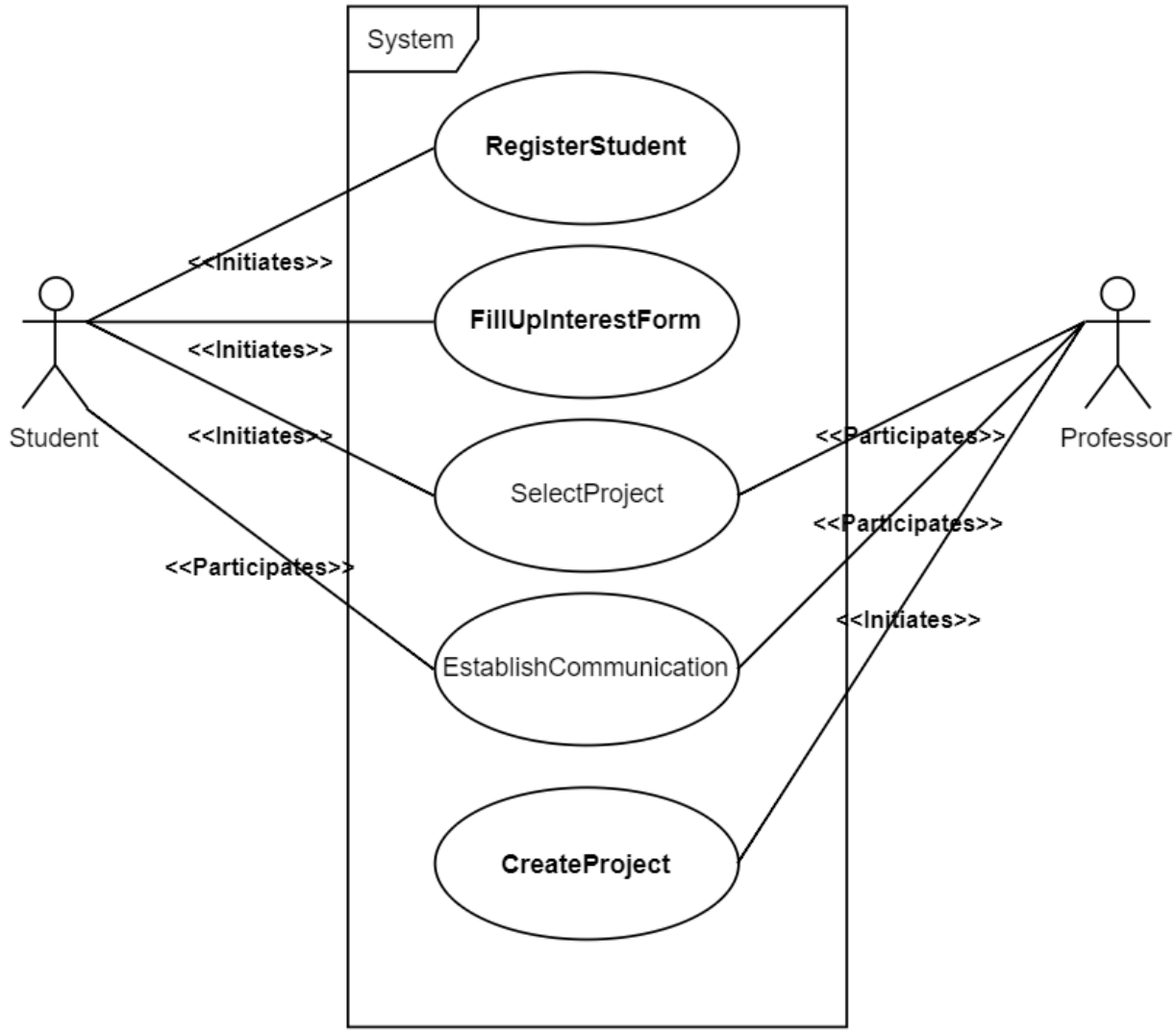
Assignment 1: Computer Science 6905

Tian Wang
Lucas Critch
Carlos Salcedo
Ruben Chevez

VISION

GRADREC (Graduate Recruitment) is a web-based system that enables faculty members to advertise Master/PhD positions, provide information about their research projects and the availability of financial aid. Our goal is to become a world leader at connecting high skilled researchers with available working positions.

USECASES-DIAGRAM: The main use cases have been highlighted in bold.



