
Beyond The Seas

CSE 326 : Information System Design

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Contents

| | |
|--|-----------|
| 1 Motivation | 4 |
| 2 Introduction | 5 |
| 3 Requirement Analysis using BPMN diagram | 6 |
| 3.1 Full BPMN Diagram | 6 |
| 3.2 User | 8 |
| 3.2.1 Normal User | 9 |
| 3.2.2 Premium User | 10 |
| 3.3 System Server | 10 |
| 3.3.1 System Service | 11 |
| 3.3.2 System Database | 11 |
| 3.3.3 Web Scrapper | 11 |
| 3.4 Connection between User and System | 12 |
| 4 Class Diagram | 13 |
| 4.1 Full Class Diagram | 14 |
| 4.2 Explore University | 15 |
| 4.3 Explore University: University | 16 |
| 4.4 Explore University: Location | 16 |
| 4.5 Explore University: Current Student List | 17 |
| 4.6 Explore University: Professor List | 17 |
| 4.7 Professor List: Professor | 18 |
| 4.8 Explore University: Program | 20 |
| 4.9 Academic Analysis | 21 |
| 4.10 Non Academic Analysis | 22 |
| 4.11 Merged University List | 23 |
| 4.12 Cloud Deployment | 24 |
| 5 ER Diagram | 25 |
| 5.1 Full ERD | 25 |
| 6 Sequence Diagram | 26 |
| 6.1 Profile Page | 26 |
| 6.2 Explore University | 27 |
| 6.3 University Details | 28 |
| 6.4 Location Details | 29 |
| 6.5 Program Details | 29 |
| 6.6 Current Students Page | 30 |
| 6.7 Professor Details | 31 |

| | | |
|-----------|---|-----------|
| 6.8 | Ongoing Research | 32 |
| 6.9 | Academic Analysis | 32 |
| 6.10 | Non Academic Analysis | 33 |
| 6.11 | Merged Analysis | 33 |
| 7 | Collaboration Diagram | 34 |
| 7.1 | Profile Creation | 34 |
| 7.2 | Explore University | 35 |
| 7.3 | University Details | 36 |
| 7.4 | University Location | 37 |
| 7.5 | University Professor | 38 |
| 7.6 | Ongoing Research | 39 |
| 7.7 | University Program | 40 |
| 7.8 | Current Students Page | 41 |
| 7.9 | Academic Analysis | 42 |
| 7.10 | Non Academic Analysis | 43 |
| 7.11 | Merged Analysis | 44 |
| 8 | State Diagrams | 45 |
| 8.1 | Student State Diagram | 45 |
| 9 | Mock UI | 46 |
| 9.1 | User Profile | 46 |
| 9.1.1 | Personal Profile | 46 |
| 9.1.2 | Public Profile | 47 |
| 9.2 | Dashboard | 48 |
| 9.3 | Explore University | 49 |
| 9.3.1 | Before Search | 49 |
| 9.3.2 | After Search | 50 |
| 9.4 | Search Result | 51 |
| 9.5 | Professor List | 52 |
| 9.6 | Professor Details | 53 |
| 9.7 | Student from users University | 54 |
| 9.8 | Academic Analysis | 55 |
| 9.8.1 | Academic Analysis Options | 55 |
| 9.8.2 | Academic Analysis Result | 56 |
| 9.9 | Non Academic Analysis | 57 |
| 9.9.1 | Non Academic Analysis Options | 57 |
| 9.9.2 | Non Academic Analysis Result | 58 |
| 9.10 | Too Ambitious Choices | 59 |
| 9.11 | Probable Chances | 60 |
| 9.12 | Safe Options | 61 |
| 9.13 | University Shortlist | 62 |
| 9.14 | Premium User | 63 |
| 10 | Software Demo | 64 |
| 10.1 | Implemented Features | 64 |
| 10.2 | Technology Overview | 64 |
| 10.3 | User Interface | 65 |
| 10.3.1 | Homepage | 65 |
| 10.3.2 | Search University | 65 |
| 10.3.3 | Sort University | 66 |

| | | |
|--------|--------------------|----|
| 10.3.4 | University Details | 68 |
| 10.4 | Cloud Deployment | 69 |
| 10.4.1 | Database | 69 |
| 10.4.2 | Version Control | 69 |

Chapter 1

Motivation

After graduation, students who want to pursue higher education abroad- are at a loss when they are trying to figure out which university would be the best fit for them. There are so many universities to choose from, and so much information to accumulate and process but there is just not enough time. To help people be less confused and more efficient about choosing their dream university, we present our project **Beyond the seas** .

Chapter 2

Introduction

Our project “Beyond the seas” intends to find the universities from different websites that are best possible fits for a user based on their current academic status. It provides the users with a better experience in searching by showing related works in their field of interest that are being done in universities or have available funding and scholarships. There are some additional facilities a user can get here.

- **Personal Preference:** Apart from getting a choice of universities based on their academic result, the students can add personal preferences on their profile to search and filter choices. For example, the location they would like to study in, what kind of weather they prefer if the living cost in these places matches their financial status, etc. We call non-academic search analysis
- **Merged Analysis:** Using both Academic analysis and non-academic analysis, a merged list of universities will be available to the premium users.

