Software Requirements Specification

for

Graduation Placement Service (GPS)

Version 2.0 approved

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Cherry

2023/4/4

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Revision History

Name	Date	Reason For Changes	Version
Joshua	2023/3/7	First Draft.	1.0
Joshua	2023/3/14	Add Information about Section 3 and 4.1.	1.1

		Modified the first draft.	
Joshua	2023/3/21	Add more state transition models.	1.2
Joshua	2023/3/28	Add class diagrams and sequence diagrams of this system. Correct the error previously made.	1.3
Joshua	2023/4/4	Correct and update the class diagram and sequency diagram. The final SRS.	2.0

1. Introduction

1.1 Purpose

This software requirement specification is to help readers get an overview of our project. It is currently version 1.0 of this product. Next, it will give us a detailed introduction to the various characteristics of the product, such as its audience and users, and the operating environment of the product. The third part is the system characteristics of the product. The fourth section lists the requirements for the external interface. The fifth part is the customer's other non-functional requirements for the product. For example, performance requirements and security requirements. The sixth part is the appendix.

1.2 Document Conventions

In this document, the title will use black bold Time New Romans font. The subtitle will use Time New Romans font. The body text will use Time New Romans. Important message or words will be black bold.

1.3 Intended Audience and Reading Suggestions

The intended audience of this document is:

- Developer: Introduction, overall description system features, external interface requirements, other nonfunctional requirements, other requirements.
- User: introduction, overall description system features, external interface requirements.
- Project Manager: introduction, system features, external interface requirements, other nonfunctional requirements, other requirements.
- Marketer: introduction, overall description system features.
- Tester: introduction, overall description, other nonfunctional requirements, other requirements.
- Document author: introduction, overall description system features, external interface requirements, other nonfunctional requirements, Introduction, overall description system features, external interface requirements, other nonfunctional requirements, other requirements.

This document has two main audiences: test managers and testers.

According to this test plan, the test manager makes further plans, schedules (work assignments, schedules), and controls the testing process.

This test plan allows testers to learn about the testing process and related information. The tester identifies test requirements, designs test cases, executes and documents test procedures, and records and reports defects according to the scope and methodology outlined in the test plan.

1.4 Project Scope

The purpose of the Graduation Placement Service (GPS) project is to help UIC undergraduate students know more information about admissions of postgraduate (PG) universities and jobs through the data of previous UIC graduates, so that students can have a better understanding of their own situation and make appropriate choices. The completion of the project is beneficial to the subsequent business development of the corporate and can attract more partners. At the same time, we can cooperate for a long time for the maintenance and update of GPS in the later period.

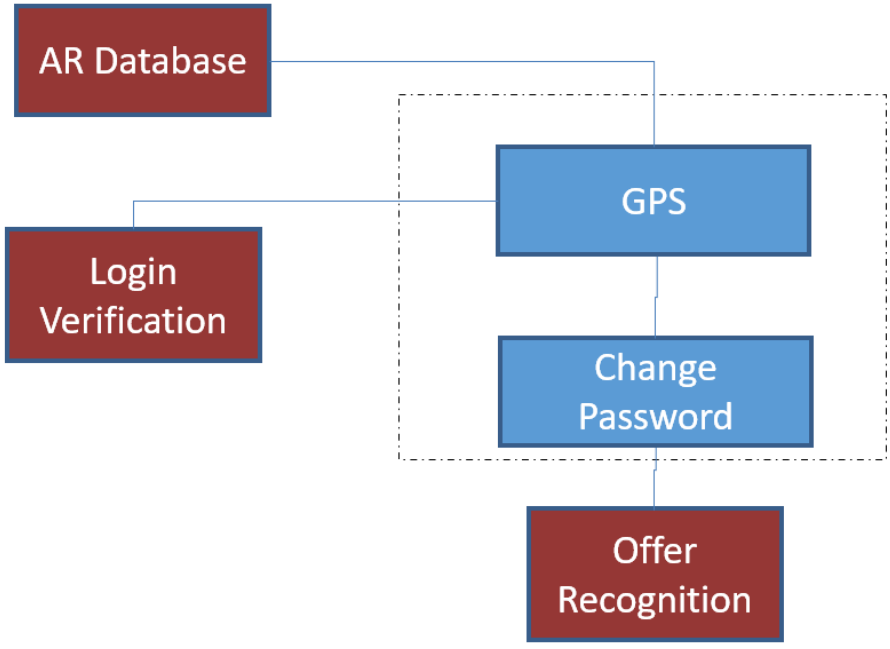
1.5 References

Graduation Placement Service (GPS), https://ispace.uic.edu.hk/mod/resource/view.php?id=436557