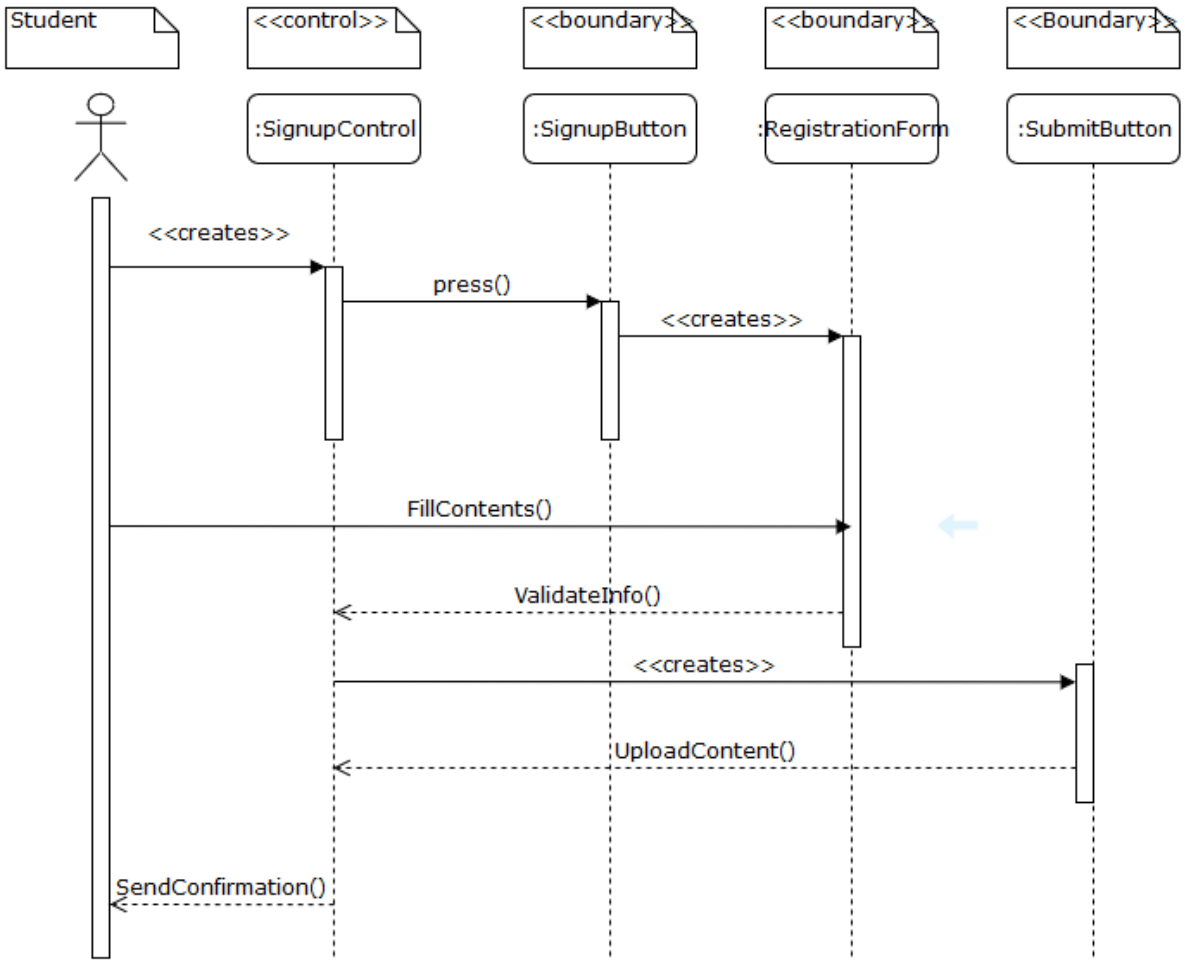
USECASE_REGISER_STUDENT

Use Case:	*RegisterStudent*
Participating Actors:	*Student*
Entry Conditions:	*Student* enters the university's website and decides to enroll in a Program
Flow of Events	1. The S*tudent* selects the sign-up option in the University's website. 2. The system displays a form to the S*tudent.* The system asks for personal / registration information. 3. The *Student* fills out the Registration_Form and presses the submit option. 4. The system adds stores the student's registration information. 5. The system sends an email confirmation 6. The student will receive and confirm the email
Exit Conditions	● Student Registers Successfully ● Student will now be able to sign in.
Quality requirements	● Student sign-ups before a Deadline ● Email is not already used

REGISTER_STUDENT_OBJECTS

ENTITY OBJECTS	
Student	The potential candidate student to participate in the MSc or PhD program
Registration_Information	The student's registration information, which is filled out in the registration form.
List_of_Students	List of potential applicants to the university's Programs
BOUNDARY OBJECTS	
SignUpButton	Button which allows the user to begin the sign up process
SignUpForm	A form with the student's relevant contact and personal information, such as: date of birth, full name, nationality, gender, address, email, phone number, and dependants.
SubmitButton	Button which allows the user to upload the RegistrationForm to the system after the form has been filled out.
CONTROL OBJECTS	
SignUpControl	Creates the registration form, enables the user to fill out his/her information, validates that the mandatory information requirements are filled, and confirms the successful storage of the student's information.