Chapter 3

Requirement Analysis using BPMN diagram

3.1 Full BPMN Diagram

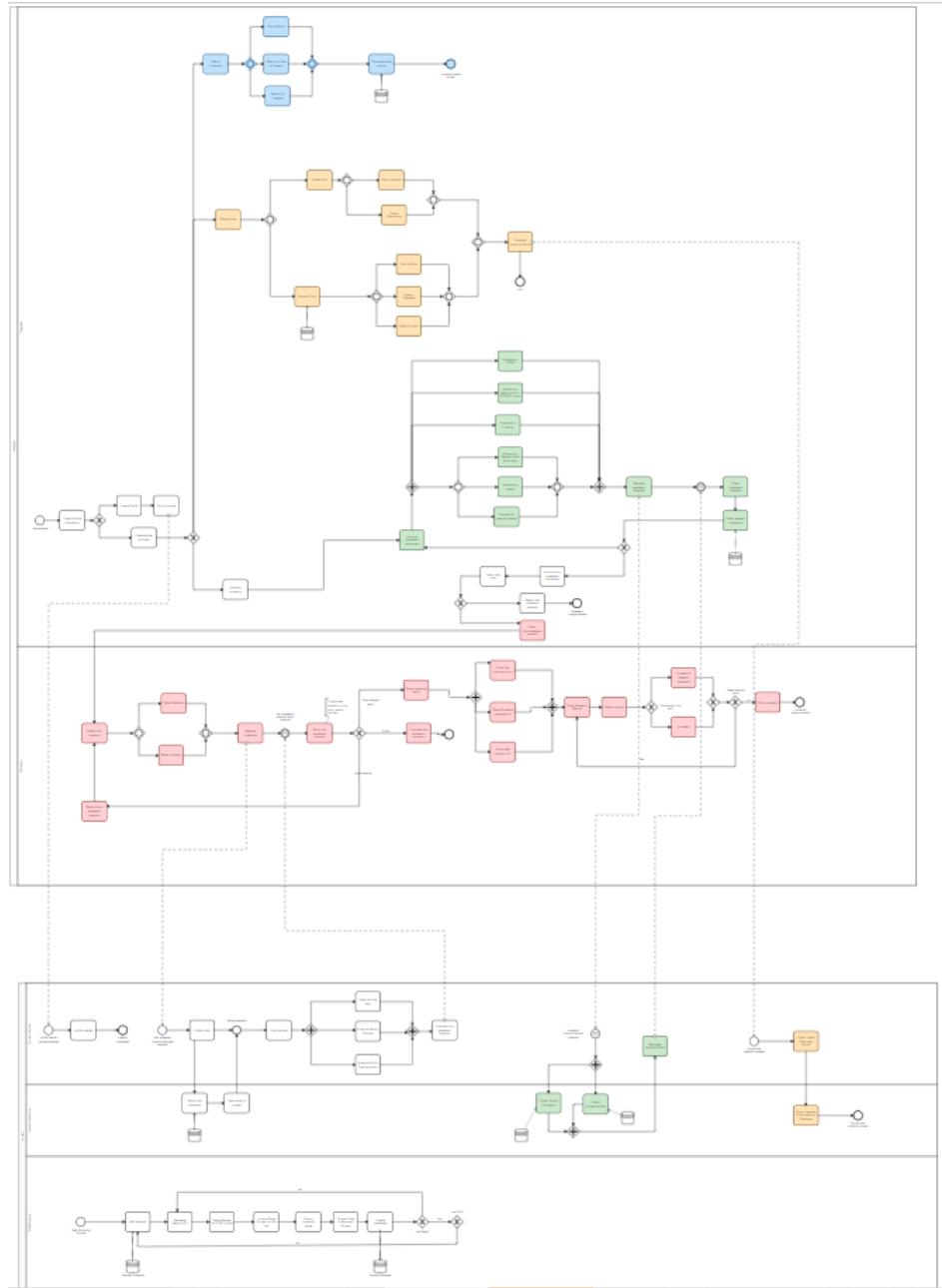


Figure 3.1: Full BPMN Diagram

Pools

- User
- System and Server

3.2 User

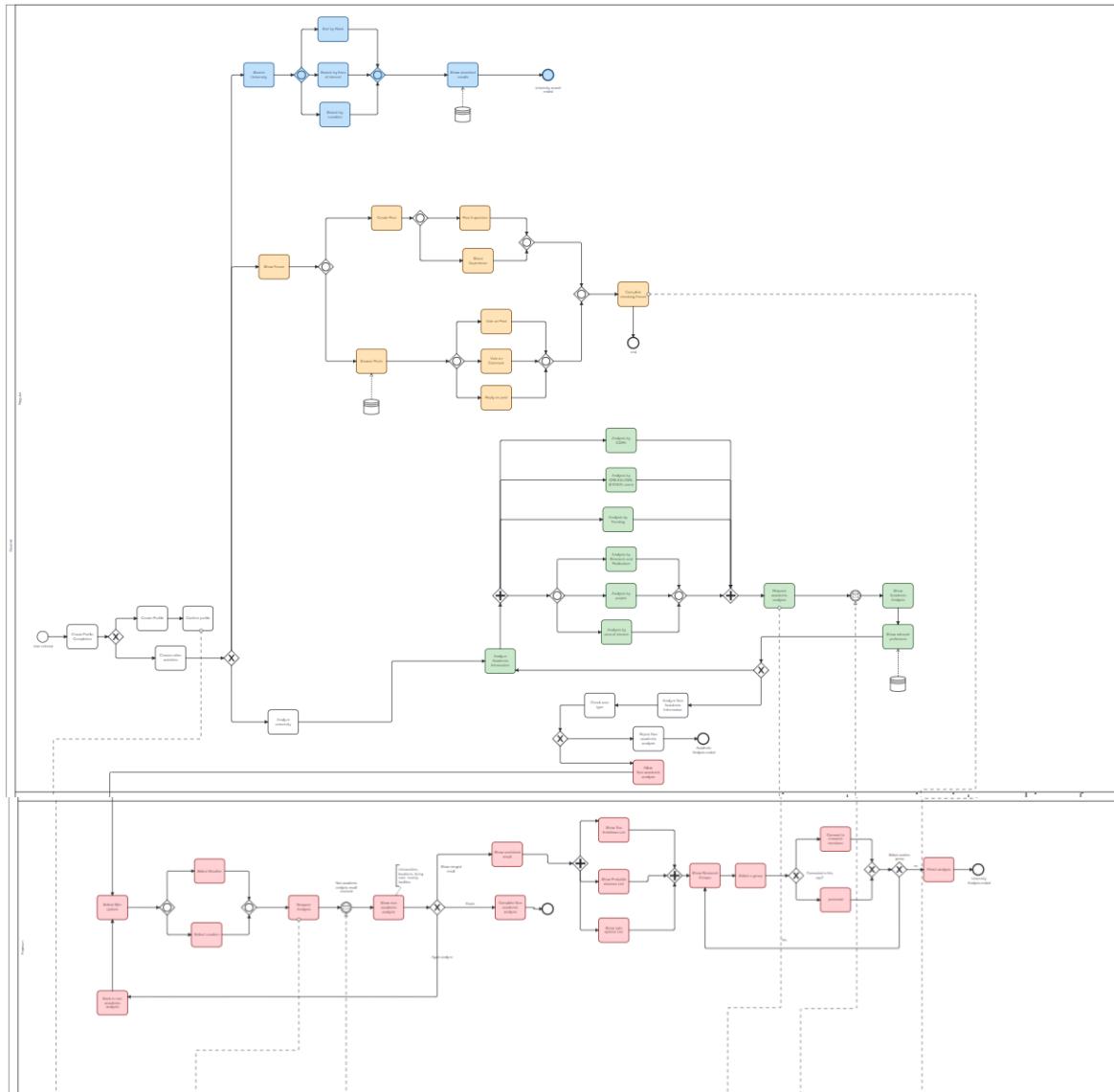


Figure 3.2: Pool: User

3.2.1 Normal User

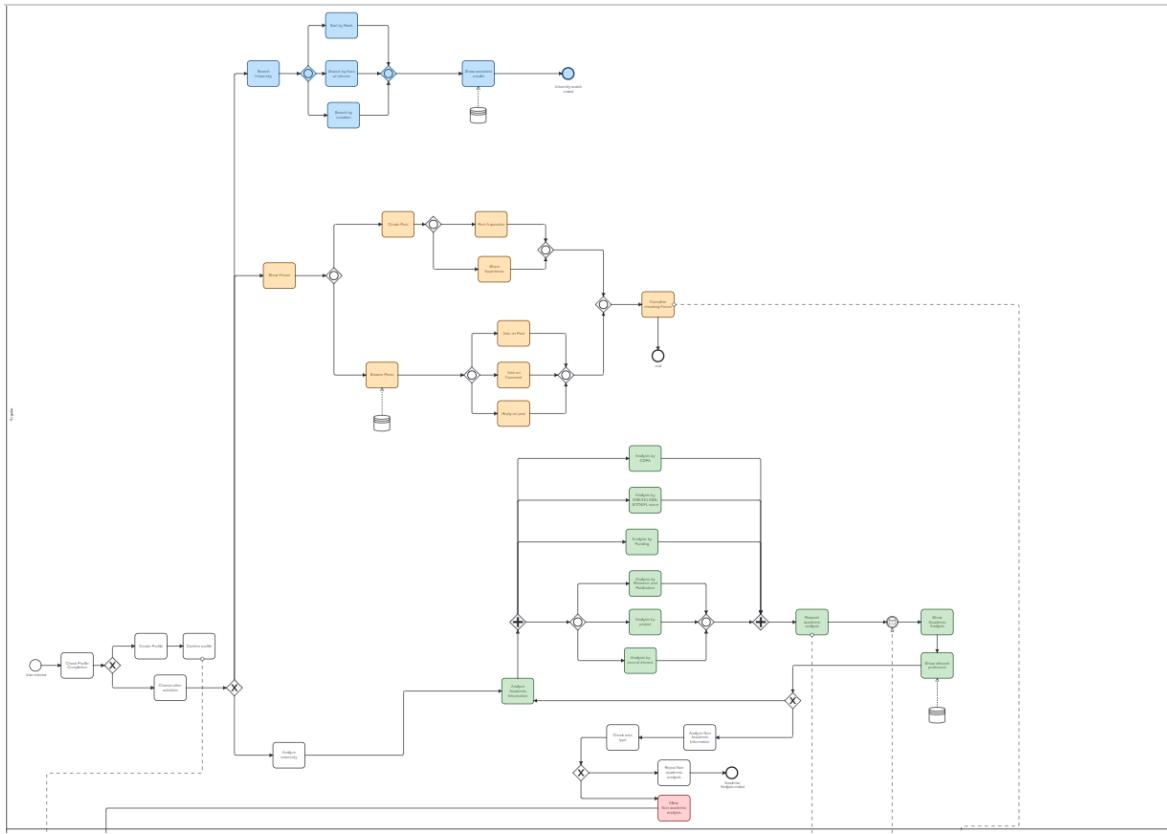


Figure 3.3: Lane: Normal User

3.2.2 Premium User

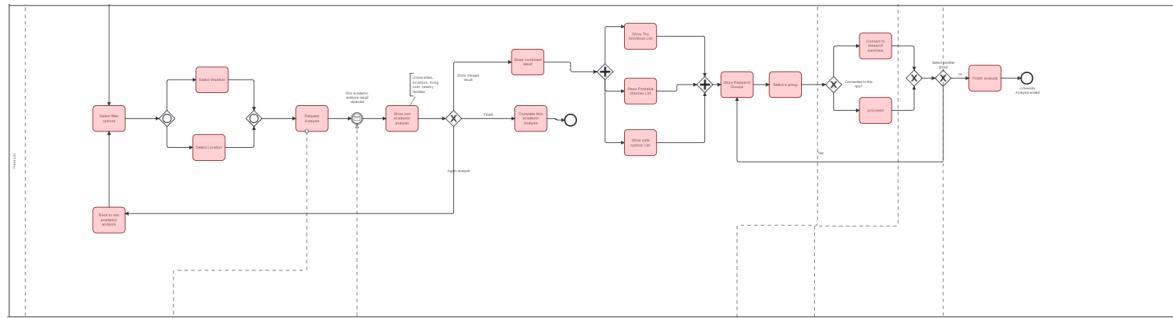


Figure 3.4: Lane: Premium User

3.3 System Server

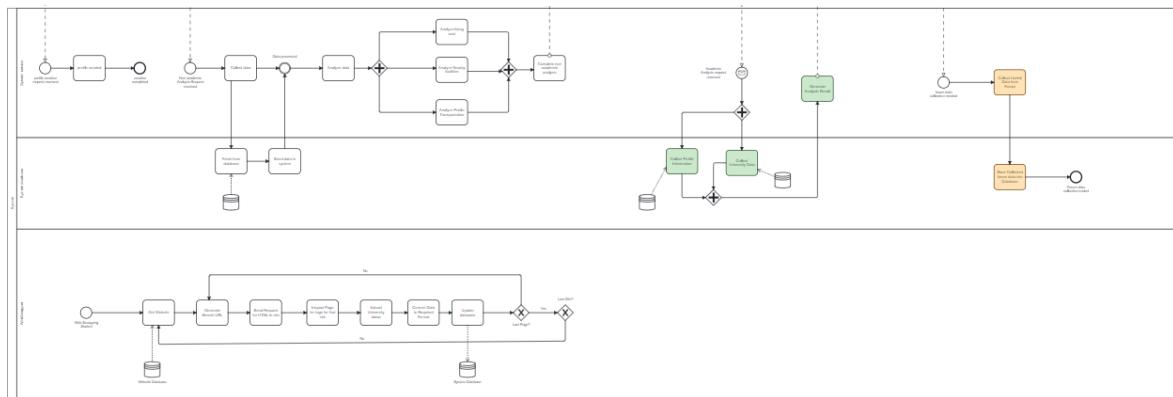


Figure 3.5: Pool: System Server

3.3.1 System Service

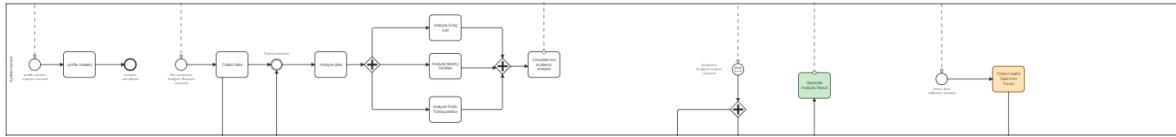


Figure 3.6: Lane: System Service

3.3.2 System Database



Figure 3.7: Lane: System Database

3.3.3 Web Scrapper

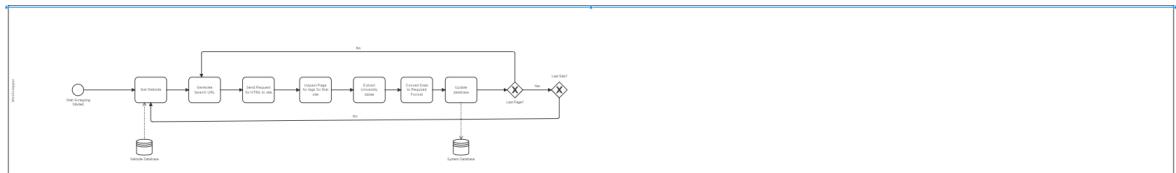


Figure 3.8: Lane: Web Scrapper

3.4 Connection between User and System

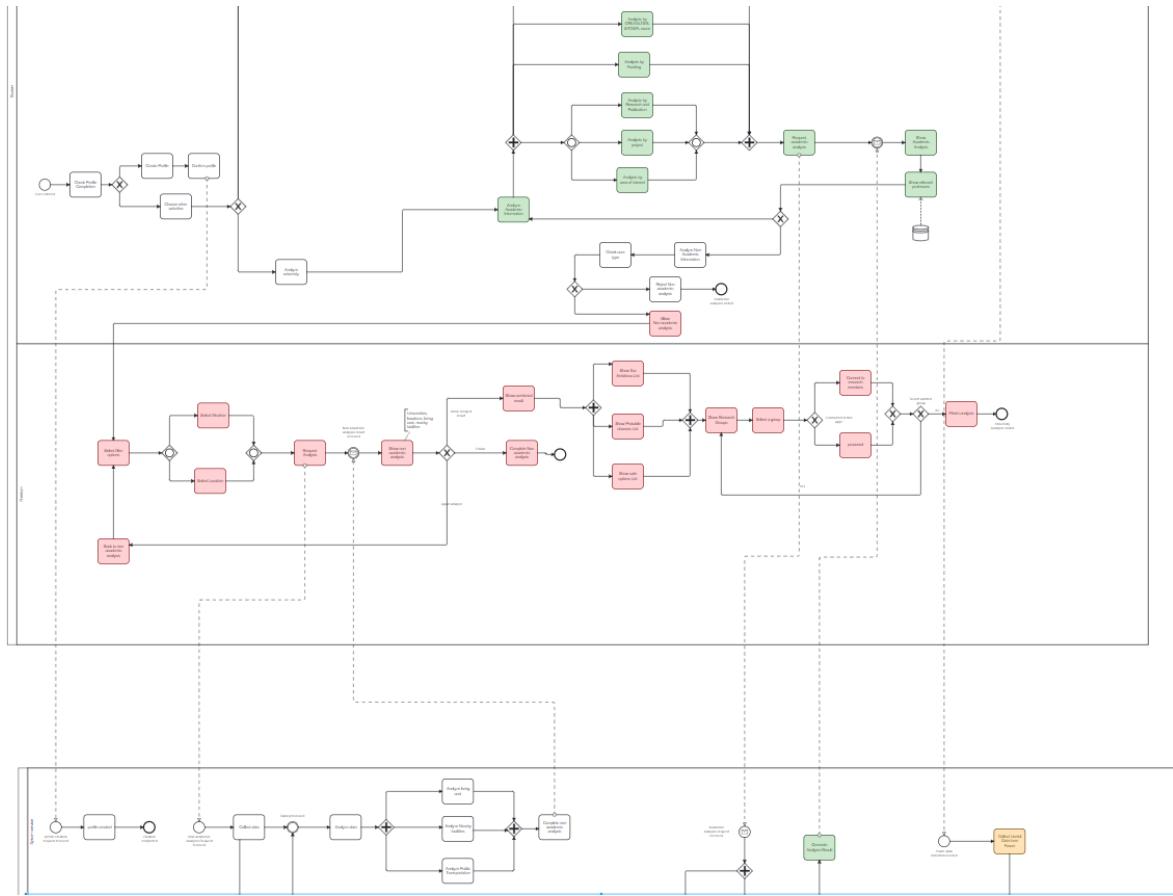


Figure 3.9: Connection between User and System

Chapter 4

Class Diagram

4.1 Full Class Diagram

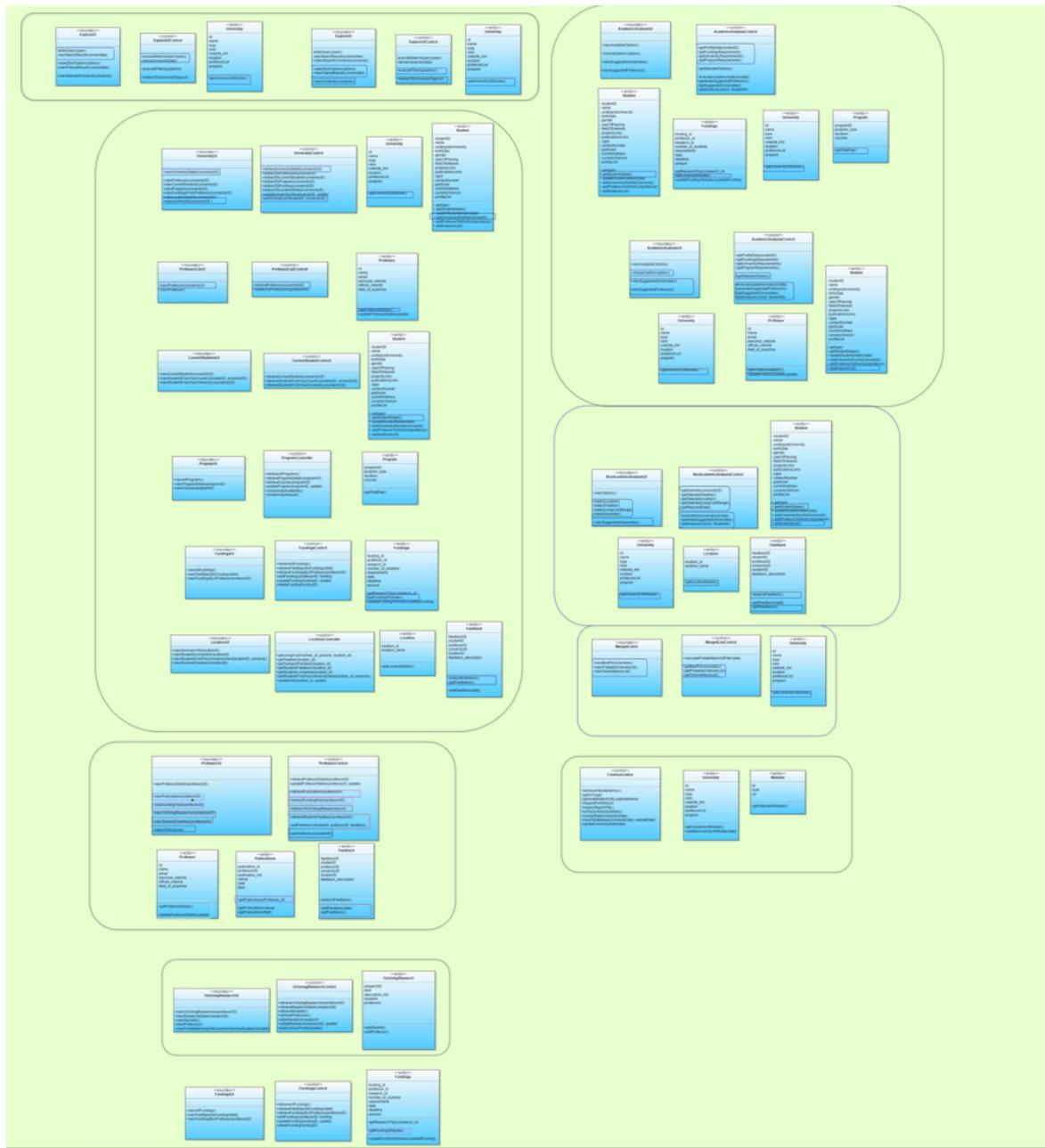


Figure 4.1: Full Class Diagram

4.2 Explore University

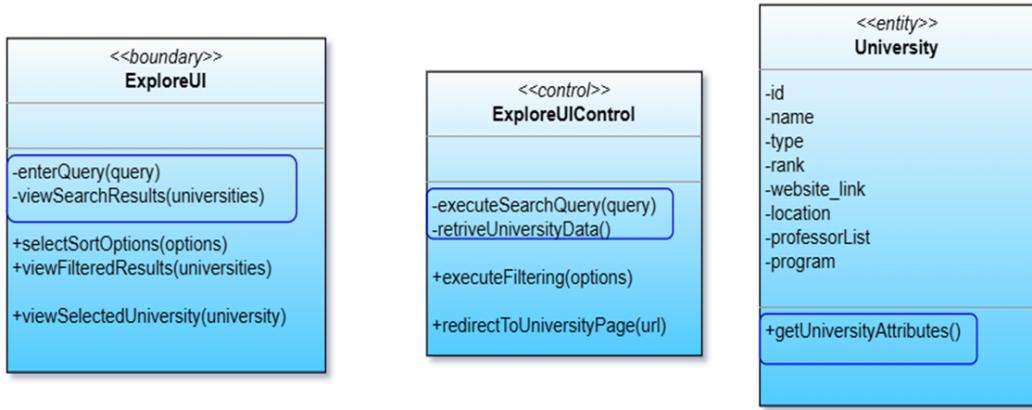


Figure 4.2: Class Diagram related to Explore University module(part-1)

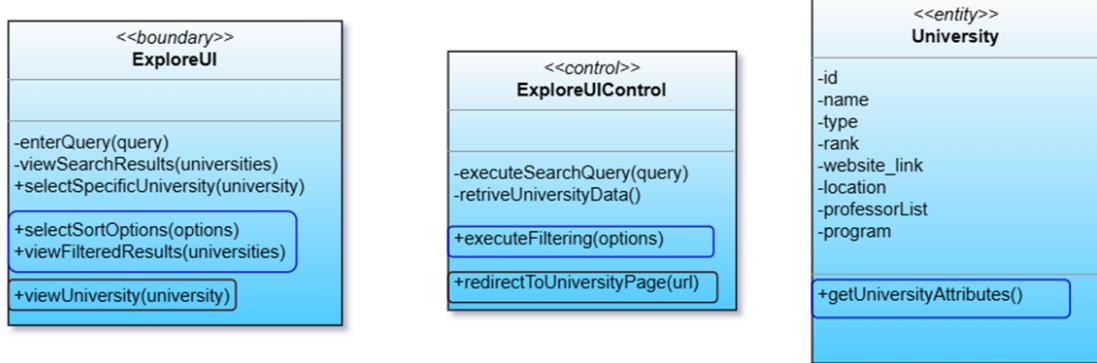


Figure 4.3: Class Diagram related to Explore University module(part-2)

4.3 Explore University: University

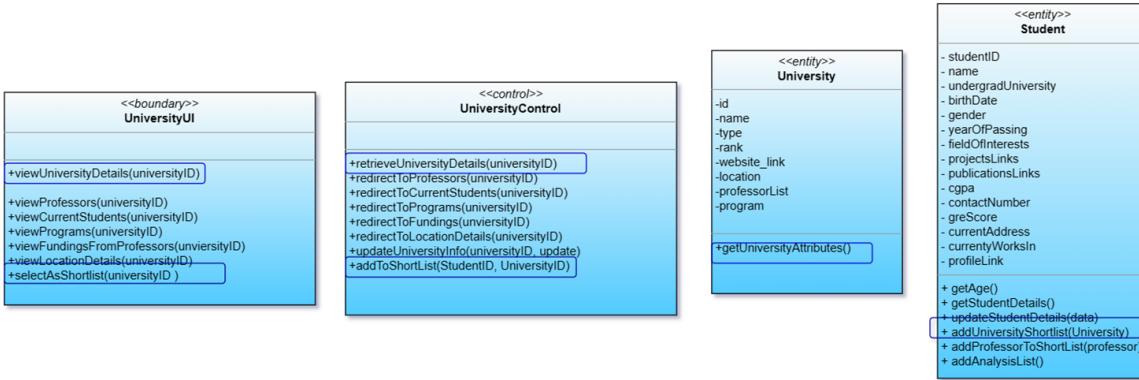


Figure 4.4: Class Diagram related to University

4.4 Explore University: Location

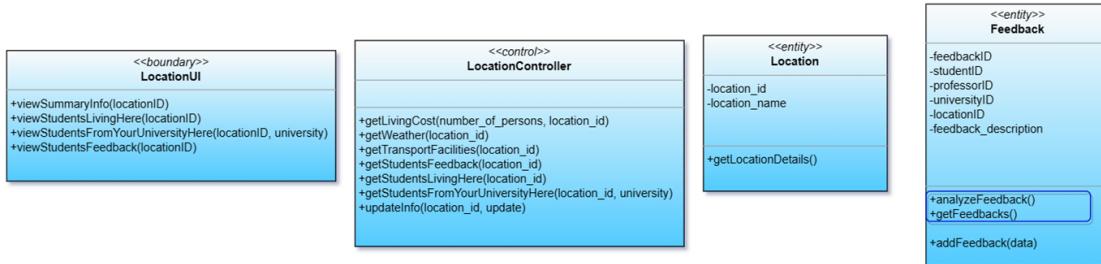


Figure 4.5: Class Diagram related to University(location details)

4.5 Explore University: Current Student List

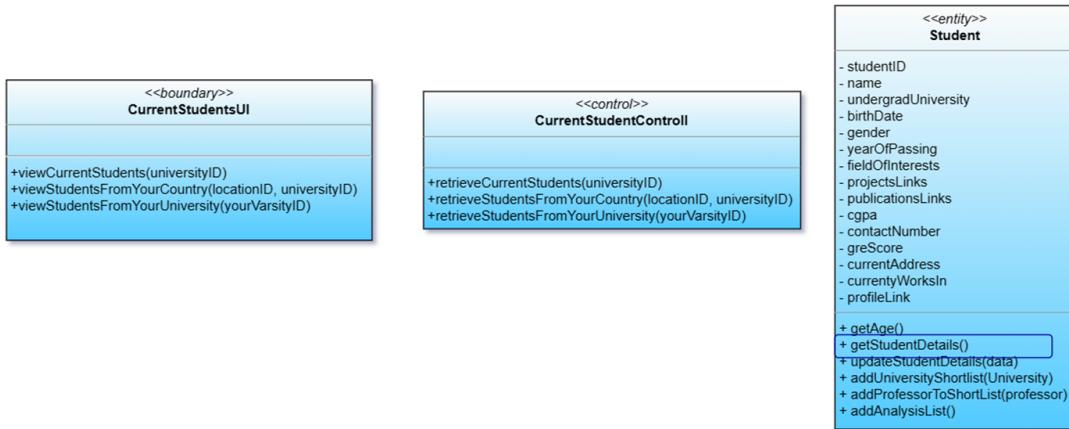


Figure 4.6: Class Diagram related to University(Current Student List)