2. Overall Description

2.1 Product Perspective

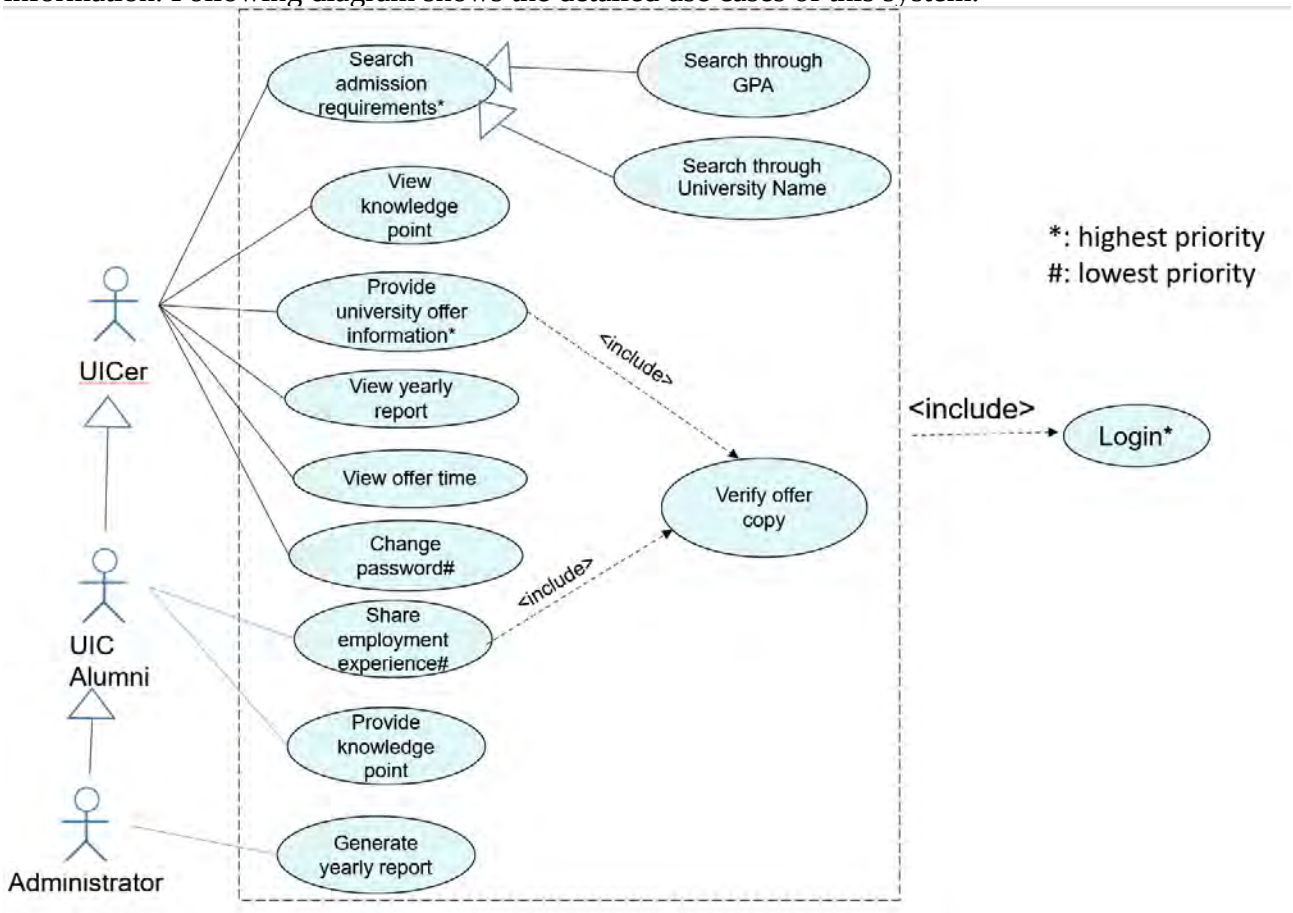
This product is a new, self-contained Graduation Placement Service (GPS) Software, which is for different students obtained different services. It is a large system which contains different components (subsystems). Following is a simple diagram to illustrate the design of this system.



2.2 Product Features

There are three major features of this product including the service for alumni, students who received offers, students who want to apply for postgraduate programs or jobs. For the alumni, they can upload their offers and share some information about universities' programs; For students who

want to apply (which is our main users), they can check their GPA and other universities information. Following diagram shows the detailed use cases of this system.



2.3 User Classes and Characteristics

College students who are Y3 or Y4 students are the most frequent users, and they have the greatest demand for our software.
New college students who haven't decided which school to apply to yet or users who have already applied to the school and may only use the software occasionally.

2.4 Operating Environment

This software will run on a browser which can open in multiple devices (computers, mobile phones, tablets etc.). It can run on any platforms which contains HTML browsers, such as Windows, MacOS, iOS, Android and so on.

2.5 Design and Implementation Constraints

The database design: set up a MySQL database environment and use MariaDB Connector to connect the database.
Programming language : python html php.
The capacity of the database may need to be expanded as the number of users increases.

2.6 User Documentation

FAQ,User manual.