REGISTER_STUDENT_SEQUENCE_DIAGRAM



USECASE-FILL_UP_INTEREST_FORM

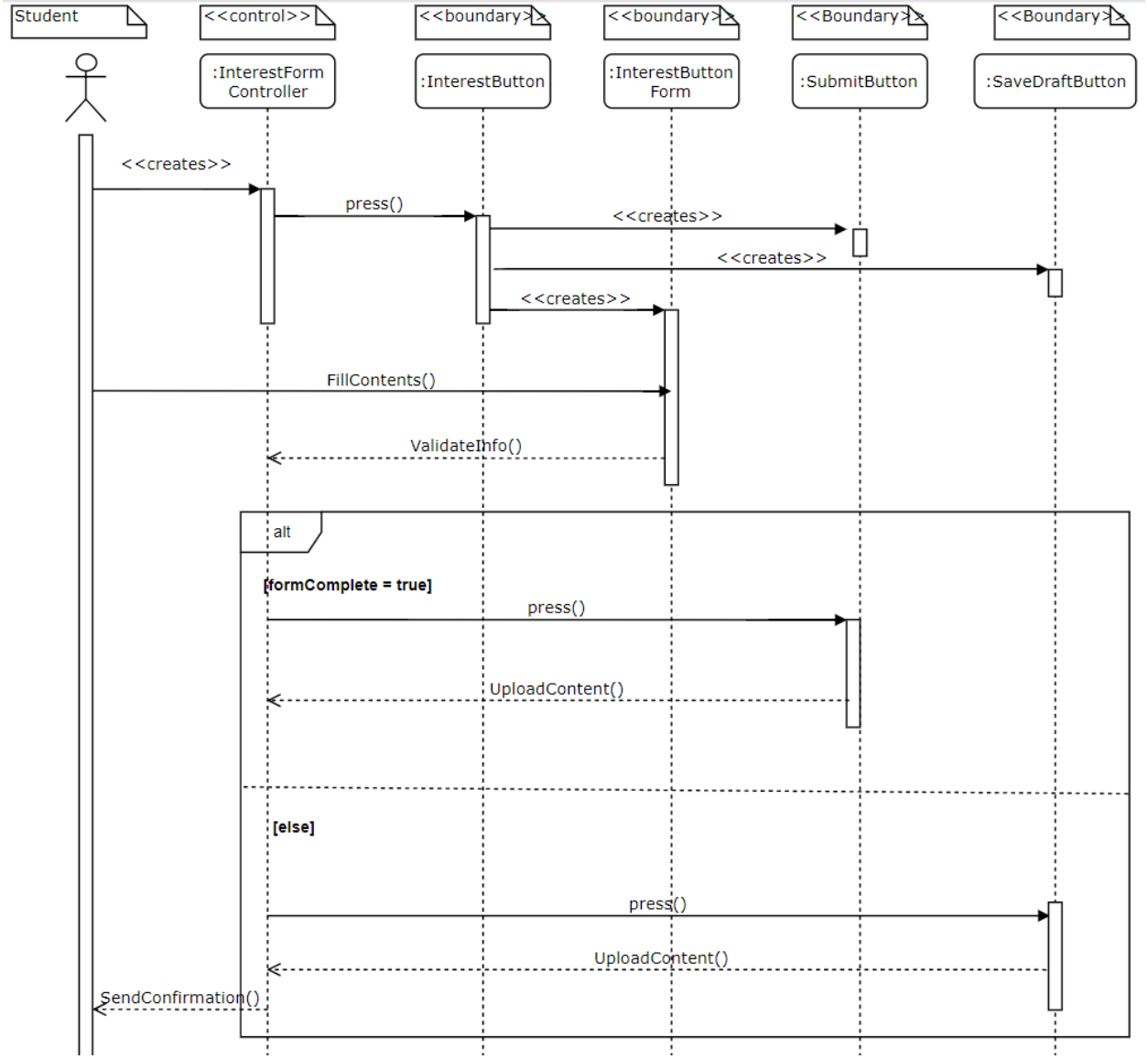
Use Case:	*FillUpInterestForm*
Participating Actors:	*Student*
Entry Conditions:	● *Student* is signed in the GradRec Website ● Student has not completed and submitted the InterestForm
Flow of Events	1. Student selects the fill InterestForm option. 2. The systems displays the Student's Personal InterestForm, the SaveDraftButton and the SubmitButton. The InterstForm would be empty if it is the first the Student is accessing this option, otherwise, the form would include the information from a previous draft. 3. Student begins to fill out the interest form. Interest form includes the program the student wishes to enter to, academic strengths, and research areas of interest, among other questions. 4. If the student is done with the form, the student presses the submit button 5. The system stores the Students information 6. The system sends a confirmation notice to the student indicating that the information has been saved. 7. If the student wishes to continue at a later time, he/she presses the SaveDraftButton 8. The system stores the current information in the Student's Personal InterestForm as a draft for the Student to revisit next time he selects the Fill InterestForm option. 9. The system sends a confirmation notice to the student indicating that the information has been saved as a draft.
Exit Conditions	● The *Student*'s InterestForm is successfully saved and submitted ● OR The student's InterestForm is saved as a draft for later review
Quality requirements	● The submit button will only work if enough information has been filled out, notifying the user of any fields that still need to be completed.

FILL_UP_INTEREST_FORM_OBJECTS

ENTITY OBJECTS	
Student	The potential candidate student to participate in the MSc or PhD program
Educational_Information	The student's registration information, which is filled out in the registration form.
BOUNDARY OBJECTS	
FillInterestForm_Button	Button which allows the user to fill up his interest form.
Interest_Form	A form with the students relevant educational information, such as: educational background(University Diplomas or highest degree obtained), resume, *research interests*, *skills*, published papers, projects, self-evaluation, character keywords.

SubmitButton	Button which allows the user to upload the Registration_Form to the system.
SaveDraftButton	Button which allows the Student to save his Registration as a draft..
CONTROL OBJECTS	
InterestFormControl	Creates the Interest form, enables the user to fill out his/her information, validates that the mandatory information requirements are filled, and stores the student's information.