4.6 Explore University: Professor List

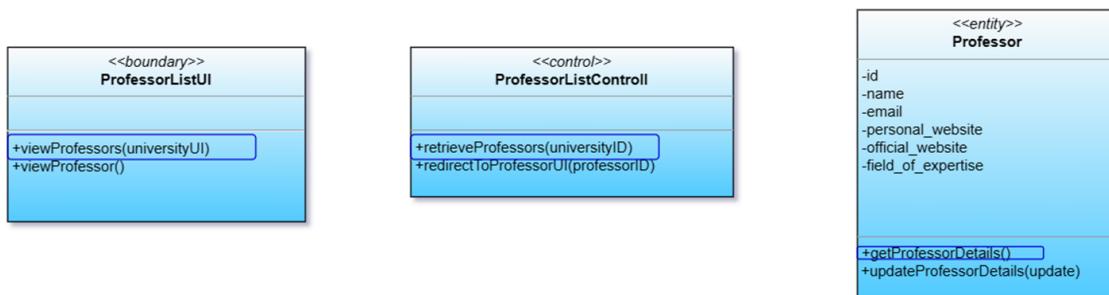


Figure 4.7: Class Diagram related to University(Professor List)

4.7 Professor List: Professor

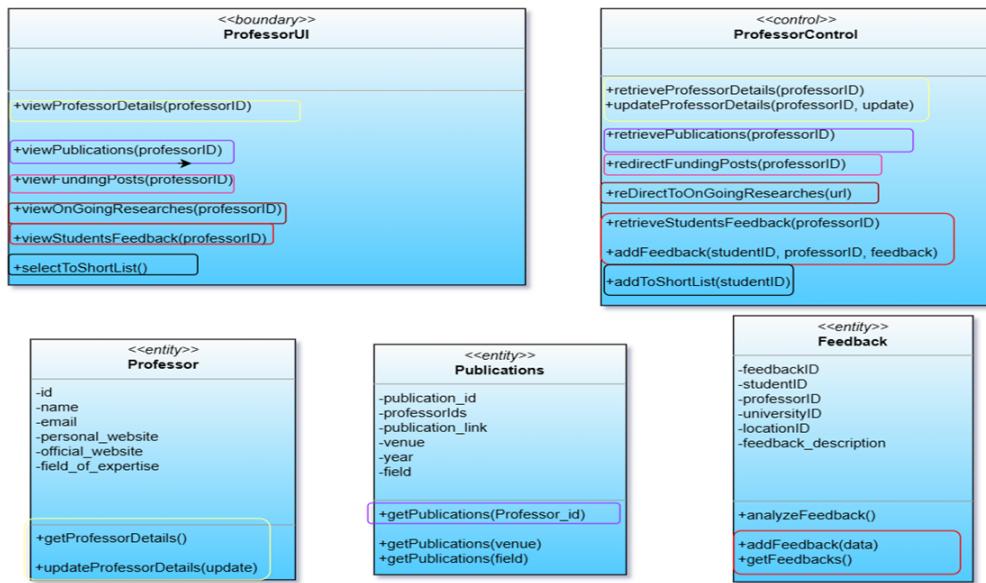


Figure 4.8: Class Diagram related to professor

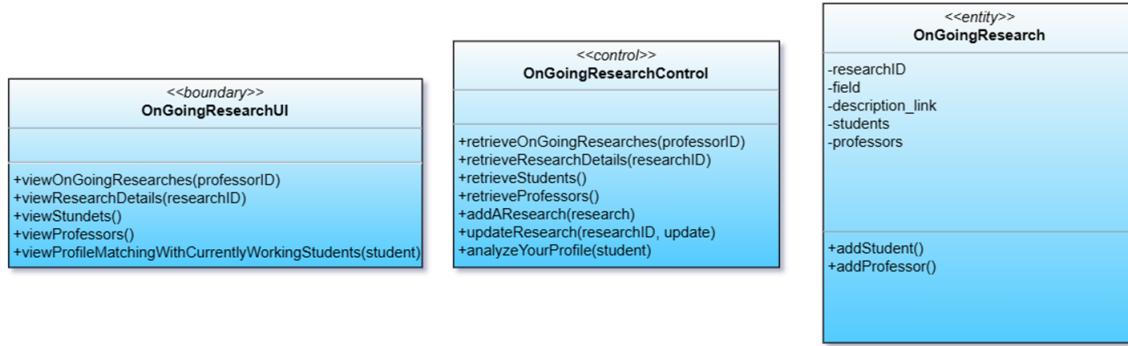


Figure 4.9: Class Diagram related to professor's Ongoing research details

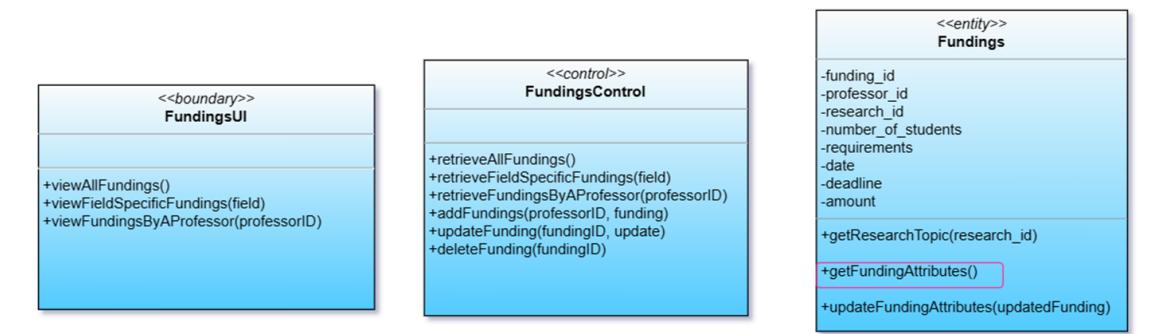


Figure 4.10: Class Diagram related to professor's funding details

4.8 Explore University: Program

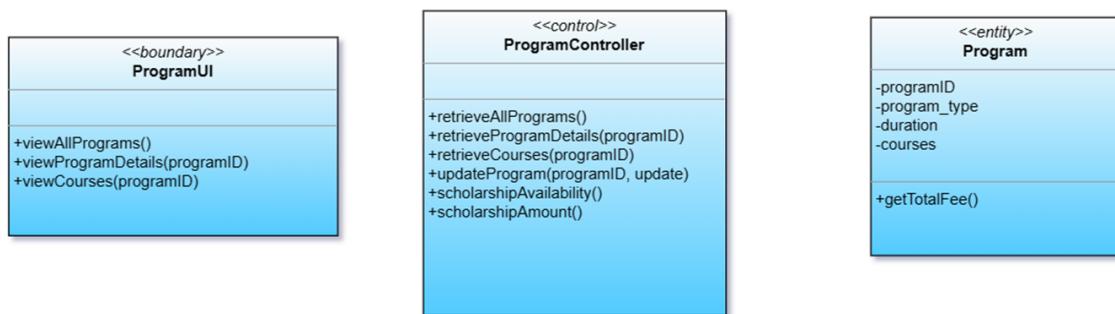


Figure 4.11: Class Diagram related to University(Program details)

4.9 Academic Analysis

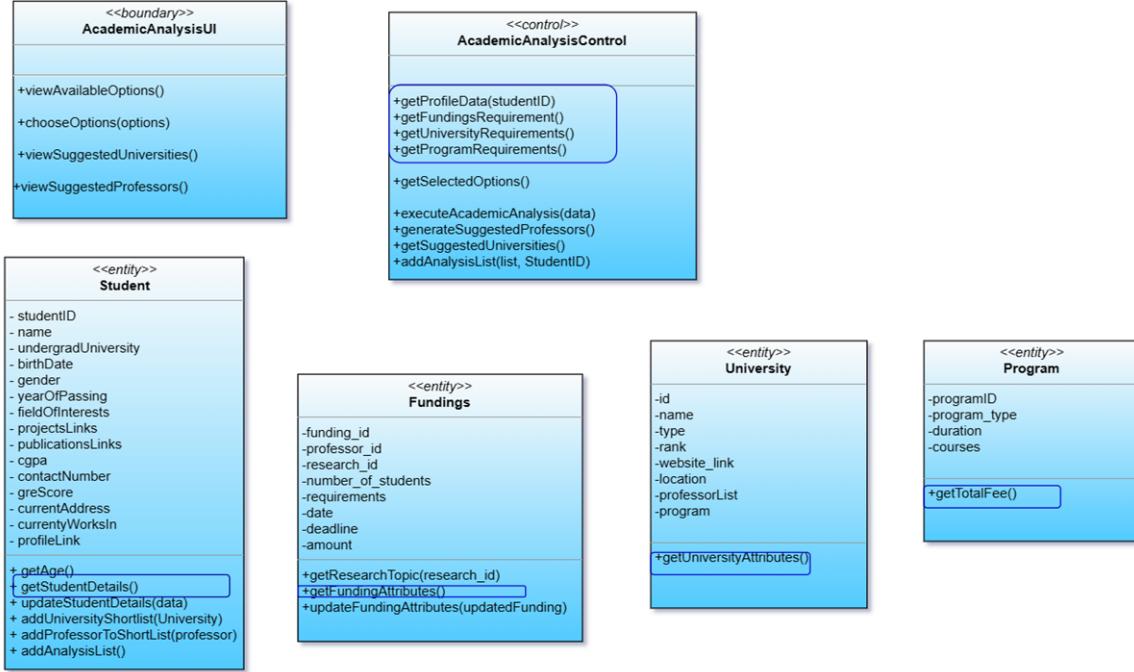


Figure 4.12: Class Diagram related to Academic Analysis module



Figure 4.13: Class Diagram related to Academic Analysis module(cont.)