2.7 Assumptions and Dependencies

Perhaps UIC will not authorize us to use their database, so we may need to manually collect the information ourselves, or purchase the information from UIC.

3. System Features

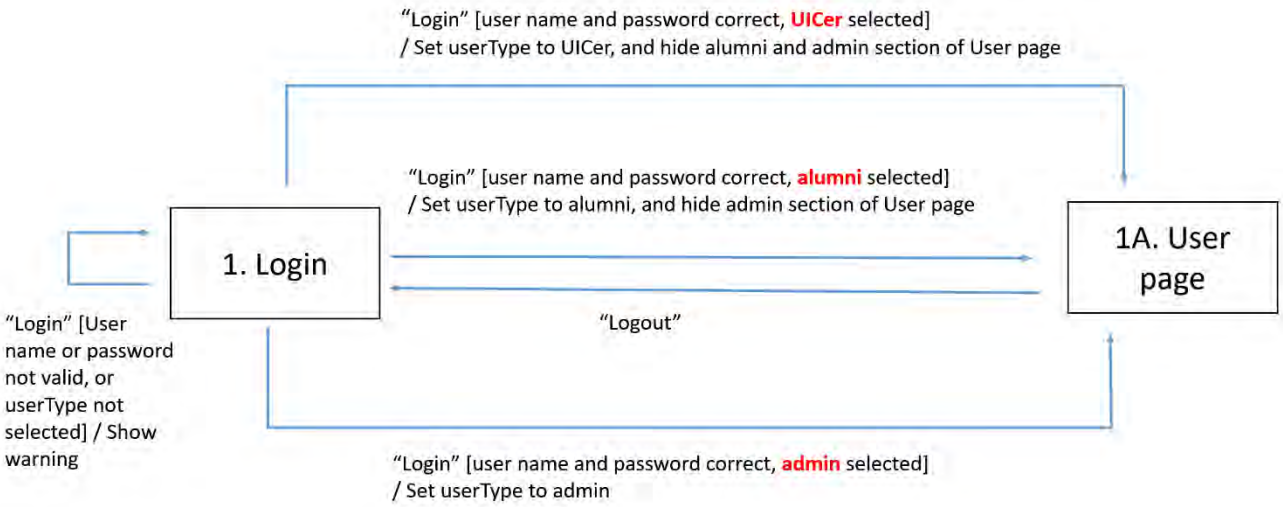
<This template illustrates organizing the functional requirements for the product by system features, the major services provided by the product. You may prefer to organize this section by use case, mode of operation, user class, object class, functional hierarchy, or combinations of these, whatever makes the most logical sense for your product.>

3.1 User Login

3.1.1 Description and Priority

The different users can login with password. Each type of logged in user can have different privileges.

3.1.2 Stimulus/Response Sequences



The basic scenario for "User login":

- The user enters its username and password, and select the according user type to login.
- The system displays the homepage including functions: "search admission requirements", "view knowledge point", "provide university offer information", "view yearly report", "view offer time" and "change password" and so on.

- The user click “logout” to exit this system.

3.1.3 Functional Requirements

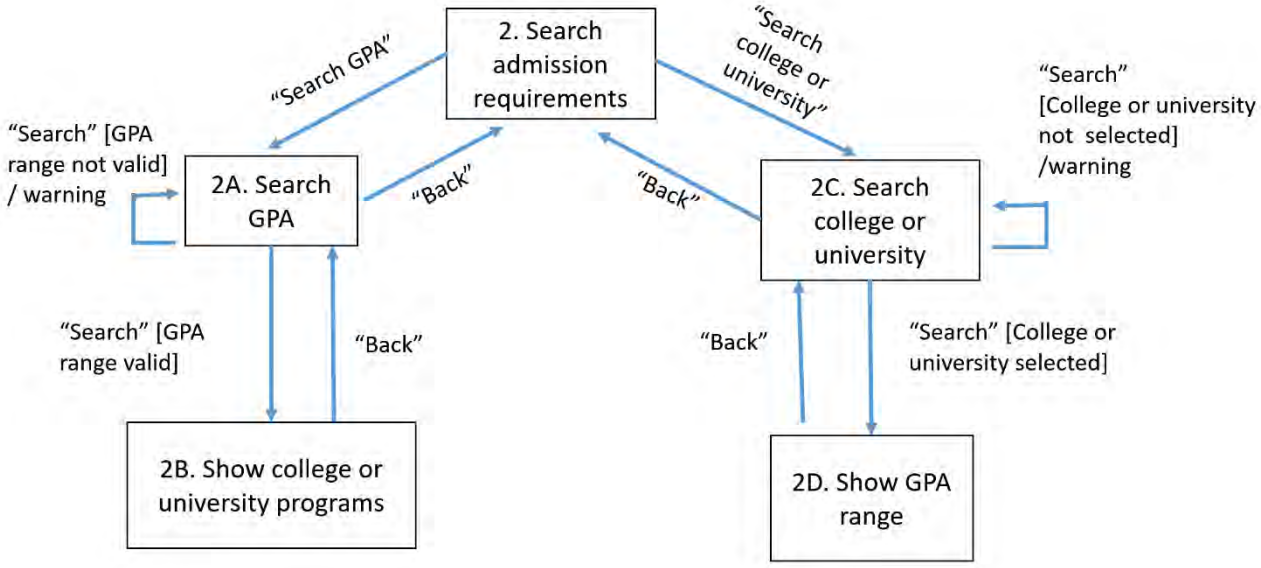
REQ-1: The home page shows different functions according to different users (UICer, UIC Alumni, Administrator)