FILL_UP_INTEREST_SEQUENCE_DIAGRAM



USECASE-CREATE_NEW_PROJECT

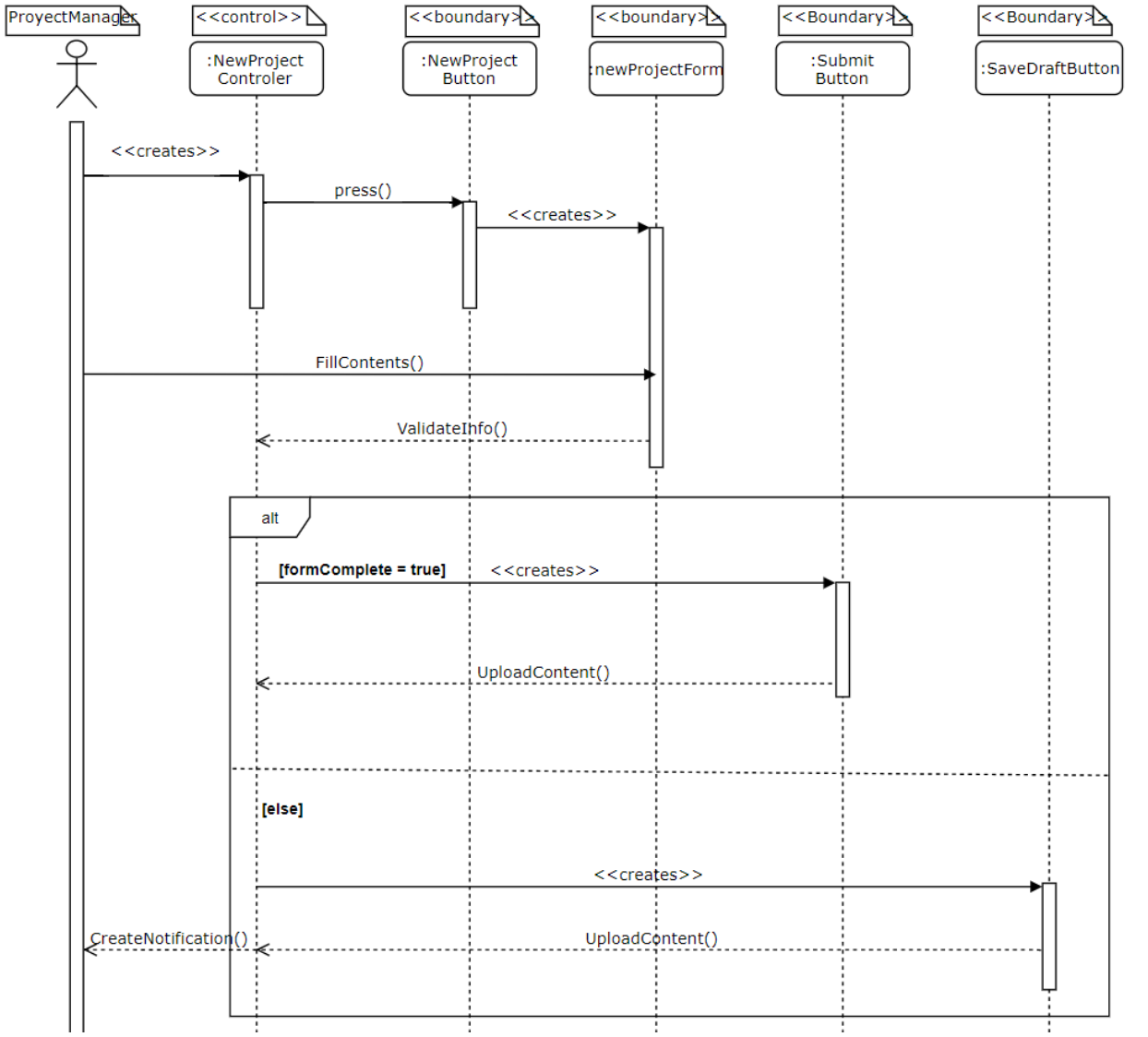
Use Case:	*CreateNewProject*
Participating Actors:	*ProjectManager*
Entry Conditions:	*ProjectManager* is logged into the University's Website
Flow of Events	1. The *ProjectManager* selects the CreateNewProject option. 2. The system displays a Form. The Form asks for a title, abstract, MSc or PhD, Field of Study (Computer Science, Chemistry, Biology, Etc.), Specific area of Study (biomechanics, machine learning, Genes, etc.), Invited Coworkers and a few characteristics that a student should have to enter this project. 3. The *ProjectManager* begins to fill out the Form. 4. If the primary fields (ProjectManager, Title, PhD or MSc, and ProjectDescription) are filled out the system displays the option to store the current project as a draft or as a new project. 5. If the ProjectManager selects the save draft option 6. The system stores the current project's information in a temporary location as a draft for the ProjectManager to revisit at a later time. 7. If the ProjectManager selects the submit project option 8. The system stores the project's information. 9. The system provides the project manager with a confirmation that the project has been created.
Exit Conditions	● The list of projects is successfully updated with the *ProjectManager's* new project
Quality requirements	● Certain fields in the application must be mandatory ● A *ProjectManager* can only have a certain amount of Projects at a time

CREATE_NEW_PROJECT_OBJECTS

ENTITY OBJECTS	
ProjectManager	The person in charge of creating the new project
Project_Information	The project's basic information, which can be stored temporarily as a draft, or can be saved to the system as a new project.
BOUNDARY OBJECTS	
NewProject_Button	Button which allows to the professor to begin the creation of a new project
NewProjectForm	A form with the new projects relevant information, such as: degree(PhD or MSc), field(biology, chemistry, Computer science, etc.), title, abstract, collaborators, financial aid available, prospective students(skills, such as Java, Lab experience, etc.), start date, projected end date, final product, etc.
SubmitButton	Button which allows the user to store the NewProjectForm in the system after a minimum number of fields from the NewProjectForm have been