4.10 Non Academic Analysis

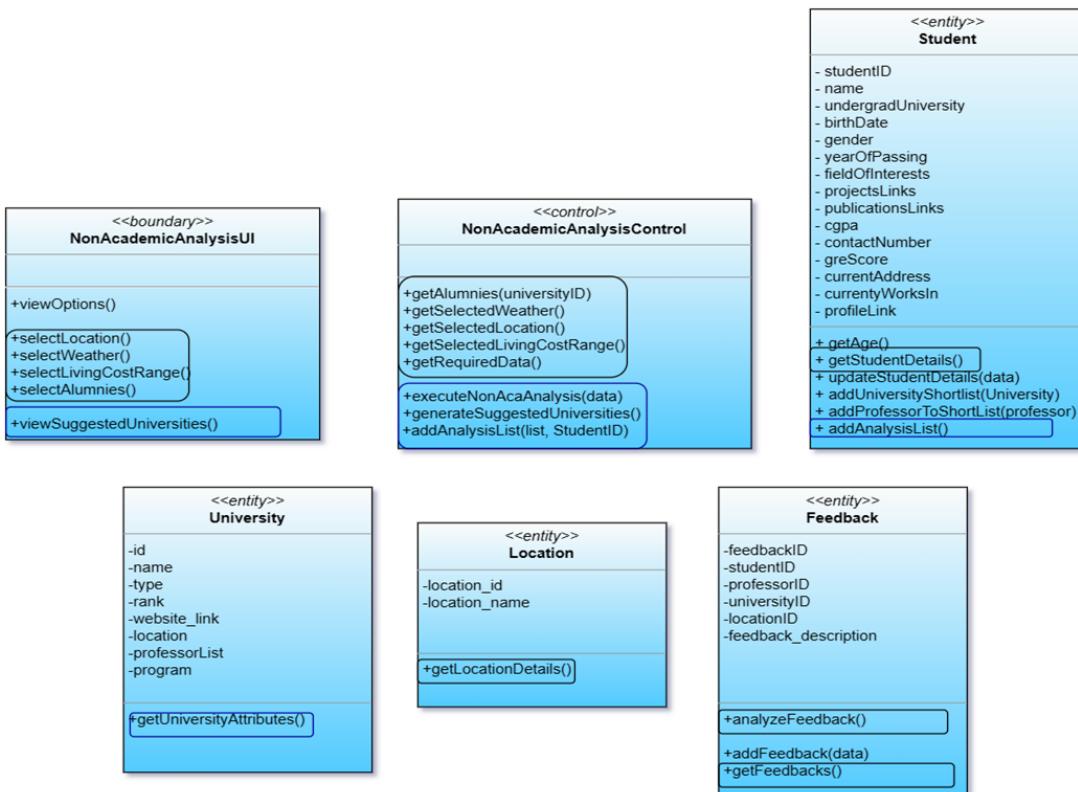


Figure 4.14: Class Diagram related to Non-Academic Analysis module

4.11 Merged University List

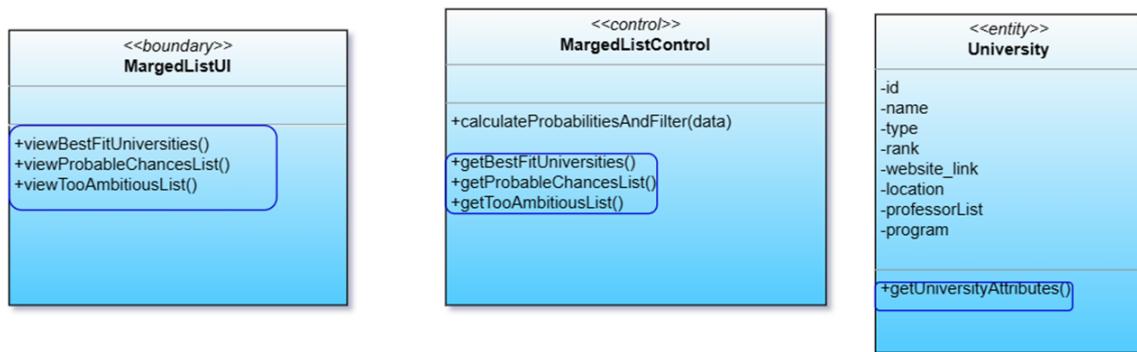


Figure 4.15: Class Diagram related to Merged University list suggested to user

4.12 Cloud Deployment

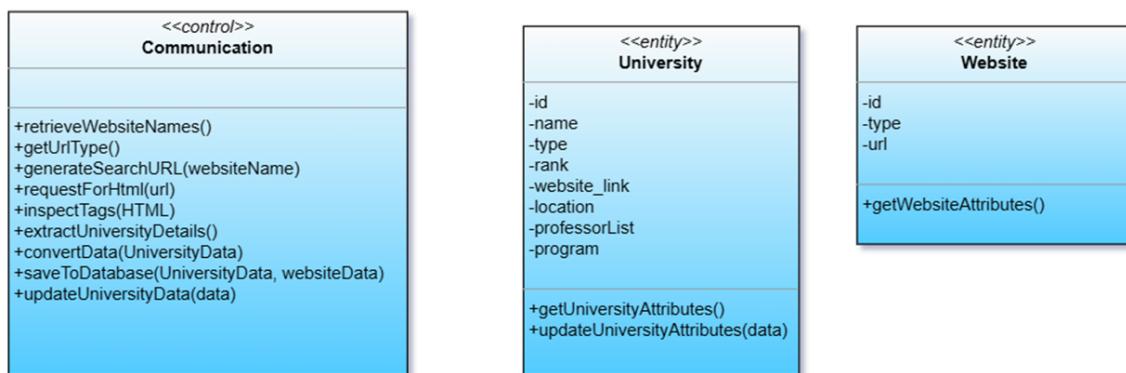


Figure 4.16: Class Diagram related to Cloud Deployment

Chapter 5

ER Diagram

5.1 Full ERD

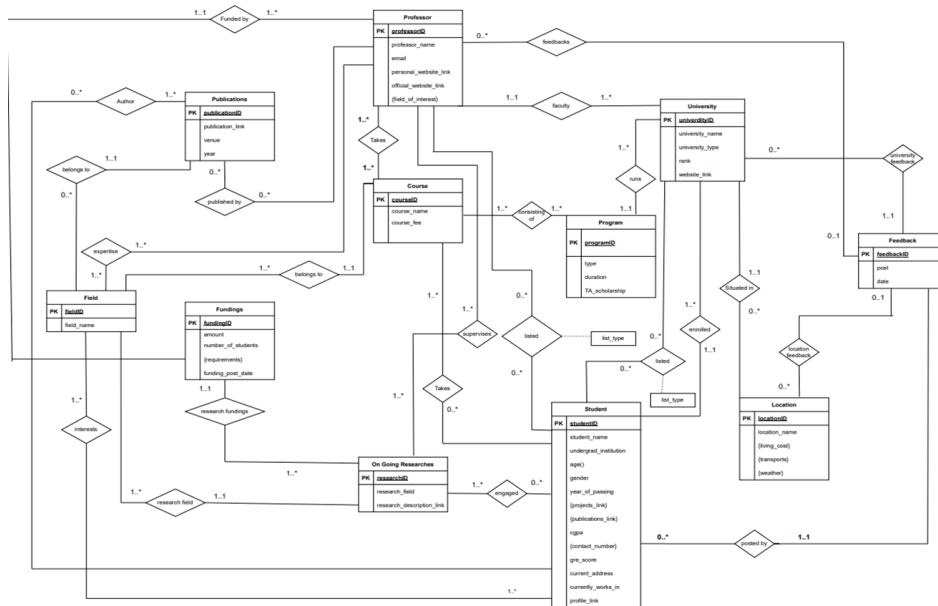


Figure 5.1: Full ER Diagram

Chapter 6

Sequence Diagram

6.1 Profile Page

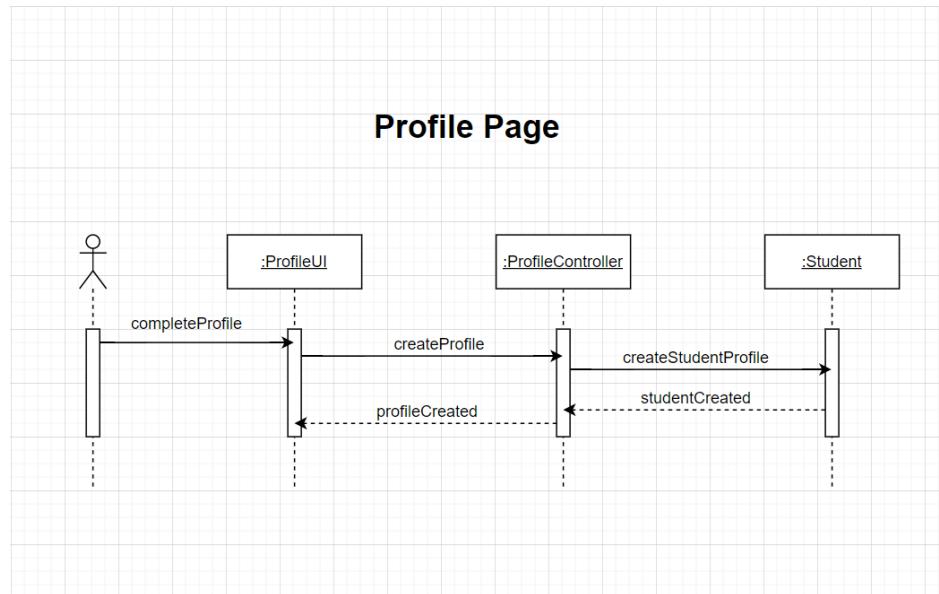


Figure 6.1: Sequence Diagram for user profile page

6.2 Explore University

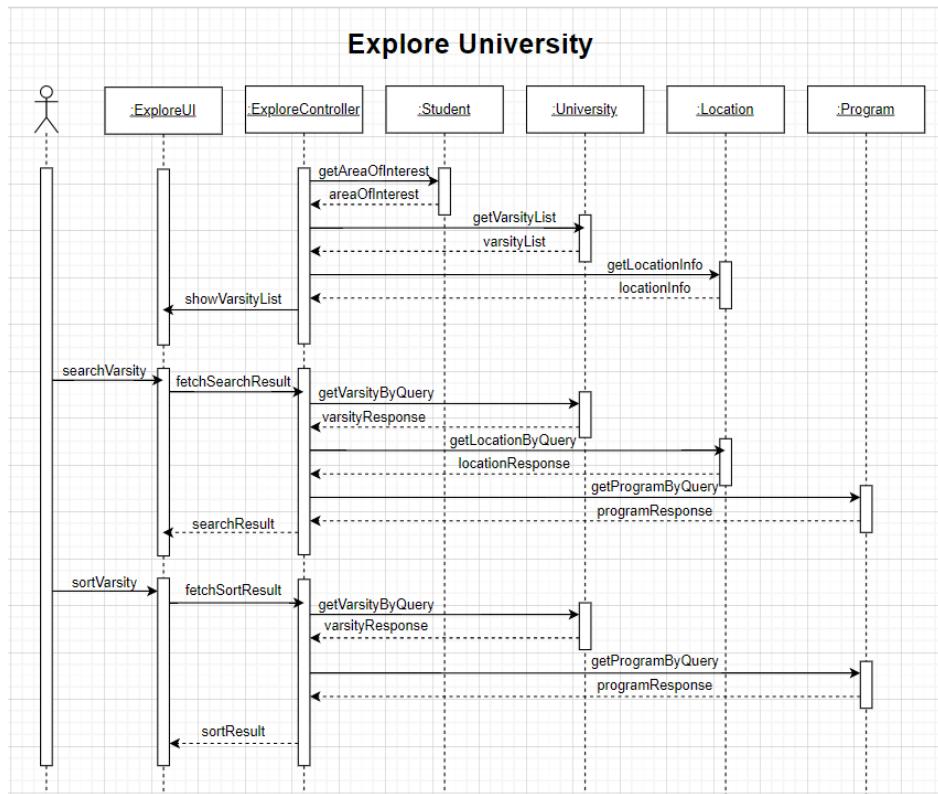


Figure 6.2: Sequence Diagram for Search and Filter

6.3 University Details

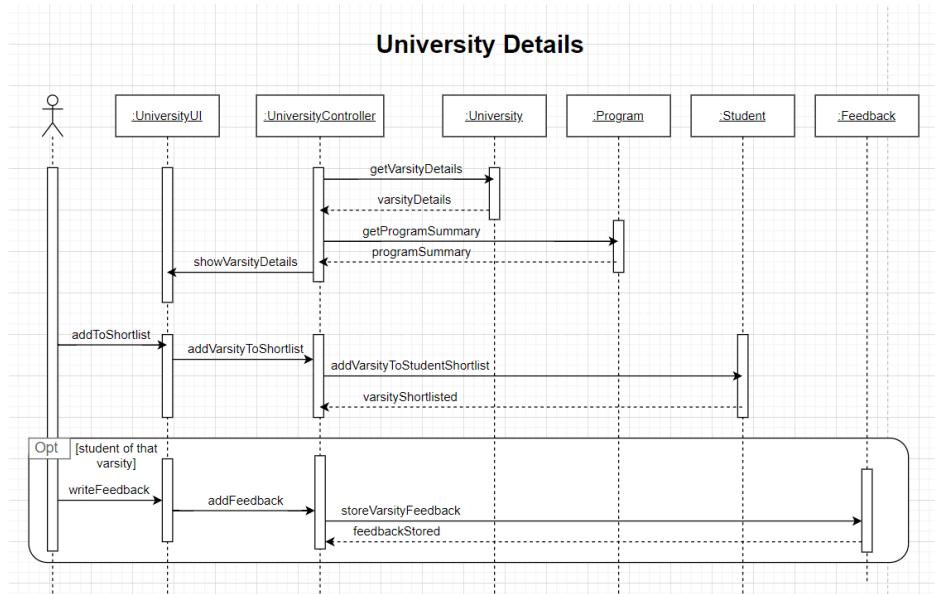


Figure 6.3: Sequence Diagram for University Details

6.4 Location Details

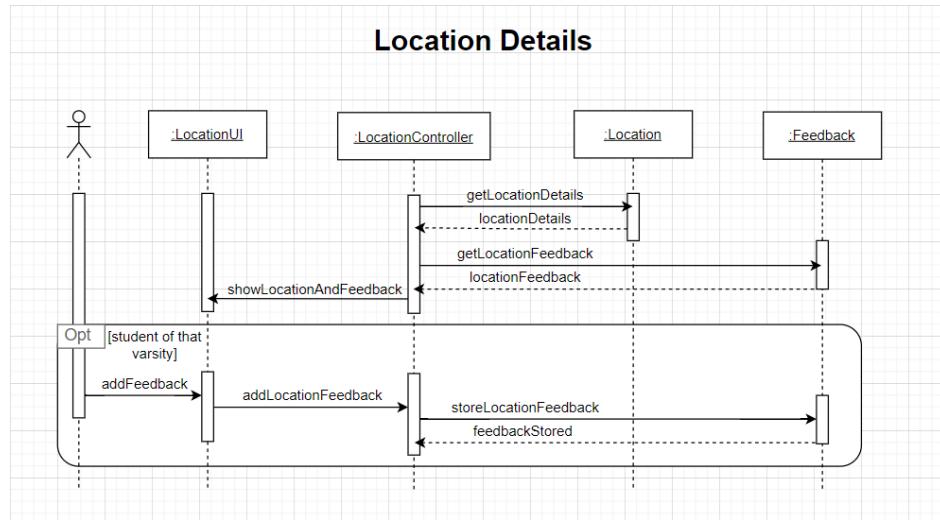


Figure 6.4: Sequence Diagram for Product Comparison

6.5 Program Details

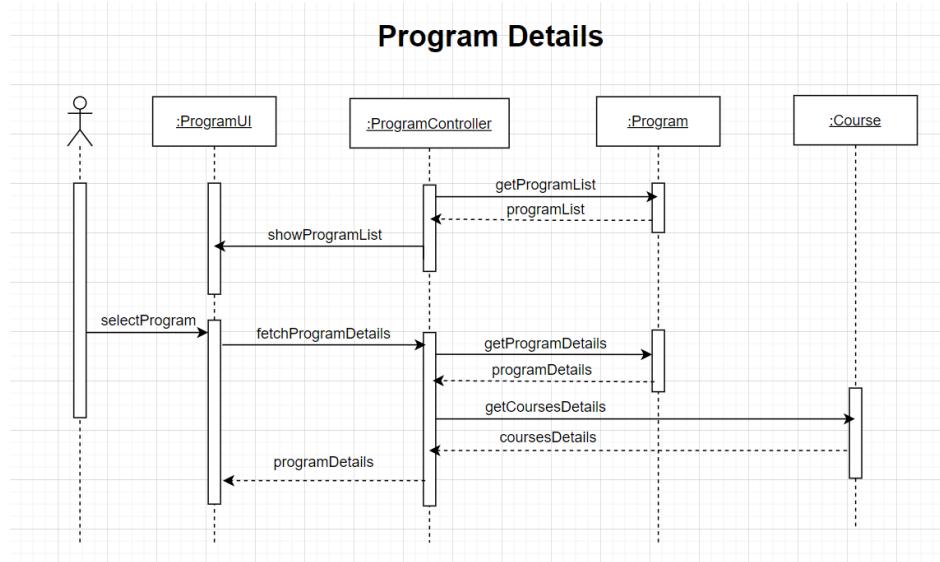


Figure 6.5: Sequence Diagram for Program Details

6.6 Current Students Page

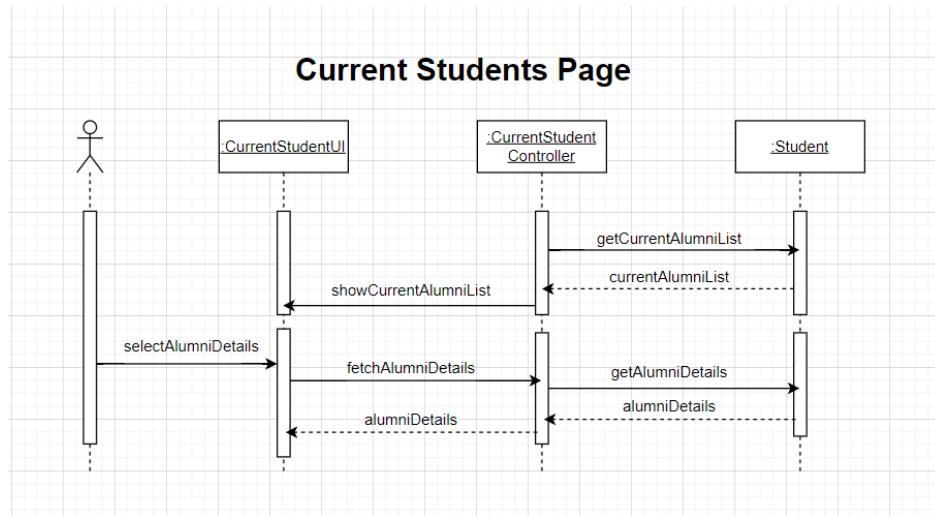


Figure 6.6: Sequence Diagram for Current Students Page

6.7 Professor Details

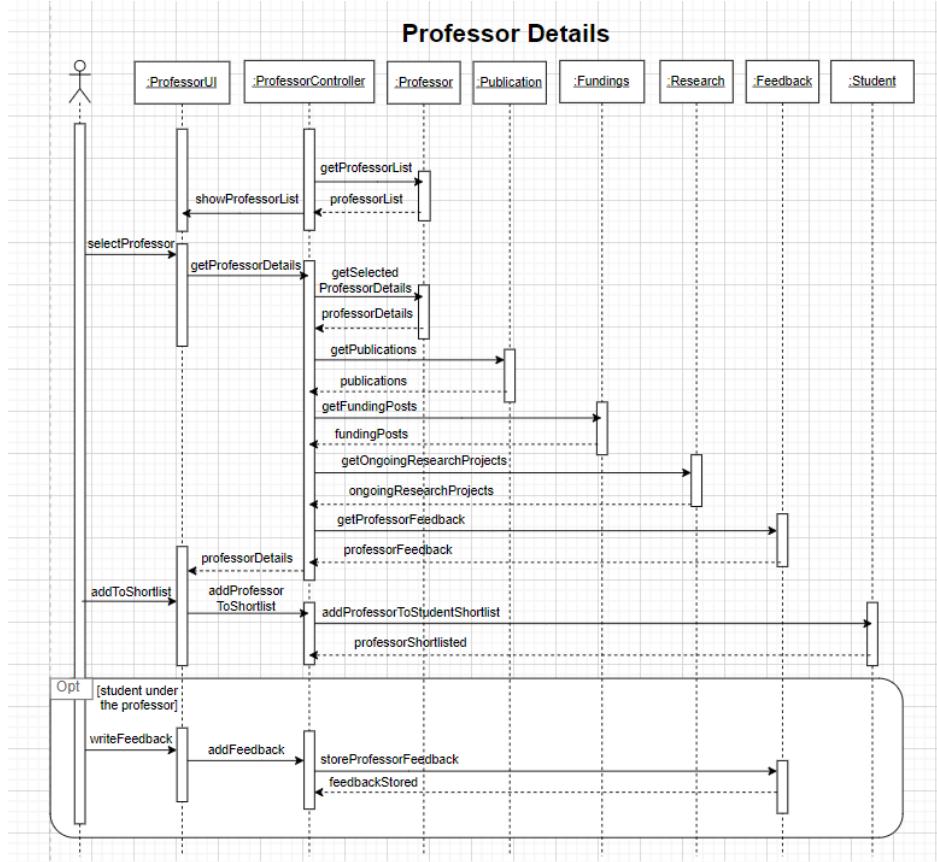


Figure 6.7: Sequence Diagram for Professor Details

6.8 Ongoing Research

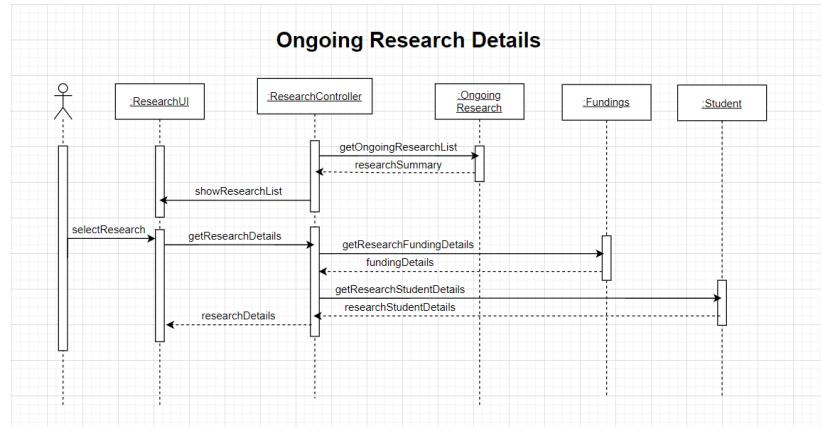


Figure 6.8: Sequence Diagram for Professor's Ongoing Research Details

6.9 Academic Analysis

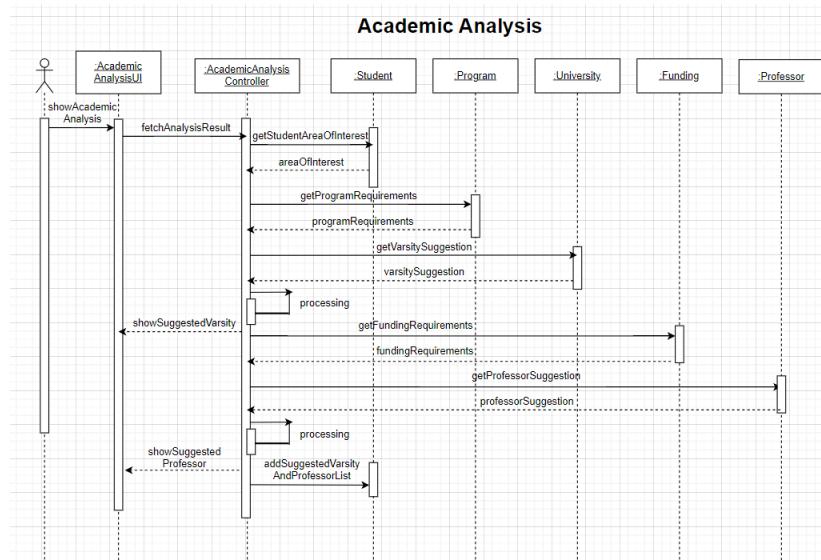


Figure 6.9: Sequence Diagram for Academic Analysis

6.10 Non Academic Analysis

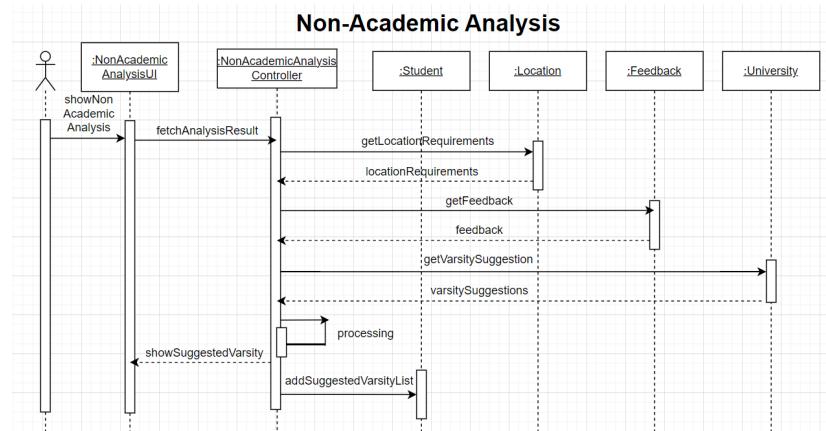


Figure 6.10: Sequence Diagram for Non Academic Analysis

6.11 Merged Analysis

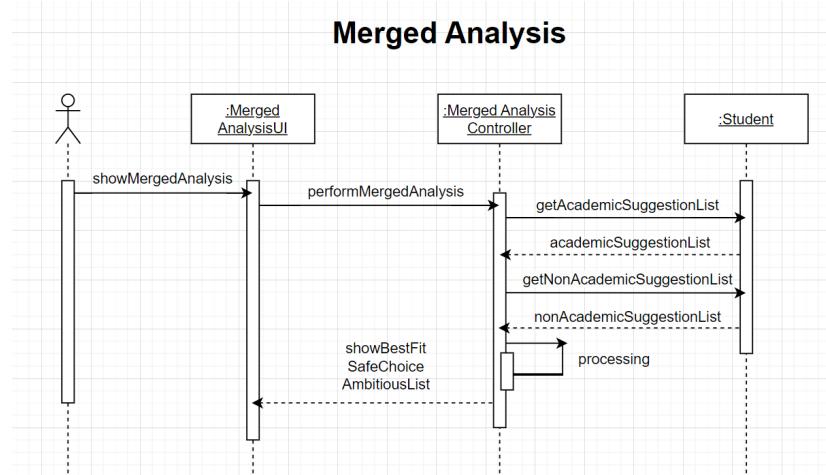


Figure 6.11: Sequence Diagram for Merged Analysis

Chapter 7

Collaboration Diagram

7.1 Profile Creation

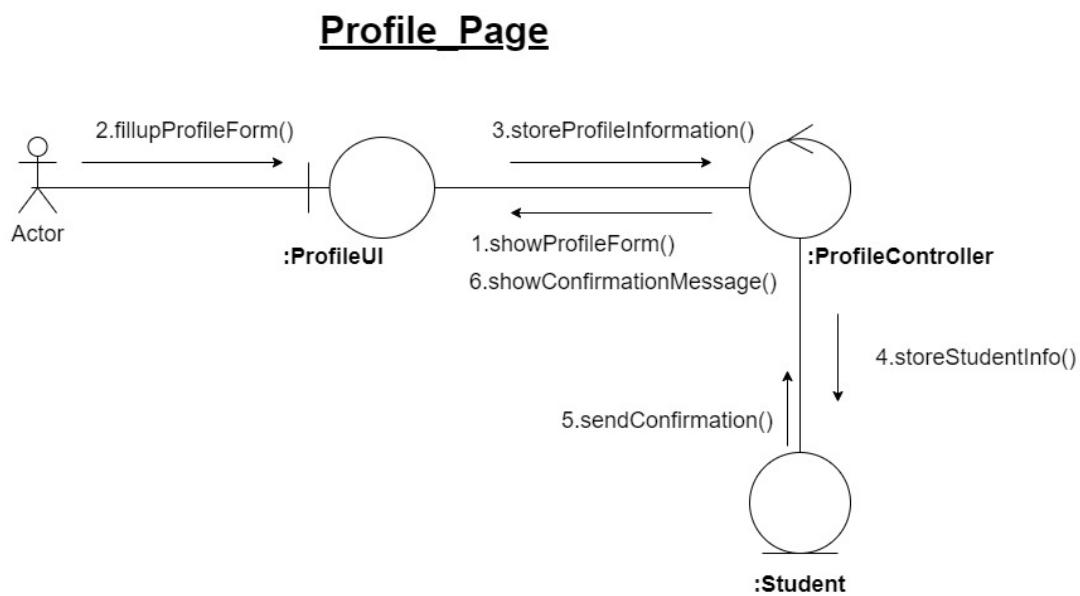


Figure 7.1: Profile Creation

7.2 Explore University

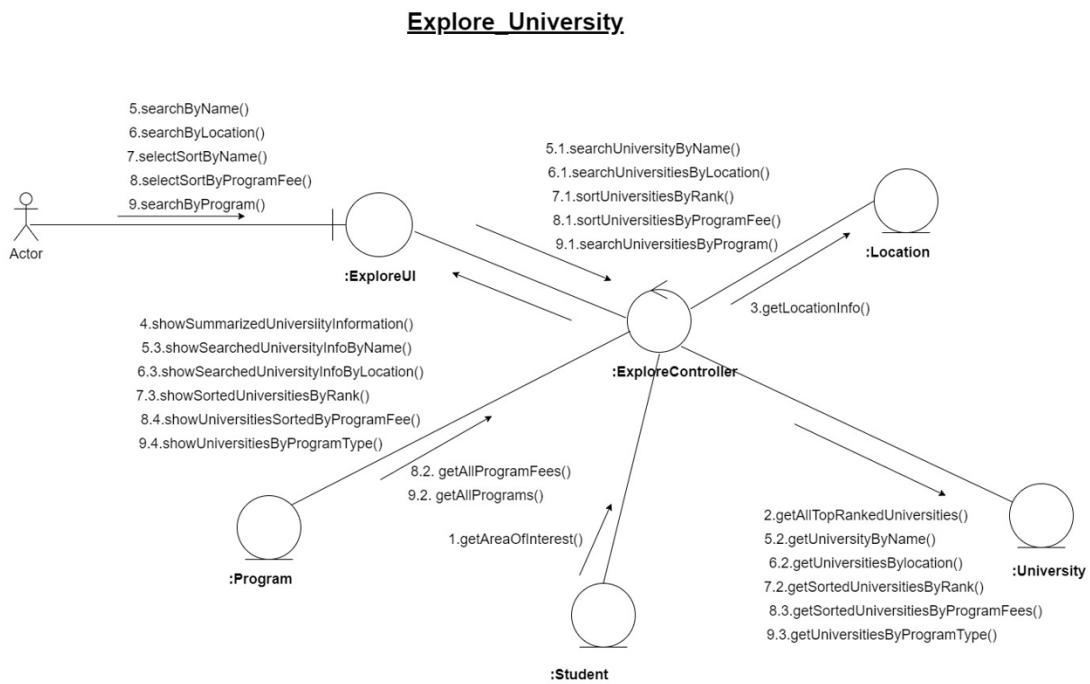


Figure 7.2: Explore University

7.3 University Details

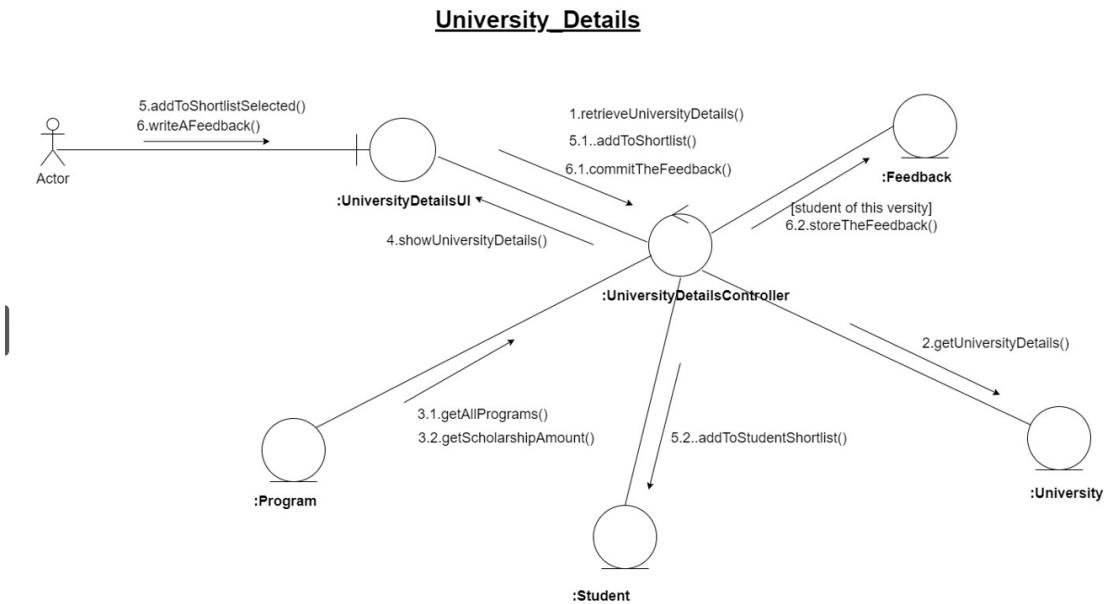


Figure 7.3: University Details

7.4 University Location

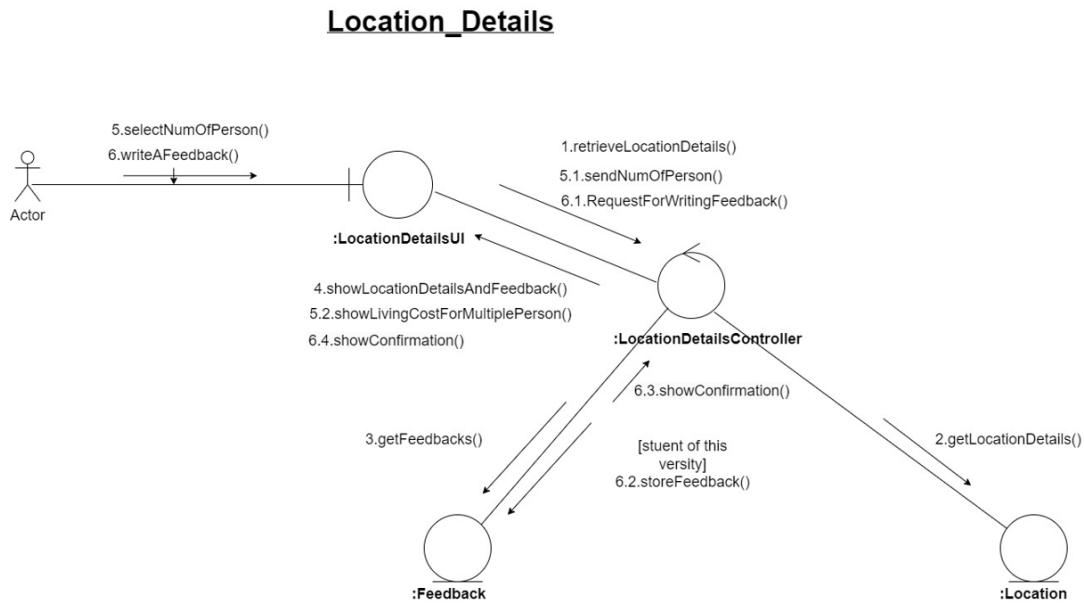


Figure 7.4: University Location

7.5 University Professor

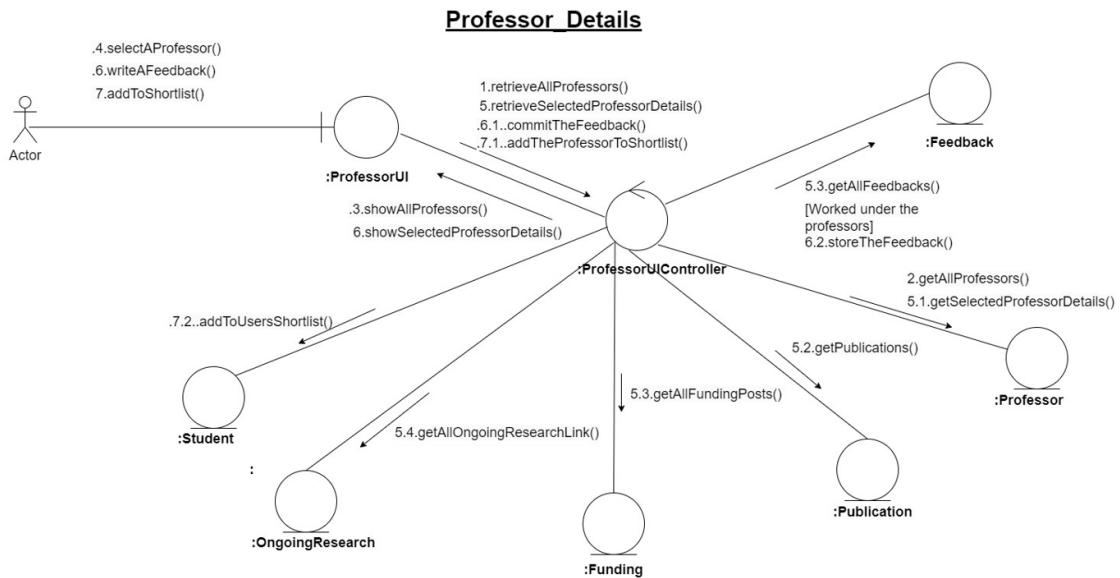


Figure 7.5: Vouchers

7.6 Ongoing Research

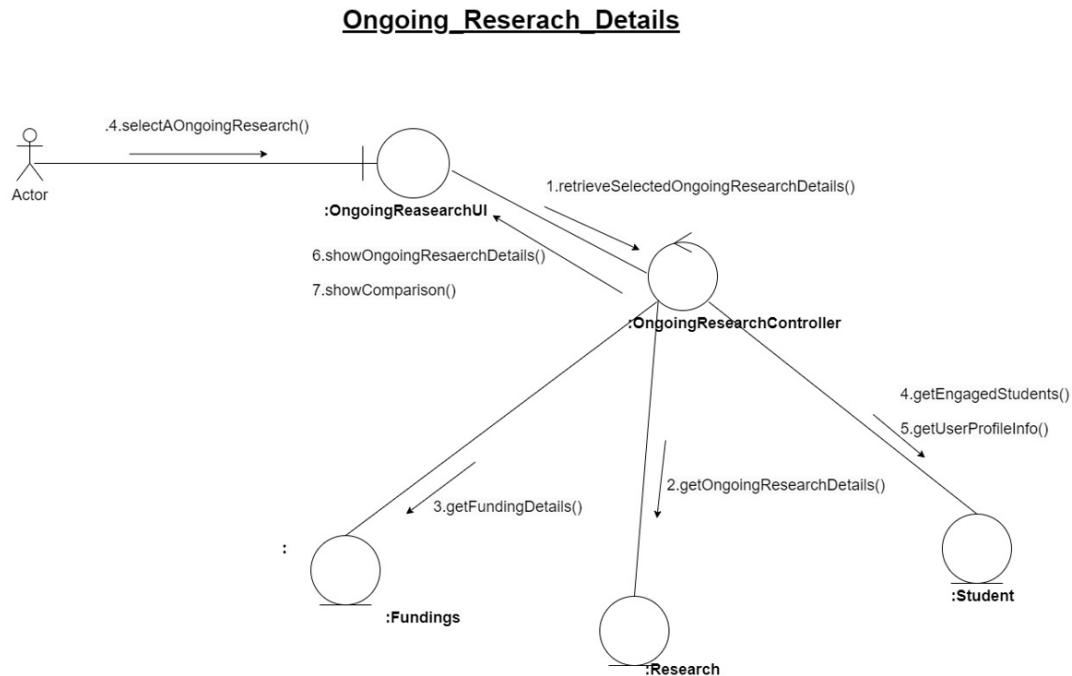


Figure 7.6: Ongoing Research

7.7 University Program