3.2 UICers Search Admission Requirements

3.2.1 Description and Priority

A UICer can enter:
a) his or her GPA. The system returns a list of universities and programs that had accepted UIC students with GPA similar to the user
b) A college or university program. The system returns the range of GPA of UIC students that been accepted to that program.
The priority is low.

3.2.2 Stimulus/Response Sequences



The basic scenario for “UICers Search Admission Requirements”:
- The user selects “Search admission requirements”.
- The system displays “Search GPA” or “Search college or university”.
- The user choose “Search GPA” or “Search college or university”.
- If user choose “Search GPA”, then the system display the input box, and the user should input a valid GPA range. If user choose “Search college or university”, then the system display the university drop box, and the user should select one of the university.
- The system displays “the college or university programs” or “GPA range” according to what he choose above.

3.2.3 Functional Requirements

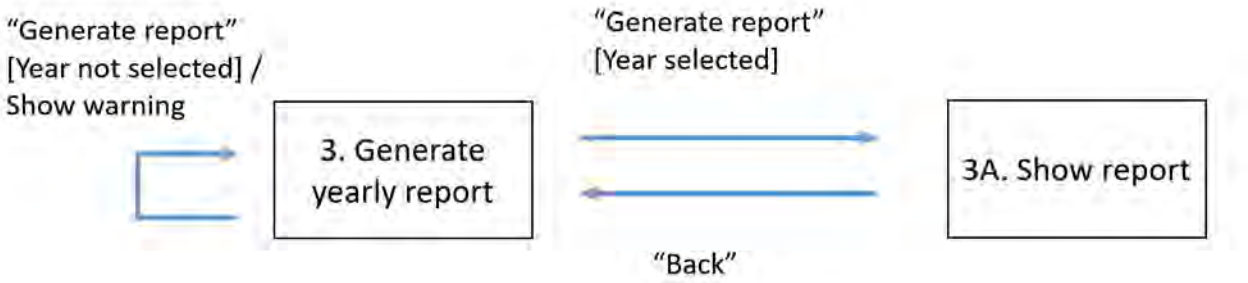
TBD.

3.3 Administrators Generate Yearly Report

3.3.1 Description and Priority

Administrator can login and generate the yearly report. The report contains info on the year's UIC graduates, such as from which colleges or universities programs they received offers for postgrad study. The priority is high.

3.3.2 Stimulus/Response Sequences



The basic scenario for "Administrator generates yearly report":
- The administrator chooses "Generate yearly report" function.
- The system displays the year's drop box.
- The administrator chooses one of the years and click "Generate report".
- The system shows the report generated.

3.3.3 Functional Requirements

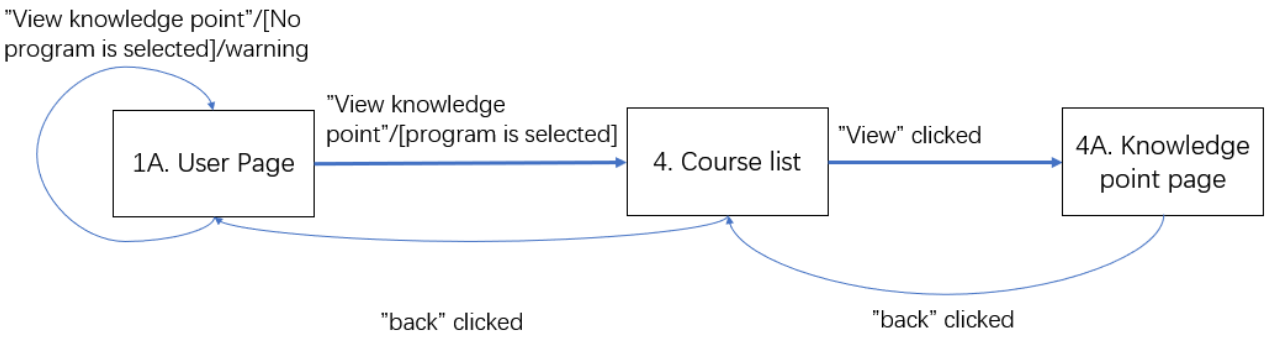
TBD.

3.4 UICer views knowledge point

3.4.1 Description and Priority

UICer can view knowledge point shared by UIC Alumni. The priority is low.

