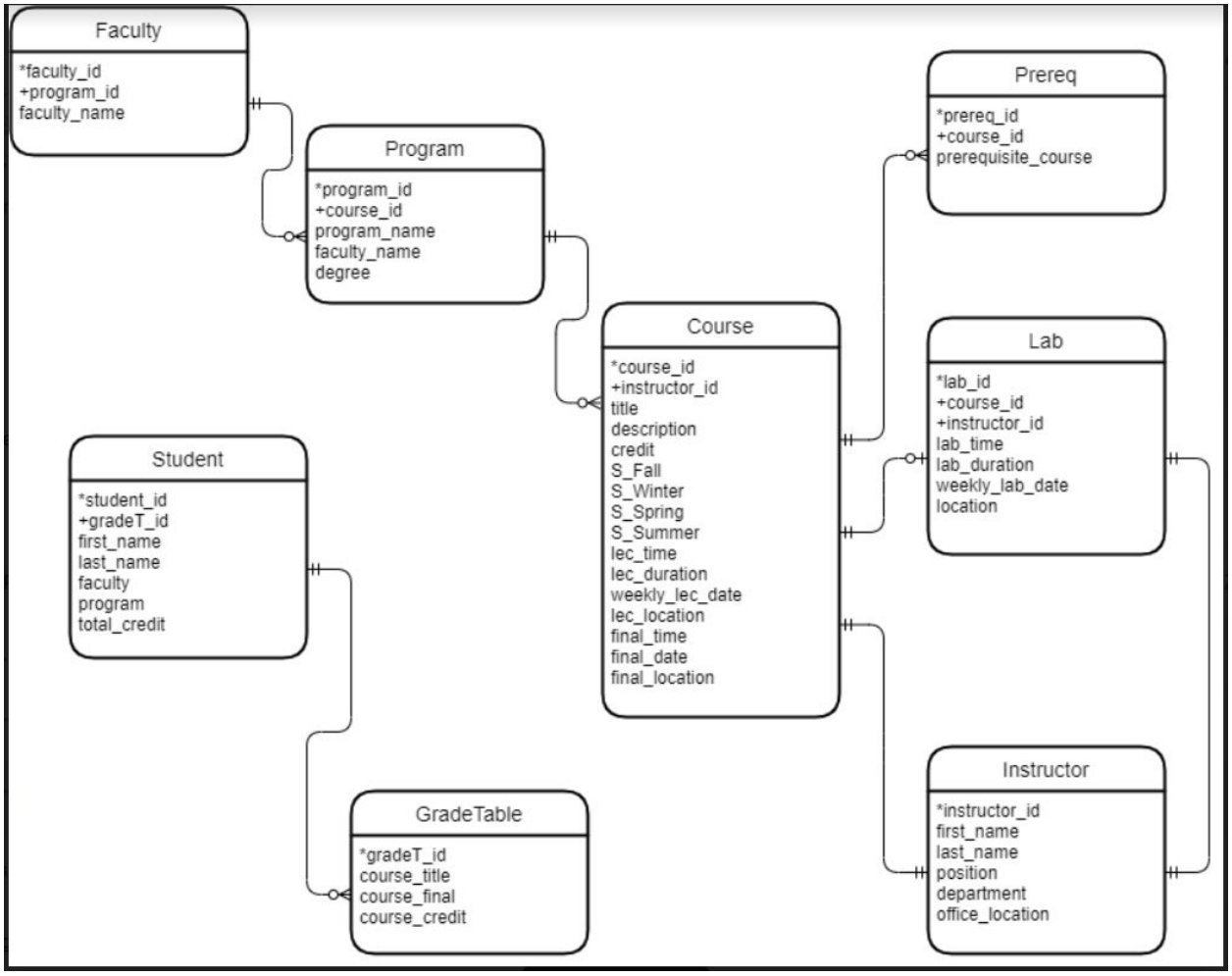


About Us

Discussion of the Entity Relationship Diagrams;
version1



version2


Faculty
*faculty_id
+program_id
faculty_name
Program
*program_id
+course_id
program_name
faculty_name
degree
Prereq
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+course_id
prerequisite_course
Course
*course_id
+instructor_id
title
description
credit
S_Fall
S_Winter
S_Spring
S_Summer
lec_time
lec_duration
weekly_lec_date
lec_location
final_time
final_date
final_location