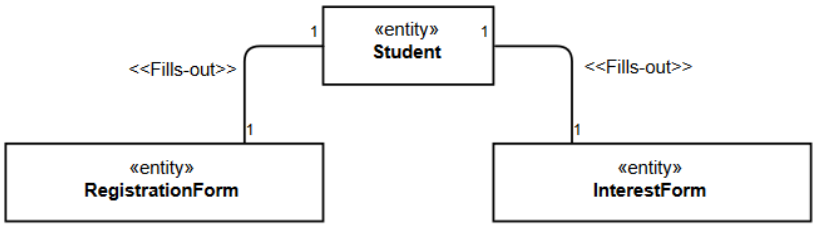
	filled out.
DraftButton	Button which allows the user to store the NewProjectForm in the system in a temporary location after a minimum number of fields from the NewProjectForm have been filled out.
CONTROL OBJECTS	
ProjectCreationControl	Creates the NewProjectForm, enables the user to fill out the project's information, validates that the mandatory information requirements are filled, and confirms the successful storage of information.

CREATE_NEW_PROJECT_SEQUENCE_DIAGRAM

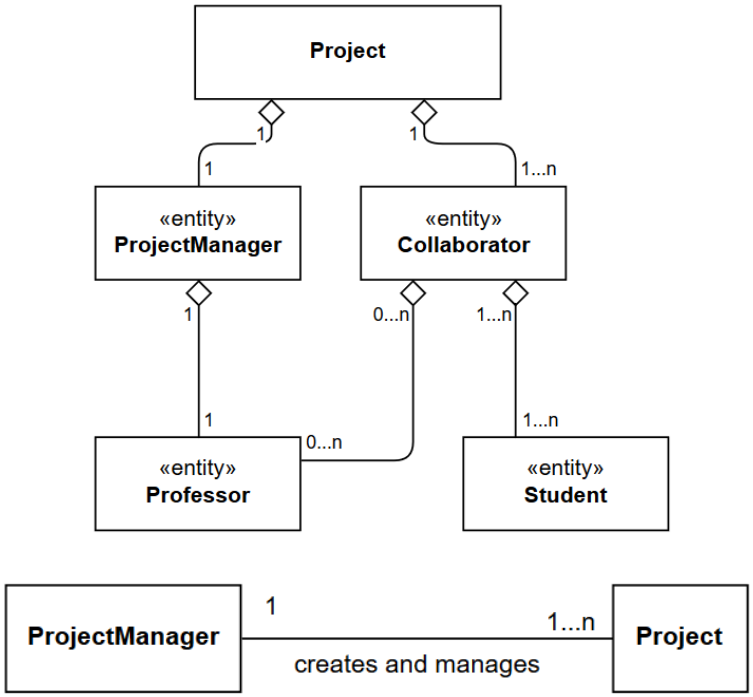


OBJECT DOMAIN MODELLING -- GENERAL ASPECTS

All students will have a one to one relationships with their registration form and their interest form, as this forms can only be submitted once. There is a possibility to save the Interest Form temporarily as a draft, but for the purpose of matching students to projects later on during development, the system will only take into account submitted InterestForms. The following diagram displays the relationship between the Student and the forms.



The primary actors participating in the system will be Students and Professors. However, each user will have different roles in the creation and participation of the Projects. Only professors will be able to create and manage projects as Project Managers, while Students will only be able to participate as collaborators in the Project.