3.4.2 Stimulus/Response Sequences



The basic scenario for "UICer views knowledge point":

- The users choose “View knowledge point” function.
- The system displays a list of courses.
- The users choose one of the courses.
- The system provides the knowledge provided by UIC Alumni according to the course chosen.

3.4.3 Functional Requirements

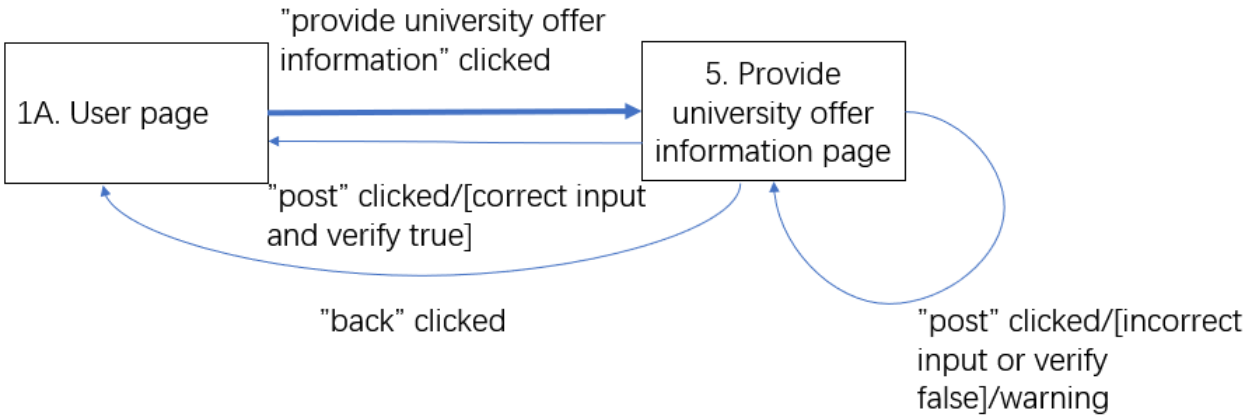
TBD.

3.5 UICer provides university offer information

3.5.1 Description and Priority

UICer can provide offer information for all users to see. The priority is low.

3.5.2 Stimulus/Response Sequences



The basic scenario for “provide university offer information”:

- The users choose “provide university offer information” function.
- The system displays a text box and an insert file box for users to upload information.
- The users input text or insert file and click “post”.
- The system uploads the offer information to AR database to verify to AR database to AR database.

3.5.3 Functional Requirements

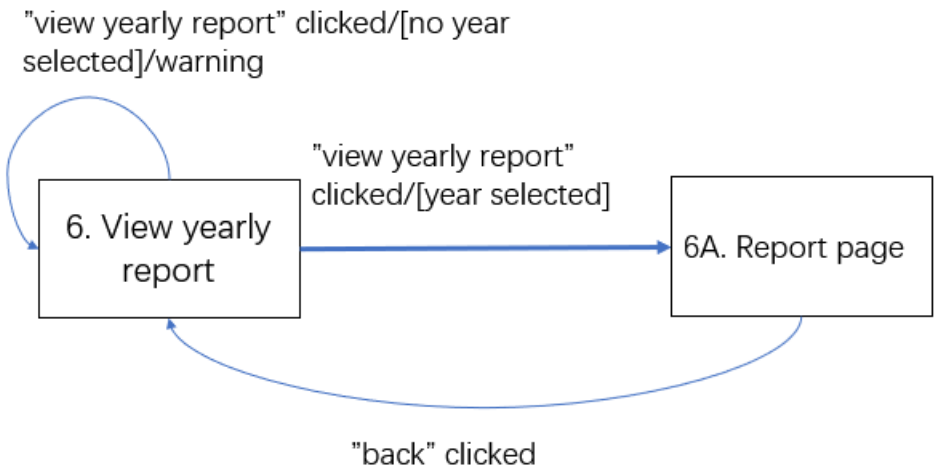
TBD.

3.6 UICer views yearly report

3.6.1 Description and Priority

UICer can view yearly report. The priority is open for all users.

3.6.2 Stimulus/Response Sequences



The basic scenario for “UICer views yearly report”:
- The users choose “view yearly report” function.
- The system displays a drop box for users to select which year to be chosen.
- The users select one of the years.
- The system displays the yearly report according to the year that users chosen.