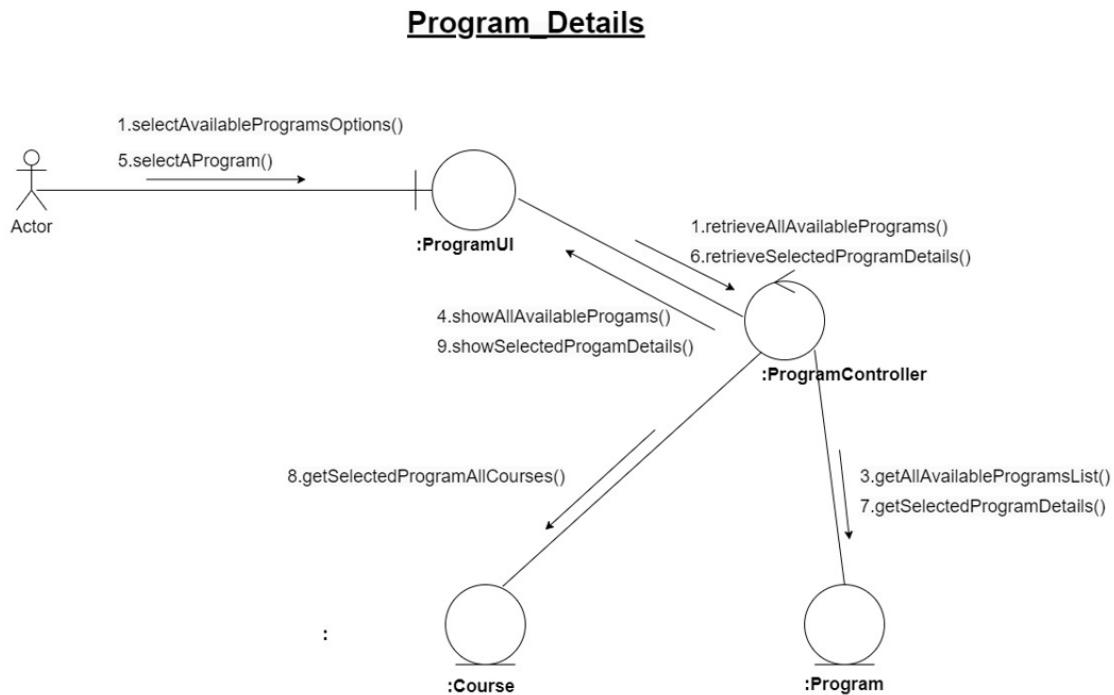


Figure 7.7: University Program

7.8 Current Students Page

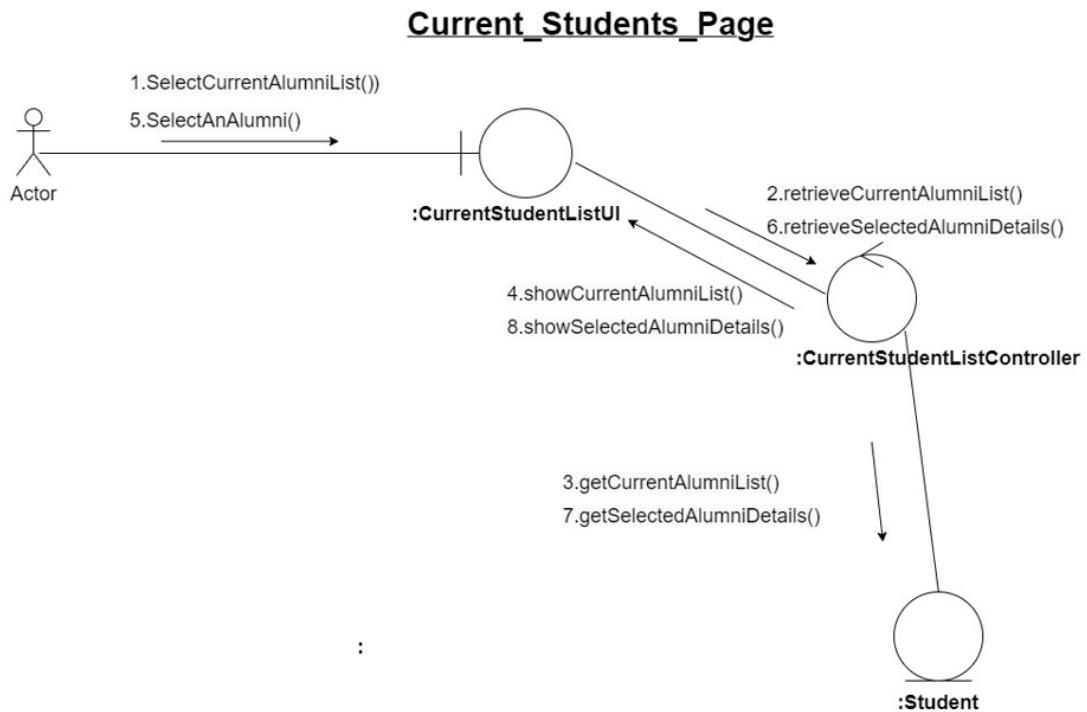


Figure 7.8: Current Students Page

7.9 Academic Analysis

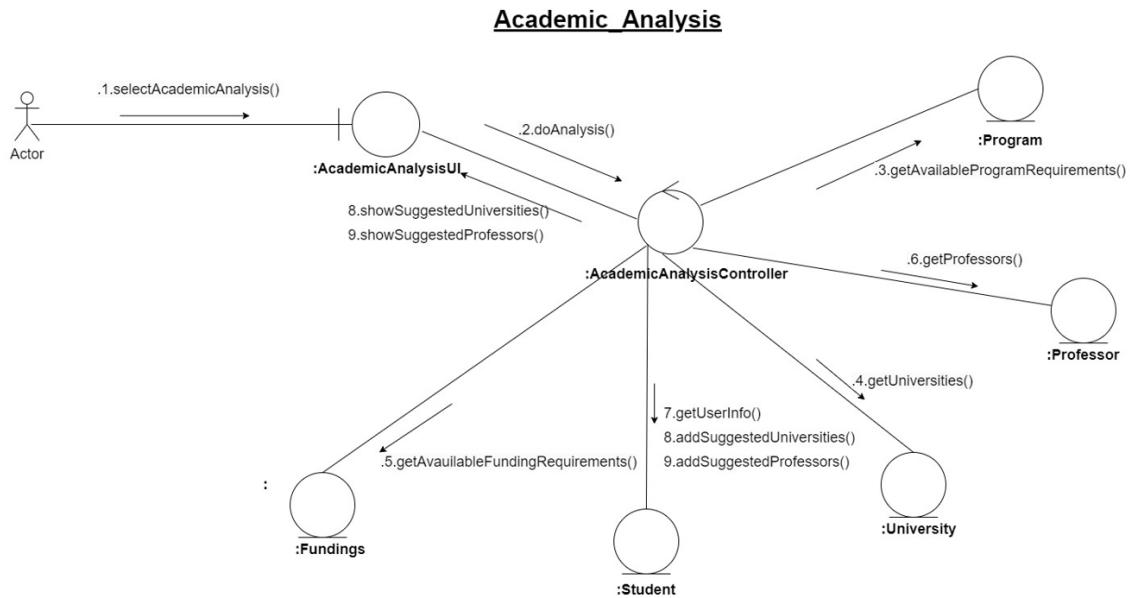


Figure 7.9: Academic Analysis

7.10 Non Academic Analysis

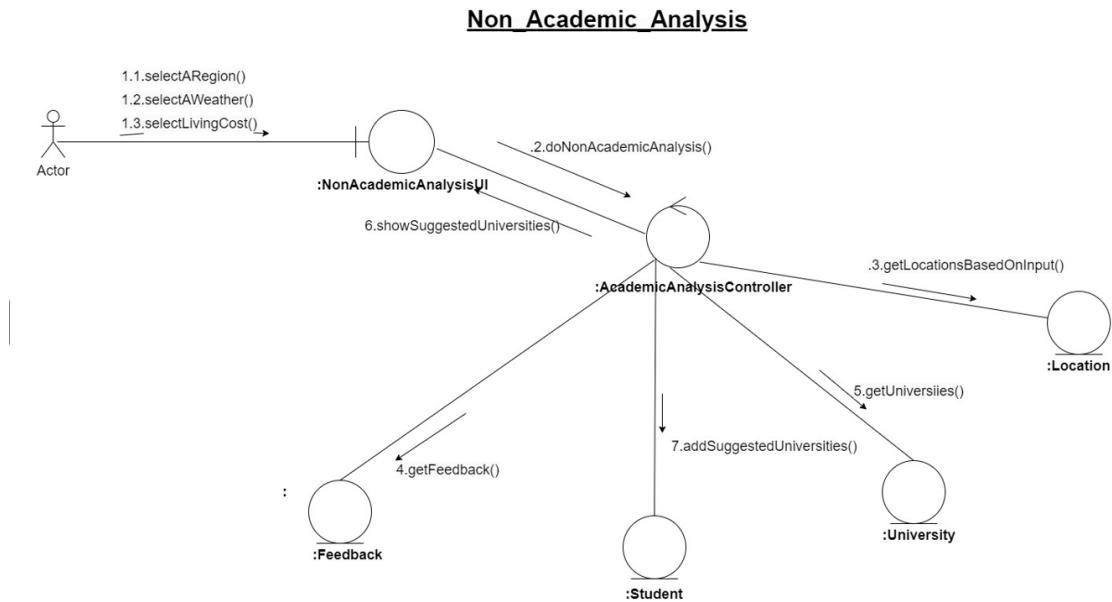


Figure 7.10: Non Academic Analysis

7.11 Merged Analysis

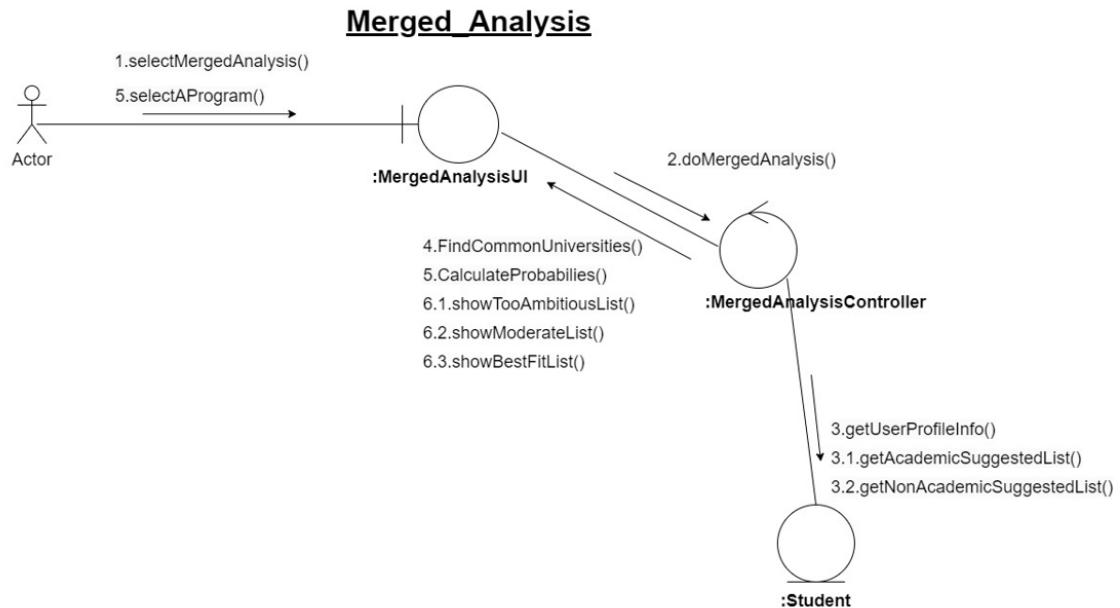


Figure 7.11: Merged Analysis

Chapter 8

State Diagrams

8.1 Student State Diagram

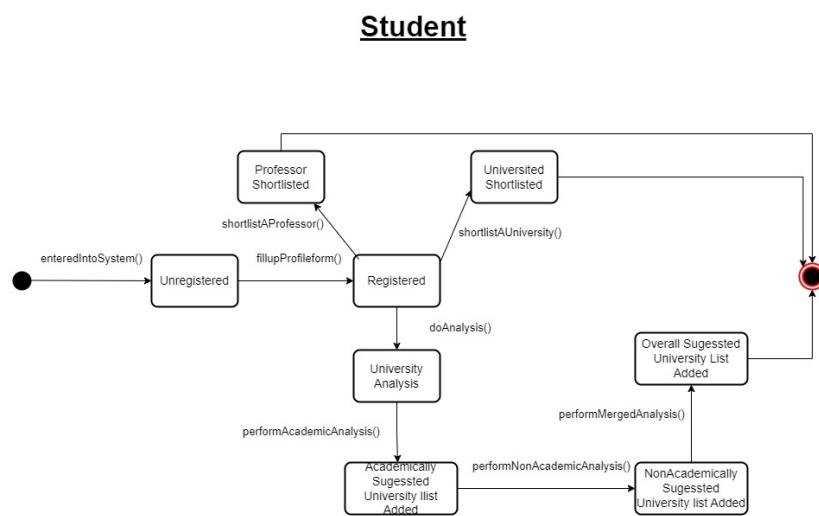


Figure 8.1: Student State Diagram

Chapter 9

Mock UI

9.1 User Profile

9.1.1 Personal Profile



A mockup of a personal profile page. At the top, there's a decorative header featuring silhouettes of the Statue of Liberty, Big Ben, a Ferris wheel, and other landmarks. Below this, the user's profile picture is centered, with a placeholder text "Click to change your avatar!" above it. To the left of the profile picture, a list of personal information is displayed. To the right, there are three buttons: "Edit profile" (yellow), "Go to Dashboard" (orange), and "View as public" (green). At the bottom right, there's a logo for "BEYOND THE SEAS" with a graduation cap icon.

Name: Ishika Tarin
Gender: Female
Age: 23 years **College:** BUET
Year of passing: 2024
Phone: +880XXXXXXXXX
Email: 1805092@gmail.com
CGPA: 3.XX **GRE:** 3XX
Field Of Interest: Web development, HCI, Networking, AI

Projects:

1. Withered away, link: <https://github.com/Ishikalme/withered-away-front>
2. Kirinku's warehouse , link: <https://github.com/Ishikalme/Kirinkus-Warehouse>

Publications:

1. Revealing Influences of Socioeconomic Factors over Disease Outbreaks, COMPASS'21, <https://dl.acm.org/doi/10.1145/3530190.3534804>

Edit profile **Go to Dashboard** **View as public**

BEYOND THE SEAS

Figure 9.1: Personal Profile

9.1.2 Public Profile



Click to change your avatar!

Name: Ishika Tarin
Gender: Female
College: BUET
Age: 23 years
Email: 1805092@gmail.com
Year of passing: 2024
Field Of Interest: Web development, HCI, Networking, AI

Projects:

- 1.Withered away, link: <https://github.com/Ishikalme/withered-away-front>
- 2.Kirinku's warehouse , link: <https://github.com/Ishikalme/Kirinkus-Warehouse>

Publications: 1. Revealing Influences of Socioeconomic Factors over Disease Outbreaks, COMPASS'21, <https://dl.acm.org/doi/10.1145/3530190.3534804>



Figure 9.2: Public Profile

9.2 Dashboard