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+course_id
+instructor_id
lab_time
lab_duration
weekly_lab_date
location
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+gradeT_id
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last_name
faculty
program
total_credit
GradeTable
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course_title
course_final
course_credit
Instructor
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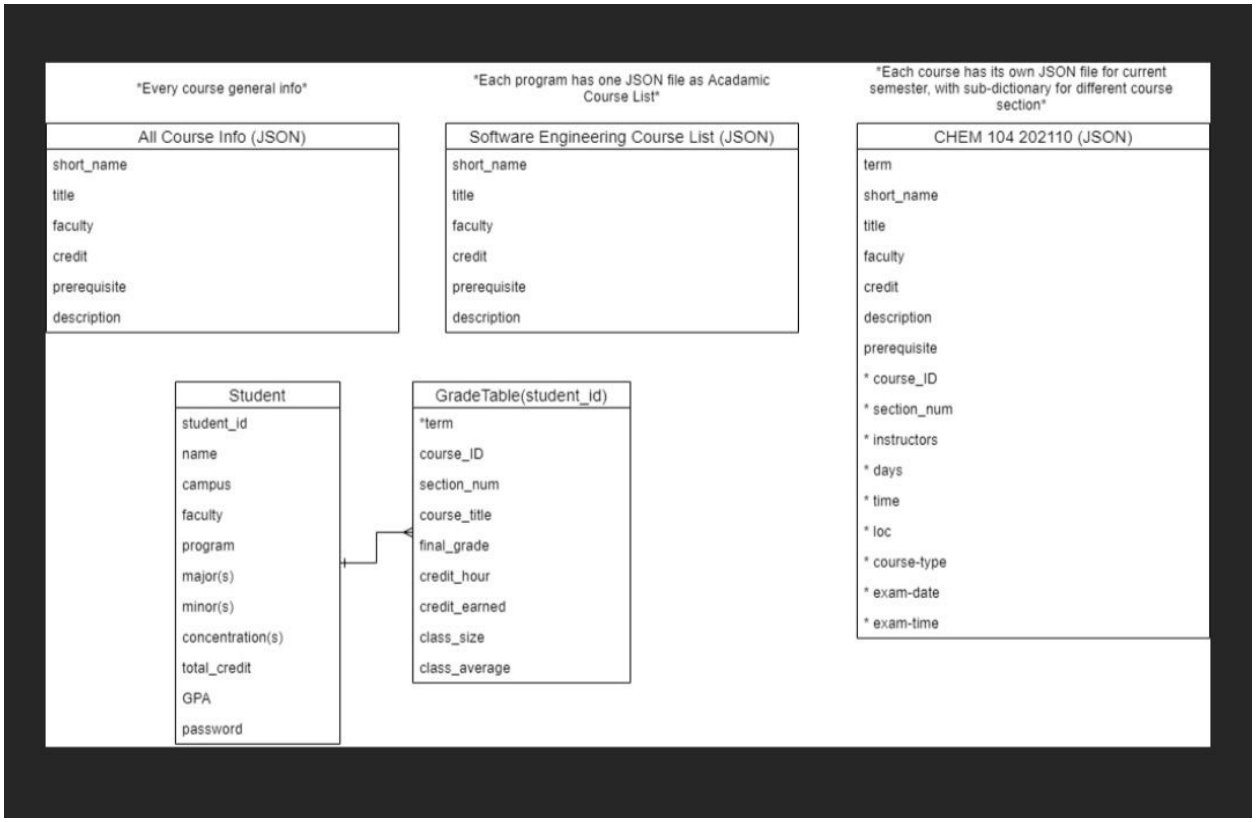
first_name
last_name
position
department
office_location