3.6.3 Functional Requirements

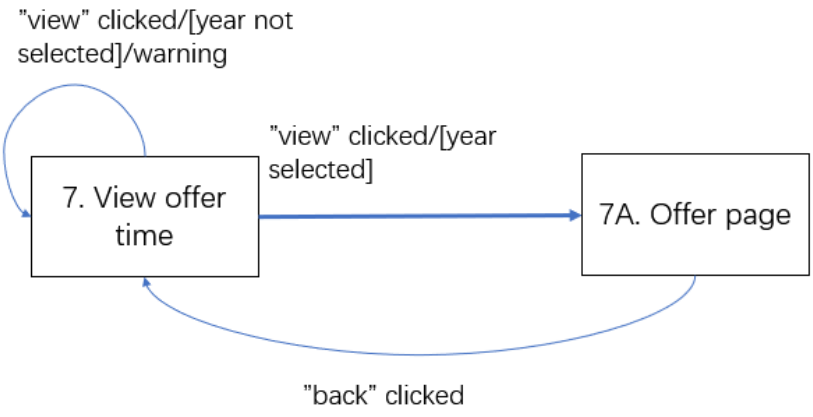
TBD.

3.7 UICer views offer time

3.7.1 Description and Priority

UICer can view offer time. The priority is low.

3.7.2 Stimulus/Response Sequences



The basic scenario for “UICer views offer time”:

- The users choose “view offer time” function.
- The system displays the radio buttons (“current”, “5+ year ago”, “10+ year ago”…)
- The users select one of the radio button, and push “submit”.
- The system displays the offer time according to the time that users chosen.

3.7.3 Functional Requirements

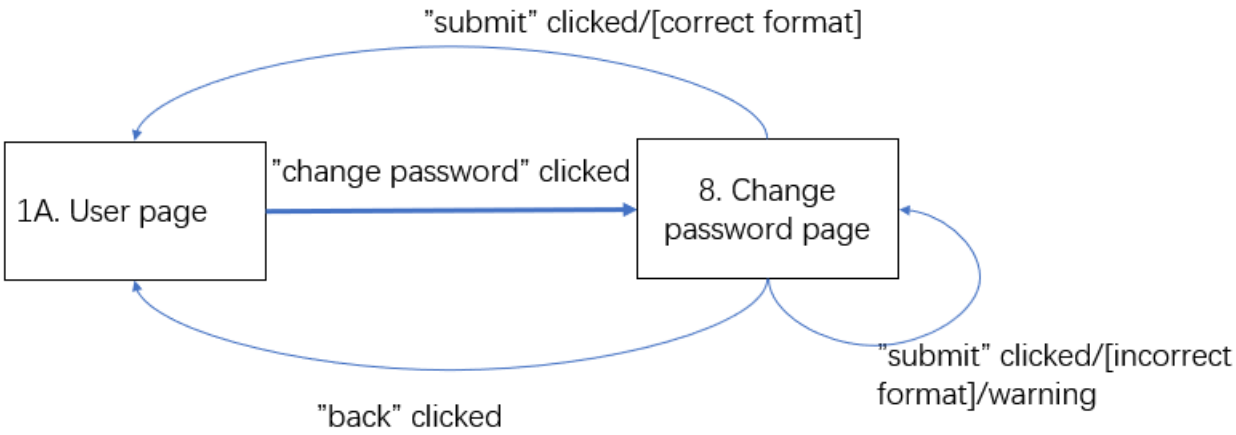
TBD.

3.8 UICer change password

3.8.1 Description and Priority

UICer can change their account password. The priority is medium.

3.8.2 Stimulus/Response Sequences



The basic scenario for “UICer change password”:

- The users choose “change password” function.
- The system displays change password page.
- The users input a new password with correct format and submit.
- The system database update user’s new password.

3.8.3 Functional Requirements

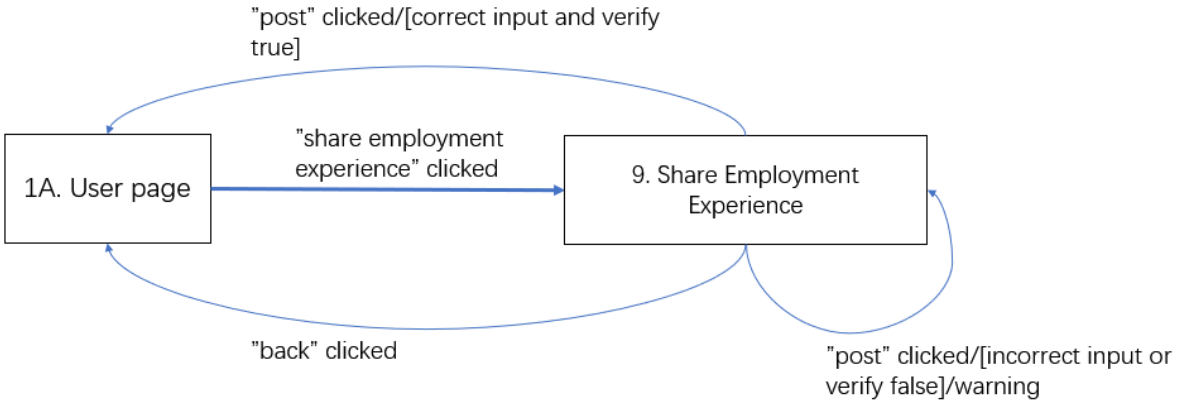
TBD.