The dashboard features a central 'Analyzer' icon connected to three input icons: 'Result' (with a bar chart), 'Funding' (with a piggy bank), and 'Facilities' (with a gear). Three colored boxes on the right list 'Too Ambitious' (pink), 'Probable chances' (orange), and 'Safe options' (light green) with numbered items 1, 2, and 3.

University Analysis
Are you tired of searching and searching for universities which is suitable for you? You will find 3 types of lists here- too ambitious, probable chances, safe options. Then you may find your perfect match according to your academic and non academic preferences.

View groups
See the chatting and discussions among your research group fellows.

Explore Universities
Your research need not include tens of browser tabs when you can surf through 2000+ universities abroad, all in one place. We have also made it more convenient for you with easy filters and sort options!

Forum and Discussions
Do you have any question regarding the whole process? Do you want to know how it feels to live in those areas? Or do you want to have a look at the questions of your peers? You can browse through 50k+ discussion threads here.

Beyond THE SEAS

Figure 9.3: Dashboard

9.3 Explore University

9.3.1 Before Search

Explore: Top Universities & Colleges for CSE in USA

All you need to know about university fees, courses, deadlines, scholarships and more.



Summarizing some useful information on top rank universities based on your field of interest

| | | |
|----|--|--|
| 1. | Massachusetts Institute of Technology (MIT) /Private #1st rank in CS Enrolment from your university: average 10 students per year during last 5 years Scholarship available for fields/ ongoing research: A: Machine learning (tap to view details) B: Human computer Interaction (tap to view details) Nearby Facilities: 10 public hospitals , 17 public schools Public transport: bus and rail | Sort by ↓ Season Rank Available Scholarship University Type Course tuition fees |
| 2. | Stanford University /Private #2nd rank in CS Enrolment from your university: average 5 students per year during last 5 years Scholarship available for fields/ ongoing research: A: Deep learning (tap to view details) B: Bioinformatics (tap to view details) Nearby Facilities: 17 public hospitals , 15 public schools Public transport: bus and rail | *The rank is done based on CS world rankings 2022-23   |

Figure 9.4: Explore page before search

9.3.2 After Search

Explore: Top Universities & Colleges for CSE in USA

All you need to know about university fees, courses, deadlines, scholarships and more.