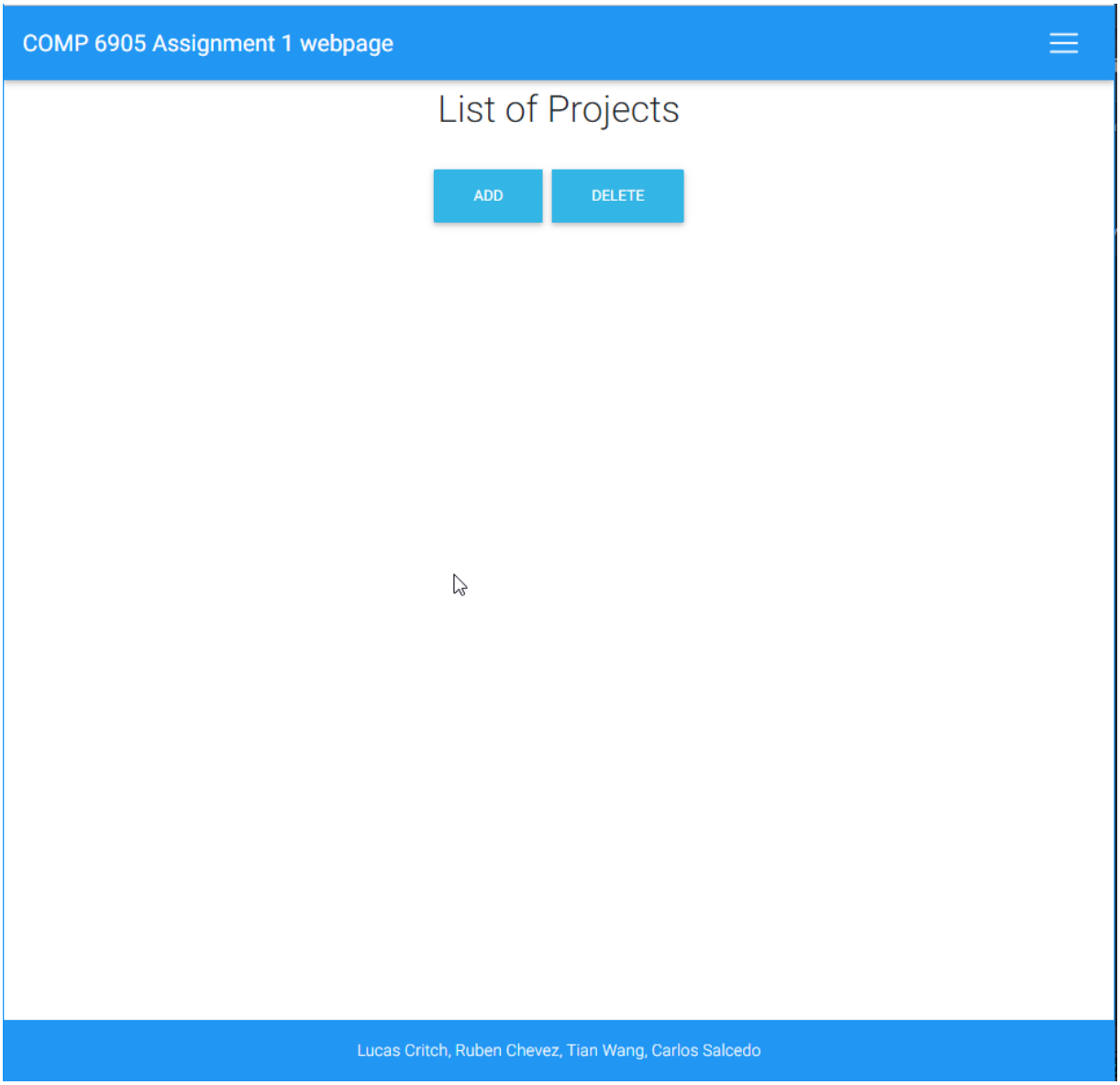
DEMO

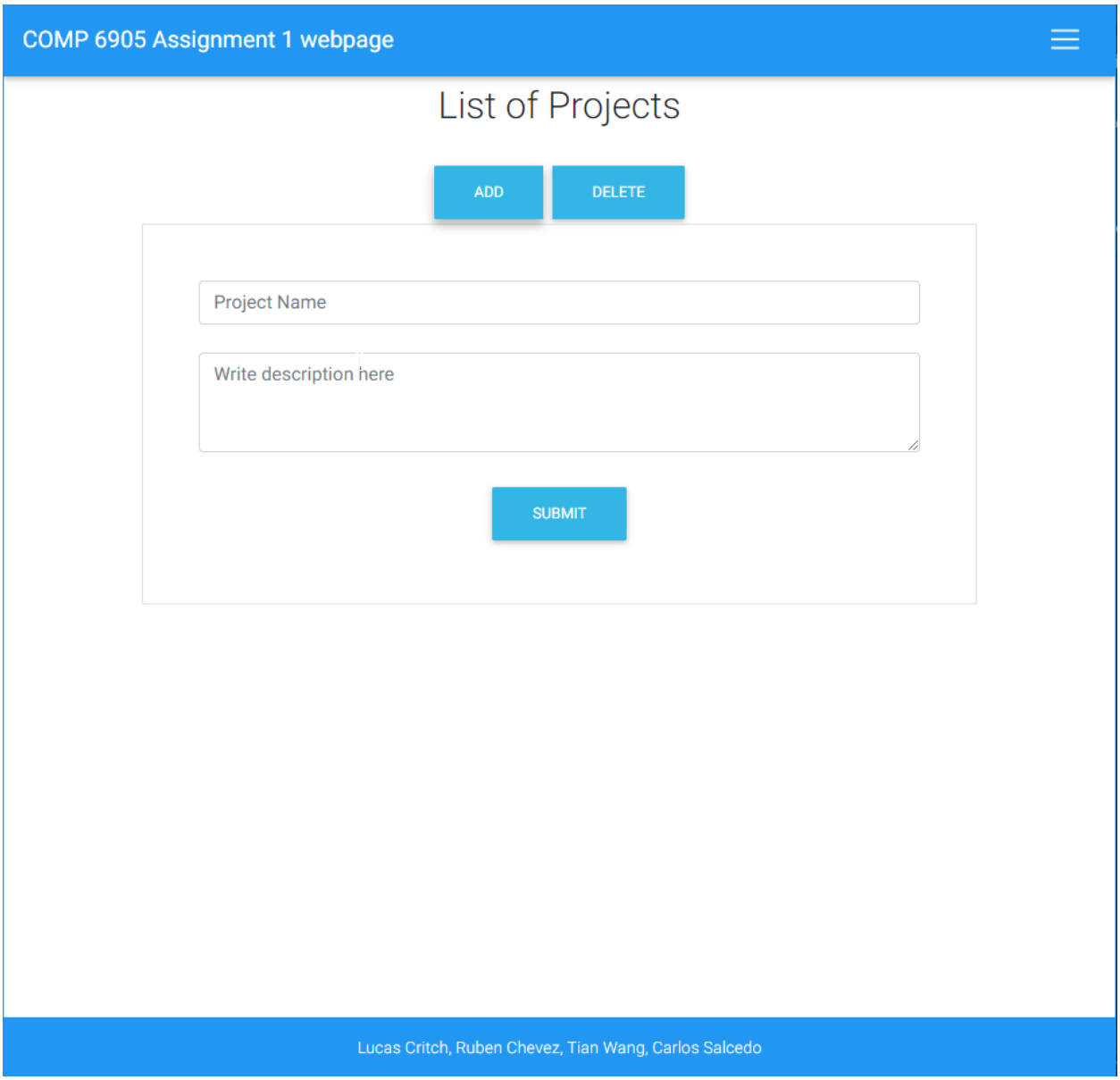
Source Code: https://github.com/rubencg195/GRADREC/blob/master/index.html