version3



courses information of database

hort_nam	title	faculty	ourse_nur	credit	rerequisit	description
CHEM 104	General Cl	CHEM	104	3	CHEM 30 (	An introduction to the fundamental principles of chemistry. Topics discussed will include atomic structure, bonding, stoichiometry, enthalpy, solutions, organic compounds. L
ENGG 123	Engineerin	ENGG	123	3		Students will be introduced to the concepts of engineering design and communications. In addition, the consequences of engineering projects on society will be explored.
ENGG 140	Mechanics	ENGG	140	3	MATH 110	Introduction to engineering mechanics including: force vectors , statics of particles and rigid bodies, centroids, mass centres, construction of free-body diagrams, analysis of s
ENGG 100	Engineerin	ENGG	100	3		Fundamentals of graphical communication and analysis. Manual and computer-aided sketching and drawing techniques; orthographic and pictorial projections; multi-view, is
ENGG 303	Engineerin	ENGG	303	3	STAT 160 (	Fundamentals of engineering economics and project financials.Social and environmental design making, time value of money, cash flows, interest, equivalence, cost estimatic
ENGG 401	Engineerin	ENGG	401	3	One of EN	Canadian law and professional engineering legislation topics include: environmental law, tort liability, contracts, tenders, corporations partnerships, patents, industrial design
ENGG 411	Safety Syst	ENGG	411	3	STAT 160 (	Professional engineering responsibility towards safety includes introduction to health and safety programs; workplace incident assessments; risk hazard identification (from v
MATH 110	Calculus I	MATH	110	3	Precalculu	An introductory class in the theory and techniques of differentiation and integration of algebraic and trigonometric functions. Topics include limits, optimization, curve sketch
MATH 122	Linear Alg	MATH	122	3	Precalculu	A course intended to introduce students to elementary linear algebra, particularly at a computational and applied level. Topics include matrices and systems of equations, inv
MATH 111	Calculus II	MATH	111	3	MATH 110	Differentiation and integration of exponential and logarithmic functions; methods of integration and applications; indeterminate forms, L'Hospital's rule and improper integra
MATH 217	Differentia	MATH	217	3	MATH 111	Ordinary differential equations, modelling with differential equations, Laplace transforms.
MATH 213	Vector Cal	MATH	213	3	MATH 111	A study of vector functions and functions of several variables and their derivatives; Applied maximum and minimum problems, Lagrange multipliers, multiple integration, integ
CS 110	Programm	CS	110	3	Precalculu	An introduction to problem-solving techniques, the fundamental concepts of programming, and the software design process. Topics will include: data types, control structure
CS 115	Object-Ori	CS	115	3	CS 110 wit	This course focuses on the concepts of object-oriented programming. Topics include data abstraction, classes, composition and inheritance, subtyping, dynamic binding, poly
CS 210	Data Struc	CS	210	3	CS 115 an	This course introduces data abstraction, data structures and their implementations, the basics of algorithmic analysis, and the fundamental computing algorithms. Topics incl
CS 335	Computer	CS	335	3	CS 210, an	Network architectures and protocols, networked applications, reliable data delivery, routing and forwarding, local area networks, resource allocation, mobility, reliability thr
CS 340	Advanced	CS	340	3	CS 210	Fundamental algorithms: depth- and breadth-first traversals, pattern matching, and graph algorithms. Algorithmic strategies: brute-force, greedy, divide-and-conquer, backtra
CS 350	Programm	CS	350	3	CS 210	Programming language genealogy and design. Imperative, functional, and object-oriented language paradigms. Context-free grammars and syntax trees. Data types, control s
CS 372	Software E	CS	372	3	CS 215	Fundamental principles of designing programs and developing large software systems that meet specifications and that are safe, secure, reliable and maintainable. Software
CS 375	Database i	CS	375	3	CS 215	Information management: concepts and applications. Motivation for database systems. Components of database systems. Data modeling: conceptual, spreadsheet, relation
ENGL 100	Critical Re	ENGL	100	3		This course develops students' proficiency in critical reading and writing through the study of a wide range of non-literary and literary texts, and the study of composition, wit
PHYS 119	General Ph	PHYS	119	3	PHYS 109 (	A continuation of PHYS 109: Fluid mechanics, heat and thermodynamics, waves, sound, radiation, electrostatics and electric current.
PHYS 201	Electricity	PHYS	201	3	MATH 213	An introduction to electricity and magnetism for science and engineering students, covering the topics of electrostatics, D.C. circuits, magnetism, and electromagnetic inducti
ENEL 280	Electrical (	ENEL	280	3	Math 111	DC circuits, Kirchoff's voltage and current laws, equivalent circuits, introduction to mesh and nodal methods, superposition, maximum power transfer, capacitors,inductors, tr
ENEL 281	Signals, Cir	ENEL	281	3	MATH 217	The introductory aspects of signals, circuits and systems including: AC circuit analysis,frequency response, resonance, passive and active filters, second order transient analysi
ENEL 282	Semicondu	ENEL	282	3	ENEL 280	Semiconductor materials and conduction principles. The characteristics of common semiconductor devices, including: PN junction diodes, bipolar and field effect transistors,
ENEL 383	Analog Sys	ENEL	383	3	ENEL 282	Application of electronic components and systems. Topics include load control through active components, operational amplifier applications in amplifier, decision making a
ENEL 384	Digital Ele	ENEL	384	3	ENEL 282	The introductory aspects of digital electronic circuits, including basic principles of digital systems, logic function and gates, boolean algebra and combinational logic,introducti
ENEL 380	Automatic	ENEL	380	3	ENIN 233 (	Programmable logic controllers, ladder logic, latches, timers, counters, flow control, and data handling instructions, sensors and actuators, state based design. Open & closed

Sheet1

Next up

To continue finishing up all the coding work including css, JavaScript, and JSON, as well to beautify the website interface. Then, to organize all the documents in the github.