3.9 UIC Alumni shares employment experience

3.9.1 Description and Priority

UIC Alumni can share employment experience. The priority is medium.

3.9.2 Stimulus/Response Sequences



The basic scenario for “UIC Alumni shares employment experience”:

- The users choose “share employment experience” function.
- The system displays a text box and an insert file box for users to upload employment experience.
- The users input text or insert file and click “post”.
- The system uploads the employment information to AR database to verify.

3.9.3 Functional Requirements

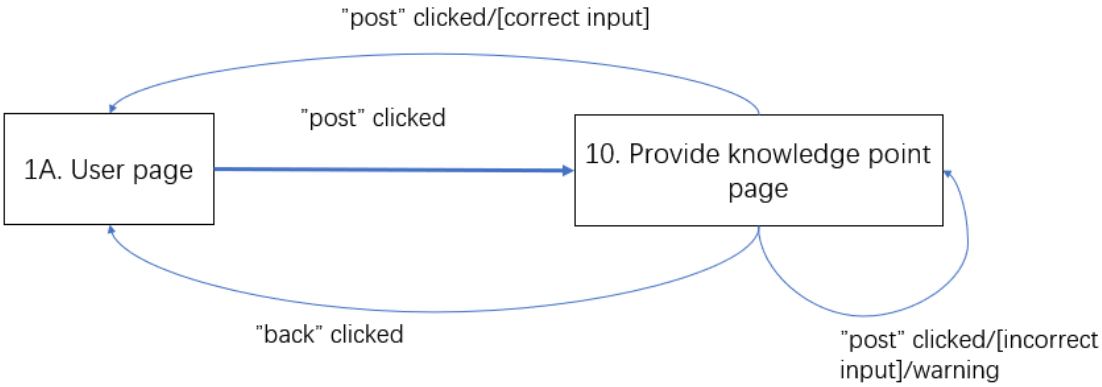
TBD.

3.10 UIC Alumni provide knowledge point

3.10.1 Description and Priority

UIC provide knowledge point so that UICer can view knowledge point. The priority is medium.

3.10.2 Stimulus/Response Sequences



The basic scenario for “UICer change password”:

- The users choose “provide knowledge point” function.
- The system displays a text box and an insert file box for users to upload knowledge point.
- The users input text or insert file and click “post”.
- The system uploads the knowledge point.

3.10.3 Functional Requirements

TBD.

4. External Interface Requirements

4.1 User Interfaces

For the detailed user interfaces, please see the attached file “UI diagrams.pdf”.

4.2 Hardware Interfaces

Our software supports access on computers and mobile phones.
Others TBD

4.3 Software Interfaces

The software runs on Windows.
Others TBD

4.4 Communications Interfaces

Web browser is included.
The software uses the FTTP transport protocol.
Others TBD

5. Other Nonfunctional Requirements

5.1 Performance Requirements

The login will be completed in two seconds and the average response time should be less than four seconds.
Others TBD

5.2 Safety Requirements

Obtain the information of previous graduates with the permission of UIC school. Ensure that students' information will not be leaked, and avoid hidden dangers in students' personal safety.

5.3 Security Requirements

Distinguish the permissions of database data, so ordinary users can't manage the database. The transmitted data are encrypted by high-intensity encryption algorithm, which makes it impossible to identify the relevant data content even if the data is leaked or intercepted, thus ensuring data security.

5.4 Software Quality Attributes

The software should work with most browsers.
The database needs high stability and security.
Software components should be maintained independently.
The overall framework of the code should be clear and readable, use a good underlying structure, facilitate future improvements and error correction, and keep the parts separate.

6. Other Requirements

TBD.