New york

Showing top 3 results based on your search : New york
Sort by : Rank, Available Scholarship, University type: Private

| | |
|--|---|
| 1. Columbia University /Private #20th rank in CS | Sort by |
|  New York, United States | Season Rank |
| Scholarship available for fields/ ongoing research: A: Machine learning (tap to view details) B: Human computer Interaction (tap to view details) Nearby Facilities: 9 public hospitals , 13 public schools | Available Scholarship University Type |
| Tuition fee: \$25,350/yr in CS Living cost: \$5300/ m for 1, \$7800/ m for 4 (with rent) Public transport: bus and rail | Course tuition fees |
| 2. New York University /Private #25th rank in CS | *The rank is done based on QS world rankings 2022-23 |
|  New York, United States |  |
| Enrolment from your university: average 4 students per year during last 5 years Scholarship available for fields/ ongoing research: A: Deep learning (tap to view details) Nearby Facilities: 9 public hospitals , 13 public schools | Back |
| Tuition fee: \$20,350/yr in CS Living cost: \$5300/ m for 1, \$7800/ m for 4 (with rent) Public transport: bus and rail | |

Figure 9.5: Explore page after search

9.4 Search Result

Columbia University

New York, United States • Private University • Established in 1754

Columbia University (CU) is a private research university based in New York City. Established in 1896, Columbia University is considered one of the most admired schools in the world and is one of the nine colonial colleges that originated before the Declaration of Independence. It has become a part of the "Ivy League", being the fifth-oldest institution of higher education in the US, with an annual Columbia University fees of \$31,285/ INR 25.87 lakhs. As per 2021-22 enrolment statistics, Columbia University enrolled around 18,000+ international students and scholars from 150+ countries.

The average GPA of admitted students for the UG program at Columbia University New York is 3.19 (86%), and for PG programs, 3.6 (91%) on a scale of 4.0. The most enrolled PG programs of Columbia are of the "Fu Foundation of Engineering & Applied Science", with 3,043 international students. Followed by the Graduate School of Arts and Sciences with 2,465 international students. Further, the financial aid offered in need-based assistance makes Columbia affordable for international students. Half of the Columbia students receive financial assistance, with the average aid amount being 63,971 USD (INR 52.9 lakhs).

International Students

| % of international students in the university | Total International Students in the university |
|---|--|
| 53.9 | 16956 |

[Write a Review](#) [★ Add to Shortlist](#) [View professors](#)

Courses
Find the updated list of courses available in this university

MS in Data Science
Graduate School of Arts and Sciences

| Application deadline | Degree |
|----------------------|-------------|
| Fall, 15/01/2023 | Masters |
| Duration | Tuition fee |
| 12 Months | \$68,400/yr |

MS in Computer Science
The FU Foundation School of Engineering and Applied Science

| Application deadline | Degree |
|----------------------|-------------|
| Rolling | Masters |
| Duration | Tuition fee |
| 12 Months | \$68,360/yr |

Cost of Studying at Columbia University

| Average tuition fee | Living expenses |
|---------------------------------|---|
| High-end \$65 - \$250 | Average living expenses (Masters) \$79,368 |
| | Average on-campus living expenses \$19,300 |

Admissions at The Columbia University

| Application Fee |
|-----------------|
| \$65 - \$250 |

Rankings for The Columbia University

| US World and News Report |
|--------------------------|
| #6 |

[Back to Exploring](#)

BEYOND THE SEAS

Figure 9.6: Search Result : University of Columbia Page

9.5 Professor List

A wide-angle photograph of a large, classical-style building with many windows and columns, identified as Butler Library at Columbia University. To the right is a modern brick building. The sky is blue with white clouds. On the far right, there is a graphic element featuring a blue crown icon above the text "BEYOND THE SEAS".

Showing professors based on your field of interest :

A. Networking

| | |
|---|----------------------------|
| 1. Md Asif Haider mail: asifelhan22@gmail.com personal website: https://sites.google.com/site/asifhaider/home official website: https://www.cuit.columbia.edu/faculty/php?id=asif publication links: 1. DOI:10.3390/healthcare10101929 2. DOI:10.3390/1999 ongoing researches: 1. https://sites.google.com/site/meftrain/ 2. https://sites.google.com/site/brainnetwork/ | learn more |
| 2. Azizur Rahman Anik mail: anik2422@gmail.com personal website: https://sites.google.com/site/anikazizur/home official website: https://www.cuit.columbia.edu/faculty/php?id=anik publication links: 1. DOI:10.3390/re10106469 2. DOI:10999 ongoing researches: 1. https://sites.google.com/site/collway/ 2. https://sites.google.com/site/deepei/ | learn more |

B. Artificial Intelligence

| | |
|---|----------------------------|
| 1. MD Shahriar fahim | learn more |
| mail: fahimshah22@gmail.com | |
| personal website: https://sites.google.com/site/afhm/home | |
| official website: https://www.cuit.columbia.edu/faculty/php?id=fahim | |
| publication links: 1. DOI:10.3 ... 2. DOI:10.3 ... 3.DOI: 21313 | |
| ongoing researches: 1. https://sites.google.com/site/robotichand/ | |
| 2. https://sites.google.com/site/camera/ | |
| Funding available: Yes | |
| 1. Anika Monir | learn more |
| mail: anikamonir@gmail.com | |
| personal website: https://sites.google.com/site/kayanika/home | |
| official website: https://www.cuit.columbia.edu/faculty/php?id=anika | |
| publication links: 1. DOI:10.34242/24 | |
| ongoing researches: 1. https://sites.google.com/site/robocop/ | |
| 2. https://sites.google.com/site/camera/ | |
| Funding available: Yes | |

Figure 9.7: Professor List

9.6 Professor Details



Md Asif Haider

Contact information:
Room# 417, Department of Computer Science and Engineering, New Academic Building, West Polashi, Columbia University, New York, United States
Email: asifelhan22@gmail.com
Personal website: <https://sites.google.com/site/asifhaider/home>
Official website: <https://www.cuit.columbia.edu/faculty/php?id=asif>
Funding available: Yes Field of interest: Networking, HCI, Deep learning

Teaching experience:
Graduate:
1. CSE6913: Network Security (2022) [Course web page], (2014-2015) [Course web page]
2. CSE6804: Computer Communications and Networks-I (2014)
3. CSE6811: Wireless Ad Hoc Networks (2015-2016) [Course web page], (2012-2013) [Course web page]
4. CSE6207: Advanced Dependable and Fault-Tolerant Computer Systems (2021, 2020, 2017-2018, 2016-17) [Course web page]

Students under this professor:

1. Ruhul azgor **profile:** <https://beyondtheseas.id/razgor> **Engaged in research:** <https://sites.google.com/site/brainnetwork/>

2. Afroze disa **profile:** <https://beyondtheseas.id/adisa> **Engaged in research:** <https://sites.google.com/site/brainnetwork/>

Funding posts of this professor:

 **Posted 6 mos ago**
I need students working for a new project called "Metro rail", prerequisite is minimum B grade in the course "Computer networking". Fund will be sufficient, as 2000 per month.

How much your profile matches with the students who are working with this professor:

bad fit good fit average fit excellent fit best fit

Publication links:
1. DOI:10.3390/healthcare10101929
2. DOI:10.3390/1999

Ongoing researches:
1. <https://sites.google.com/site/metrorail/>
2. <https://sites.google.com/site/brainnetwork/>

Experiences shared by students working under this professor:
Ehsan sumon: ★ ★ ★ ★ ★
Tough professor, dry humor, otherwise a great teacher. Has reasonable expectations, is prepared to help if you have shown an honest independent attempt at tackling material (you are an adult learner right?) PRIOR to reaching out for help.



Figure 9.8: Professor Details

9.7 Student from users University

back

Students from Your University Currently Studying in Columbia University

| | | |
|----|---|---|
| 1. |  Nusrat Labiba | Field on interest: Networking, Artificial intelligence Profile: https://beyondtheseas//id//nlabiba Currently working on: https://sites.google.com/site/brainnetwork/ Currently living on: 299 baltimore street, new york Email: nlablab@gmail.com |
| 2. |  Prangan chakrabarty | Field on interest: Bioinformatics, HCI Profile: https://beyondtheseas//id//prangan Currently working on: https://sites.google.com/site/metrorail/ Currently living on: 22 Park Avenue, new york Email: pranganchakrabarty@gmail.com |
| 3. |  Shehabul Islam Sawraz | Field on interest: Networking, Security Profile: https://beyondtheseas//id//sawraz Currently working on: https://sites.google.com/site/cloudcomputing/ Currently living on: 244 Wall Street, New York Email: shehabsawraz@gmail.com |

▼More



Figure 9.9: Student from users University

9.8 Academic Analysis

9.8.1 Academic Analysis Options

Academic analysis

All you need to know about university fees, courses, deadlines, scholarships and more.

Data collected from traffic: Data collected from server:

cgpa: 3.XX Available fundings:
GRE score: 340

Choose options(0 or more)

Add Area of Interest Analysis by project Analysis by research and publication

AI
 Network
 Database



*The rank is done based on QS world rankings 2022-23

Show analysis result Go to Dashboard



Figure 9.10: Academic Analysis option selection

9.8.2 Academic Analysis Result

Profile

View shortlist

View Groups

View your questions

Go premium

Dashboard

University Anaysis

Explore universities

UNIVERSITY ANALYSIS

ACADEMIC ANALYSIS (TOP FIVE BEST MATCH)

Ishika Tarin
[Go to Non academic analysis](#)

*sorted by QS ranking 2022-23

| | | | |
|----|---|--|---|
| 1. | John Hopkins University Baltimore, MD | Rank #27 View details | Scholarship: Available Institution Type: Private Student Enrollment: 27,079 |
| 2. | Washington and Lee University Lexington, VA | Rank #28 View details | Scholarship: Available Institution Type: Private Student Enrollment: 2,264 |
| 3. | Emory University Atlanta, GA | Rank #41 View details | Scholarship: Available Institution Type: Private Student Enrollment: 14,415 |
| 4. | Boston College Chestnut Hill, MA | Rank #47 View details | Scholarship: Available Institution Type: Private Student Enrollment: 14,747 |
| 5. | Duke University Durham, NC | Rank #52 View details | Scholarship: Available Institution Type: Private Student Enrollment: 9,924 |

Figure 9.11: Academic Analysis Result

9.9 Non Academic Analysis

9.9.1 Non Academic Analysis Options

Non Academic analysis

Analysis from your non academic preferences like location, weather etc

Choose options(0 or more)

Select Location Choose a state name (ig New york)

Select weather Choose your preferable weather (ig warm)

[Show analysis result](#) [Go to Dashboard](#)



Figure 9.12: Non Academic Analysis option selection

9.9.2 Non Academic Analysis Result

Profile

View shortlist

View Groups

View your questions

Go premium

Dashboard

University Anaylsis

Explore universities

I Ishika Tarin 🏛️

UNIVERSITY ANALYSIS

NON ACADEMIC ANALYSIS (TOP FIVE BEST MATCH)
*sorted by QS ranking 2022-23

| | | | |
|----|---|--|---|
| 1. | Stanford University Stanford, CA Weather: warm | View details Rank #3 | Scholarship: Available Institution Type: private Student Enrollment: 9,292 |
| 2. | University of California Los Angeles, California Weather: warm | View details Rank #26 | Scholarship: Available Institution Type: Public Student Enrollment: 44,371 |
| 3. | Emory University Atlanta, GA Weather: warm | View details Rank #41 | Scholarship: Available Institution Type: private Student Enrollment: 14,415 |
| 4. | University of Texas Austin, United States Weather: warm | View details Rank #72 | Scholarship: Available Institution Type: Private Student Enrollment: 27,079 |
| 5. | University of Georgia Athens, GA Weather: warm | View details Rank #310 | Scholarship: Available Institution Type: Private Student Enrollment: 37,606 |

BEYOND
THE SERS

Figure 9.13: Non Academic Analysis Result

58

9.10 Too Ambitious Choices

The screenshot shows a user interface for 'UNIVERSITY ANALYSIS'. On the left, there's a sidebar with links: Profile, View shortlist, View Groups, View your questions, Go premium, Dashboard, University Anaysis (which is selected), and Explore universities. Below these links is a decorative illustration of a student sitting at a desk with books, a laptop, and travel-related items like a suitcase and a map.

The main content area is titled 'UNIVERSITY ANALYSIS' and displays 'TOO AMBITIOUS FROM ACADEMIC AND NONACADEMIC ANALYSIS *sorted by QS ranking 2022-23'.

The results are listed as follows:

1. **Stanford University** [View details](#) Rank #3 Scholarship: Available
Stanford, CA Institution Type: private
Weather: warm Student Enrollment: 9,292
2. **University of California** [View details](#) Rank #26 Scholarship: Available
UCLA Los Angeles, California Institution Type: Public
Weather: warm Student Enrollment: 44,371
3. **Columbia University** [View details](#) Rank #30 Scholarship: Available
Columbia University New York Institution Type: private
Weather: warm Student Enrollment: 44,371

In the top right corner, there's a profile icon for 'Ishika Tarin' and a crown icon. Below the main content is a logo for 'BEYOND THE SEAS' featuring a graduation cap and a globe.

Figure 9.14: Too Ambitious Choices

9.11 Probable Chances

The screenshot shows a user interface for a university analysis tool. On the left is a sidebar with links: Profile, View shortlist, View Groups, View your questions, Go premium, Dashboard, University Anaysis, and Explore universities. Below these is a decorative graphic of a person sitting at a desk with a globe, a plane, and travel-related items.

The main area is titled "UNIVERSITY ANALYSIS" and features a section titled "PROBABLE CHANCES FROM BOTH ANALYSIS". It includes a note "*sorted by QS ranking 2022-23". At the top right, there's a profile icon for "Ishika Tarin" with a crown icon, and a button "See academic analysis".

The list of universities is as follows:

- John Hopkins University** (JHU) - Baltimore, MD
View details | Rank #27 | Scholarship: Available
Institution Type: Private
Student Enrollment: 27,079
Weather: not so cold
- Washington and Lee University** (W&L) - Lexington, VA
View details | Rank #28 | Scholarship: Available
Institution Type: Private
Student Enrollment: 2,264
Weather: not so cold
- Boston College** (BC) - Chestnut Hill, MA
View details | Rank #47 | Scholarship: Available
Institution Type: Private
Student Enrollment: 14,747
Weather: little cold
- Duke University** (Duke) - Durham, NC
View details | Rank #52 | Scholarship: Available
Institution Type: Private
Student Enrollment: 9,924
Weather: little cold

At the bottom right, there is a logo for "BEYOND THE SEAS" with a stylized map icon.

Figure 9.15: Probable Chances

9.12 Safe Options

The screenshot shows a mobile application interface. On the left is a vertical navigation bar with teal-colored buttons:

- Profile
- View shortlist
- View Groups
- View your questions
- Go premium
- Dashboard
- University Analysis
- Explore universities

Below the navigation bar is a decorative graphic of a person sitting at a desk with a laptop, books, and a suitcase, set against a world map background.

The main content area is titled "UNIVERSITY ANALYSIS". At the top right are user profile icons for "Ishika Tarin" and a crown icon. Below the title is a subtitle: "SAFE OPTIONS FROM BOTH ACADEMIC AND NON ACADEMIC ANALYSIS *sorted by match percentage".

The main content displays three university options in a grid:

| Rank | University Name | Location | Weather | Action Buttons | Details |
|------|------------------------------|-----------------------|---------|---|---|
| 1. | Emory University | Atlanta, GA | warm | View details Rank #41 | Scholarship: Available Institution Type: Private Student Enrollment: 14,415 |
| 2. | University of Texas | Austin, United States | warm | View details Rank #72 | Scholarship: Available Institution Type: Private Student Enrollment: 27,079 |
| 3. | University of Georgia | Athens, GA | warm | View details Rank #310 | Scholarship: Available Institution Type: Private Student Enrollment: 37,606 |

At the bottom right is a logo for "BEYOND THE SEAS" featuring a stylized globe icon.