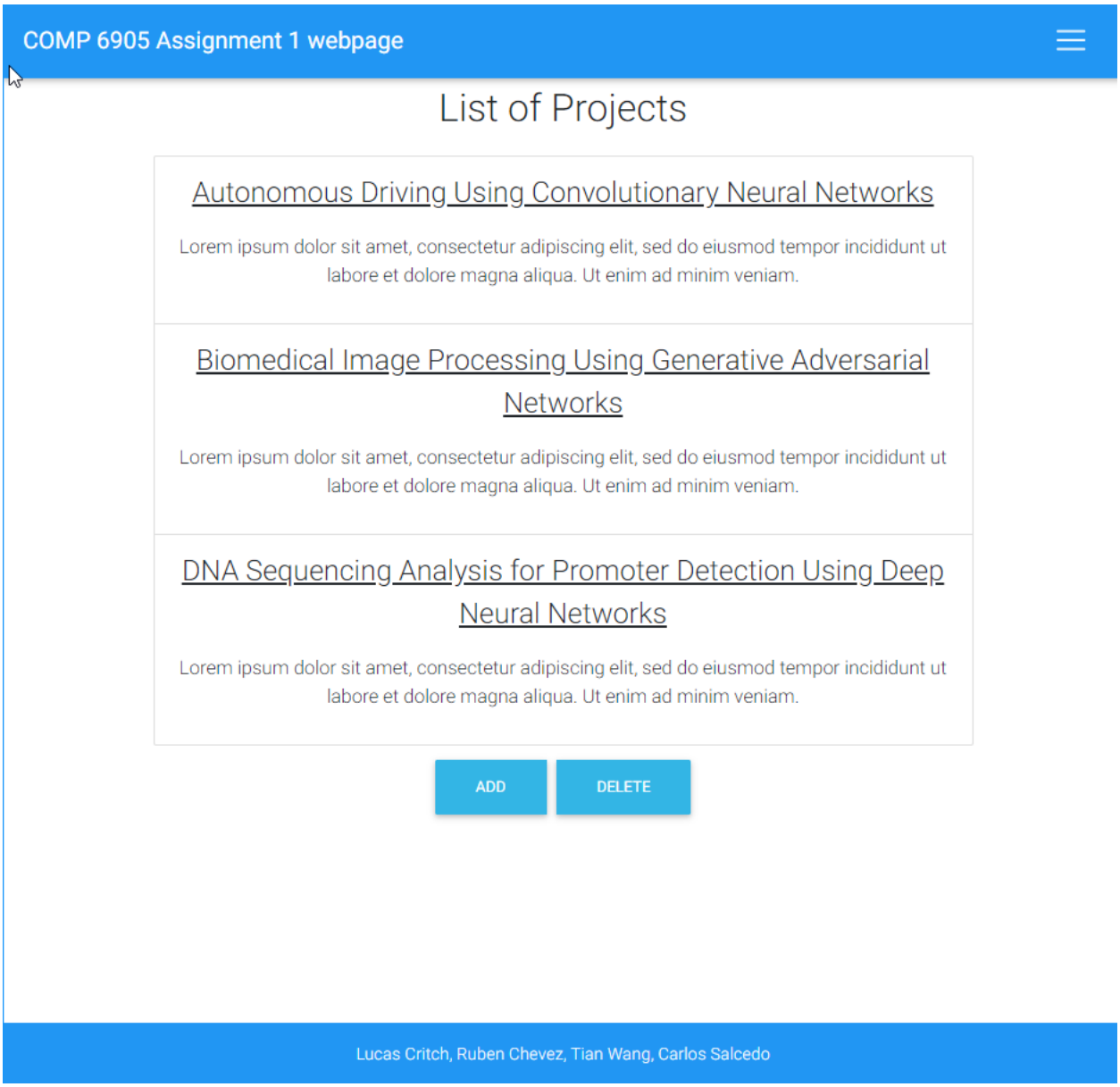
Web Page: http://www.cs.mun.ca/~lrc374/comp6905/

Description:

The following image demonstrates one of the aspects of the GRADREC System, particularly, a small preview of how the Project Manager will be able to create or delete projects. For now, the single web page offers only two options: ADD and DELETE. The ADD button will display a form containing 2 fields, the Project Title and a Description, followed by the submit button. After the fields have been filled out, and the submit button pressed, the project will be added to the list of projects, and it will be displayed bellow the “List of Projects” title. The project manager will be able to at any point select the projects in the list, and hit the button “DELETE”. This will immediately delete the project and remove it from the list.