Appendix A: Glossary

Appendix B: Analysis Models

Figure1: Class Diagram

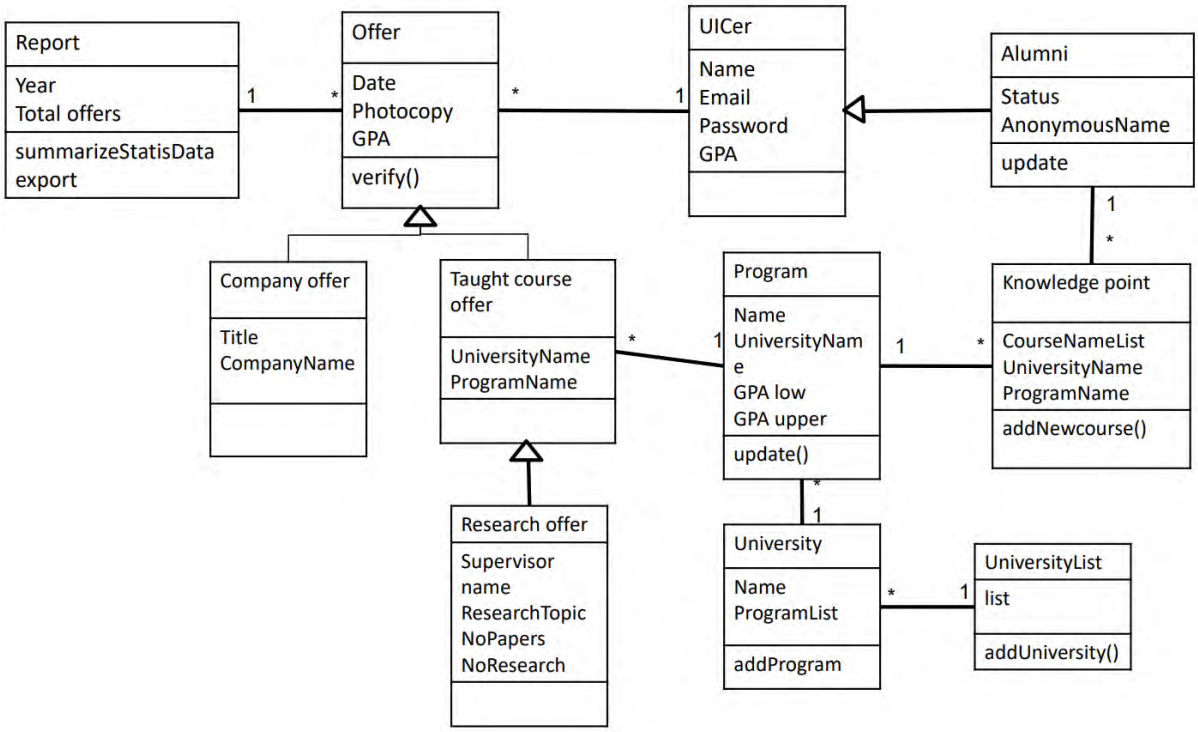
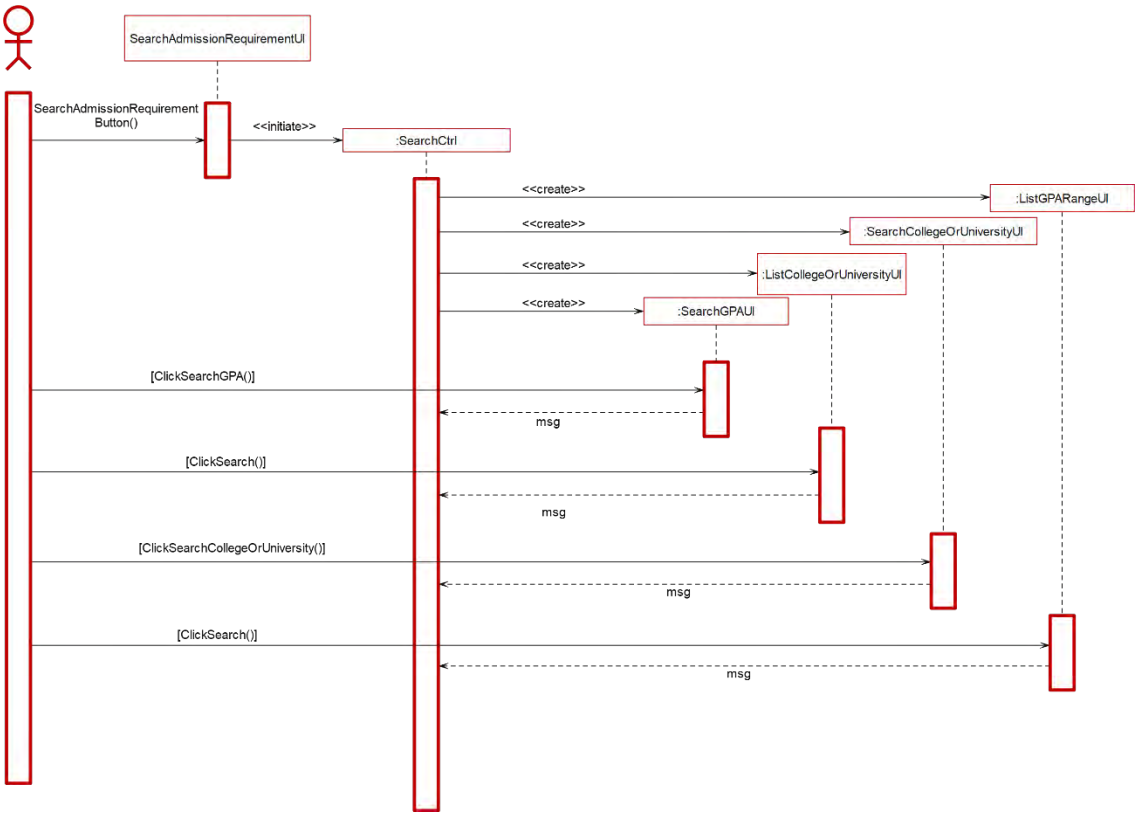


Figure2: Sequence Diagram of SearchByUniversityProgram&GPA



Appendix C: Issues List

TBD.