Figure 9.16: Safe Options

9.13 University Shortlist

VIEW YOUR SHORTLIST

| | | |
|----|--|--|
| 1. | Columbia University New York, United States | Scholarship: Available View details |
| 2. | Cornell University New York, United States | Scholarship: Available View details |
| 3. | West Virginia University Morgantown, United States | Scholarship: Available View details |



Figure 9.17: University Shortlist

9.14 Premium User

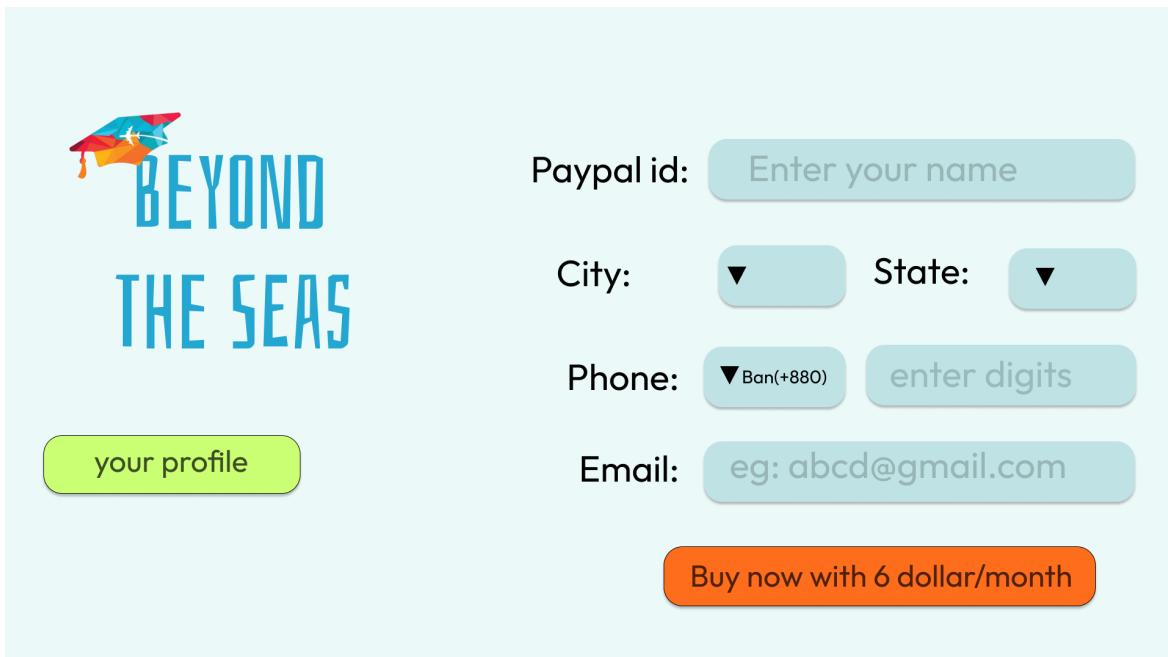


Figure 9.18: Premium User

Chapter 10

Software Demo

10.1 Implemented Features

- Homepage (Explore University)
- Search University
- Sort University

10.2 Technology Overview

- **Backend:** Django (Python)
- **Frontend:** Bootstrap (HTML, CSS, Javascript)
- **Relational Database:** PostgreSQL
- **Deployment:** Render cloud services
- **Architecture:** Monolithic, Model-View-Controller pattern
- **Version Control:** Git, GitHub

10.3 User Interface

10.3.1 Homepage

The landing homepage shows a list of universities for further exploration.

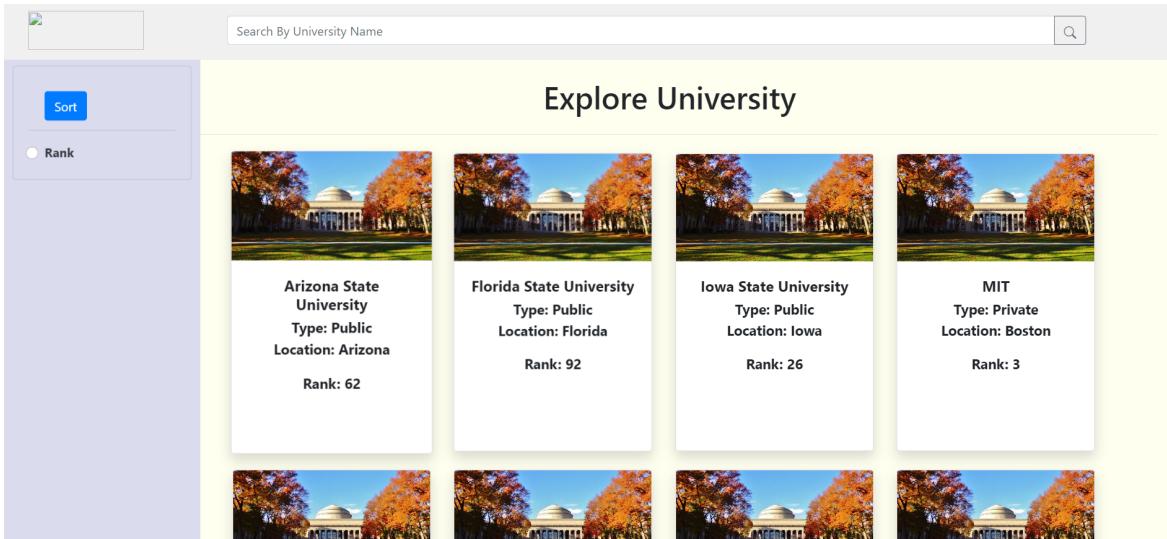


Figure 10.1: Explore University

10.3.2 Search University

Apart from viewing university cards, users can perform searches based on university names from the homepage. A dedicated search bar was designed for this purpose.

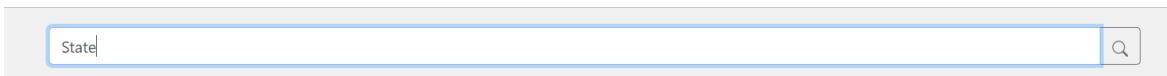


Figure 10.2: Search Bar

Explore University



Arizona State University
Type: Public
Location: Arizona
Rank: 62



Florida State University
Type: Public
Location: Florida
Rank: 92



Iowa State University
Type: Public
Location: Iowa
Rank: 26

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Figure 10.3: Search Result

10.3.3 Sort University

Users can sort and view universities based on recent rank.

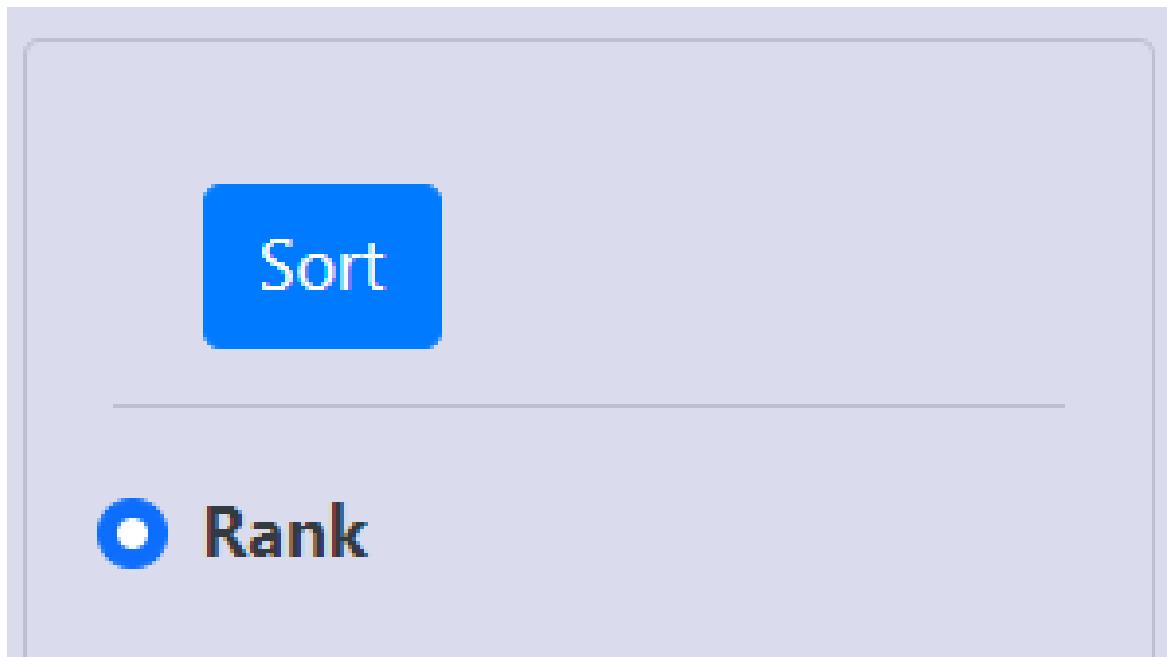


Figure 10.4: Sort Sidebar

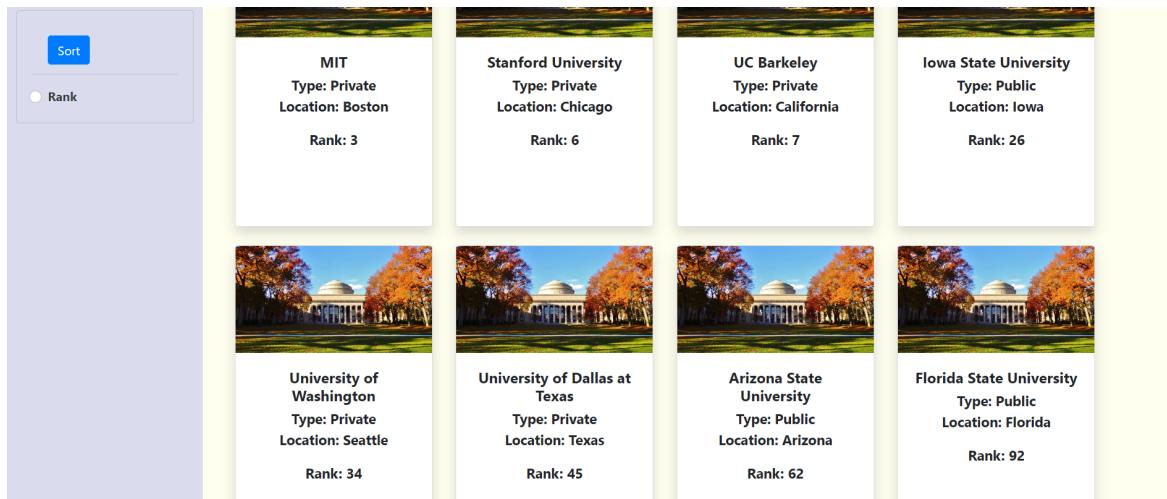


Figure 10.5: Sorting based on rank

10.3.4 University Details

University Details



Florida State University
Rank: 92
Website: [Link](#)
Type: Public

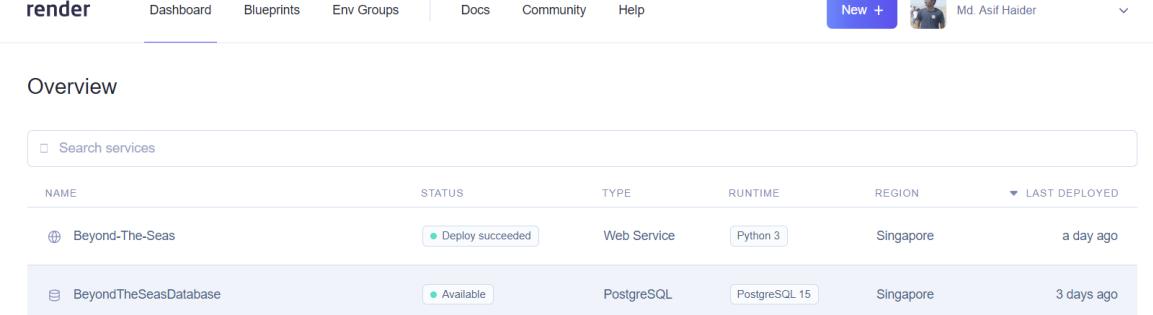
Location Details
Location: Florida
Average Cost: 3000.0\$
Weather: Warm

© 2022 Copyright: Beyond The Seas

Figure 10.6: University Details

10.4 Cloud Deployment

We used the Render cloud service to deploy our database and web backend systems.



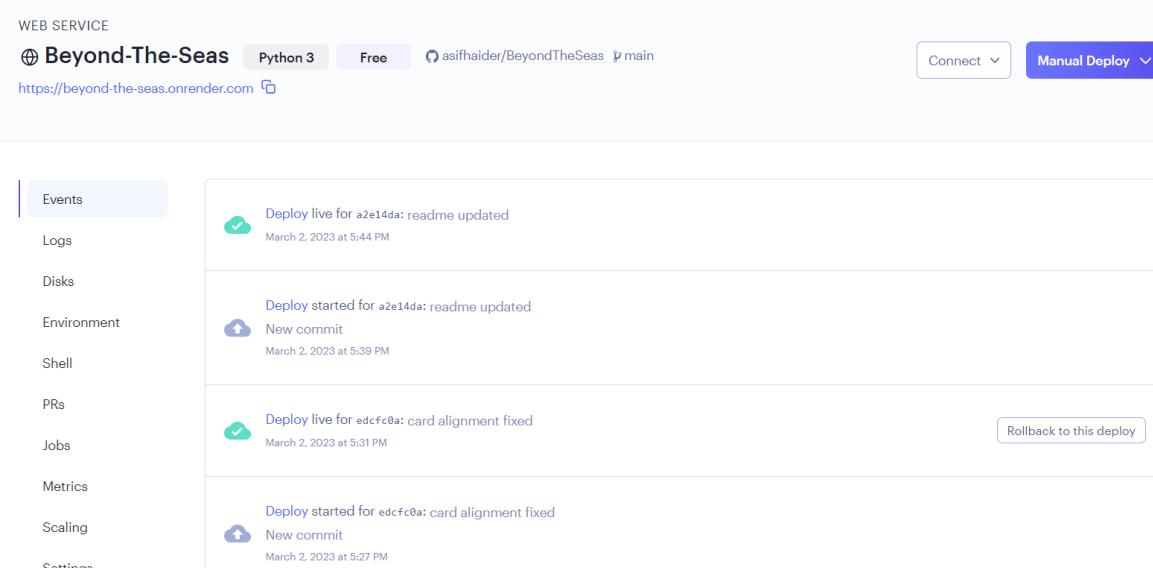
The screenshot shows the Render web interface. At the top, there's a navigation bar with links for Dashboard, Blueprints, Env Groups, Docs, Community, Help, and a user profile for Md. Asif Haider. Below the navigation is a search bar labeled "Search services". A table lists two services:

| NAME | STATUS | TYPE | RUNTIME | REGION | LAST DEPLOYED |
|-----------------------|------------------|-------------|---------------|-----------|---------------|
| Beyond-The-Seas | Deploy succeeded | Web Service | Python 3 | Singapore | a day ago |
| BeyondTheSeasDatabase | Available | PostgreSQL | PostgreSQL 15 | Singapore | 3 days ago |

Figure 10.7: Render web service

10.4.1 Database

Relational database PostgreSQL was used to store the project data. A PostgreSQL instance was created and connected to the Django backend for this purpose.



The screenshot shows the Render service details page for "Beyond-The-Seas". At the top, it displays the service name, runtime (Python 3), plan (Free), owner (asifhaider/BeyondTheSeas), branch (main), and deployment status (Deploy succeeded). It also includes "Connect" and "Manual Deploy" buttons. On the left, a sidebar lists various monitoring and management tabs: Events (selected), Logs, Disks, Environment, Shell, PRs, Jobs, Metrics, Scaling, and Settings. The main area shows deployment history:

- Deploy live for a2e14da: readme updated (March 2, 2023 at 5:44 PM)
- Deploy started for a2e14da: readme updated (New commit, March 2, 2023 at 5:39 PM)
- Deploy live for edcfc0a: card alignment fixed (March 2, 2023 at 5:31 PM) with a "Rollback to this deploy" button
- Deploy started for edcfc0a: card alignment fixed (New commit, March 2, 2023 at 5:27 PM)

Figure 10.8: Deployment

10.4.2 Version Control

We used git and GitHub for maintaining source code, and team collaboration. The GitHub repository is also connected to the web service we used that directly triggers deployment changes upon a remote push.

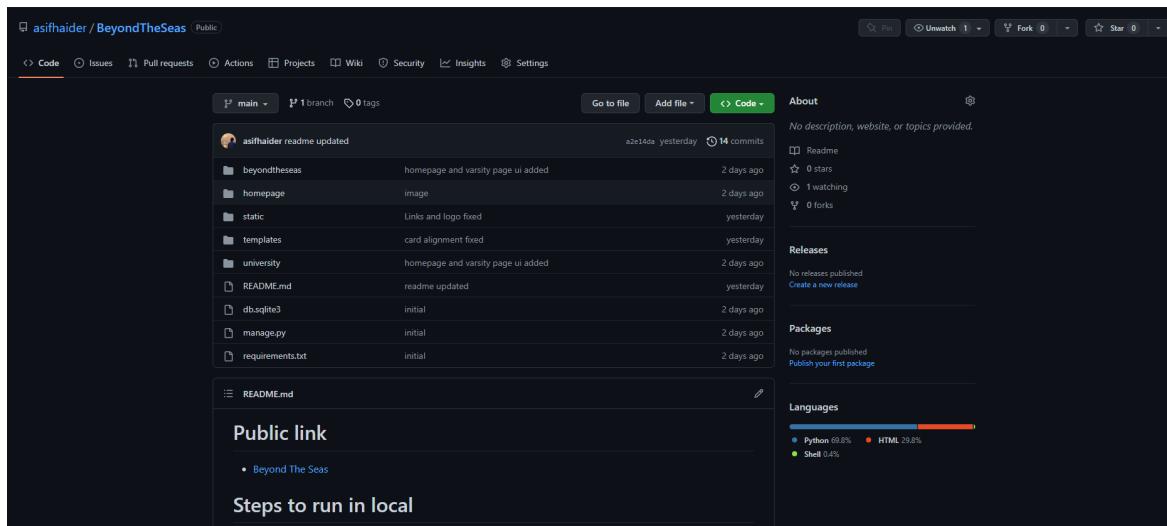


Figure 10.9: Project GitHub repository