COMP 6905 Assignment 1 webpage
List of Projects
ADD
DELETE
Project Name
Write description here
SUBMIT
Lucas Critch, Ruben Chevez, Tian Wang, Carlos Salcedo


COMP 6905 Assignment 1 webpage
List of Projects
Autonomous Driving Using Convolutionary Neural Networks
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam.
Biomedical Image Processing Using Generative Adversarial Networks
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam.
DNA Sequencing Analysis for Promoter Detection Using Deep Neural Networks
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam.
ADD
DELETE
Lucas Critch, Ruben Chevez, Tian Wang, Carlos Salcedo

COMP 6905 Assignment 1 webpage

List of Projects

Autonomous Driving Using Convolutionary Neural Networks

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam.

Biomedical Image Processing Using Generative Adversarial Networks

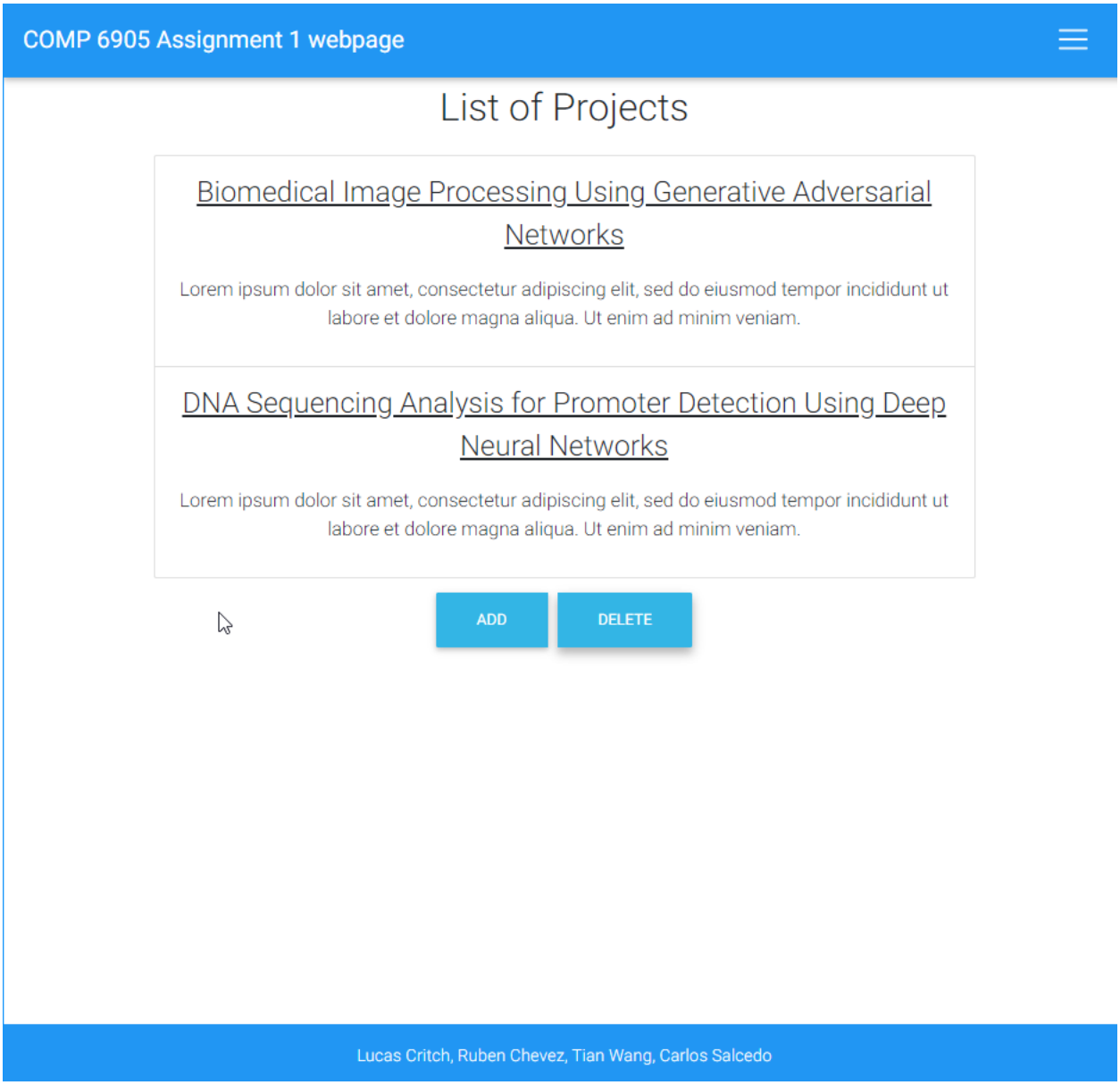
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam.

DNA Sequencing Analysis for Promoter Detection Using Deep Neural Networks

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam.

ADD DELETE

Lucas Critch, Ruben Chevez, Tian Wang, Carlos Salcedo


COMP 6905 Assignment 1 webpage
List of Projects
Biomedical Image Processing Using Generative Adversarial Networks
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam.
DNA Sequencing Analysis for Promoter Detection Using Deep Neural Networks
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam.
ADD
DELETE
Lucas Critch, Ruben Chevez, Tian Wang, Carlos Salcedo