Detailed Design

for

Graduation Placement Service

(GPS)

Version 1.0 approved

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Table of Contents

Revision History

Name	Date	Reason For Changes	Version
Joshua	4.11	First Draft	1.0

1. Overview

1.1 Project description

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.

1.2 References

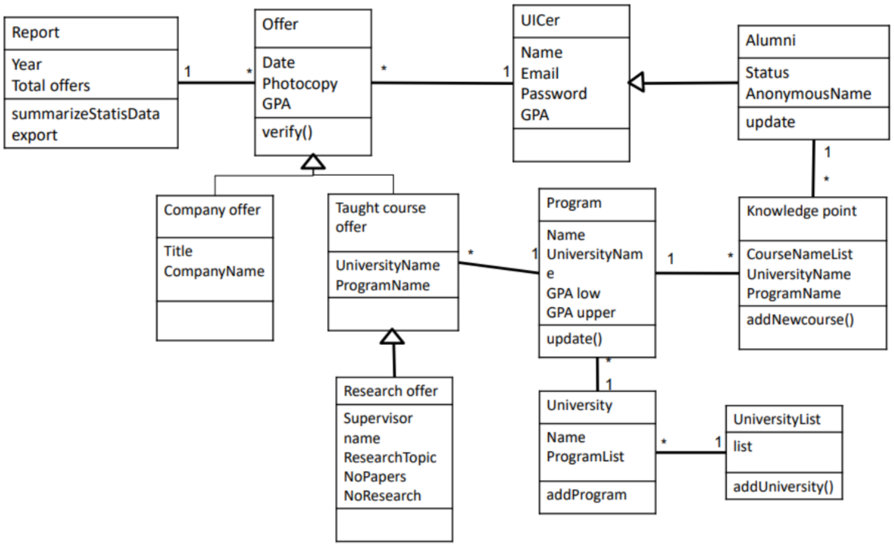
SRS_v1.3.pdf
Graduation Placement Service v3.docx

1.3 Design purpose

This document is to improve the relationship of class and describe each class design in detail.
Advantage:
1. Developer can easily check the class design in this separate document.
2. Make the functions of each class clearer in this system.

2. Overall description

2.1 Class diagram



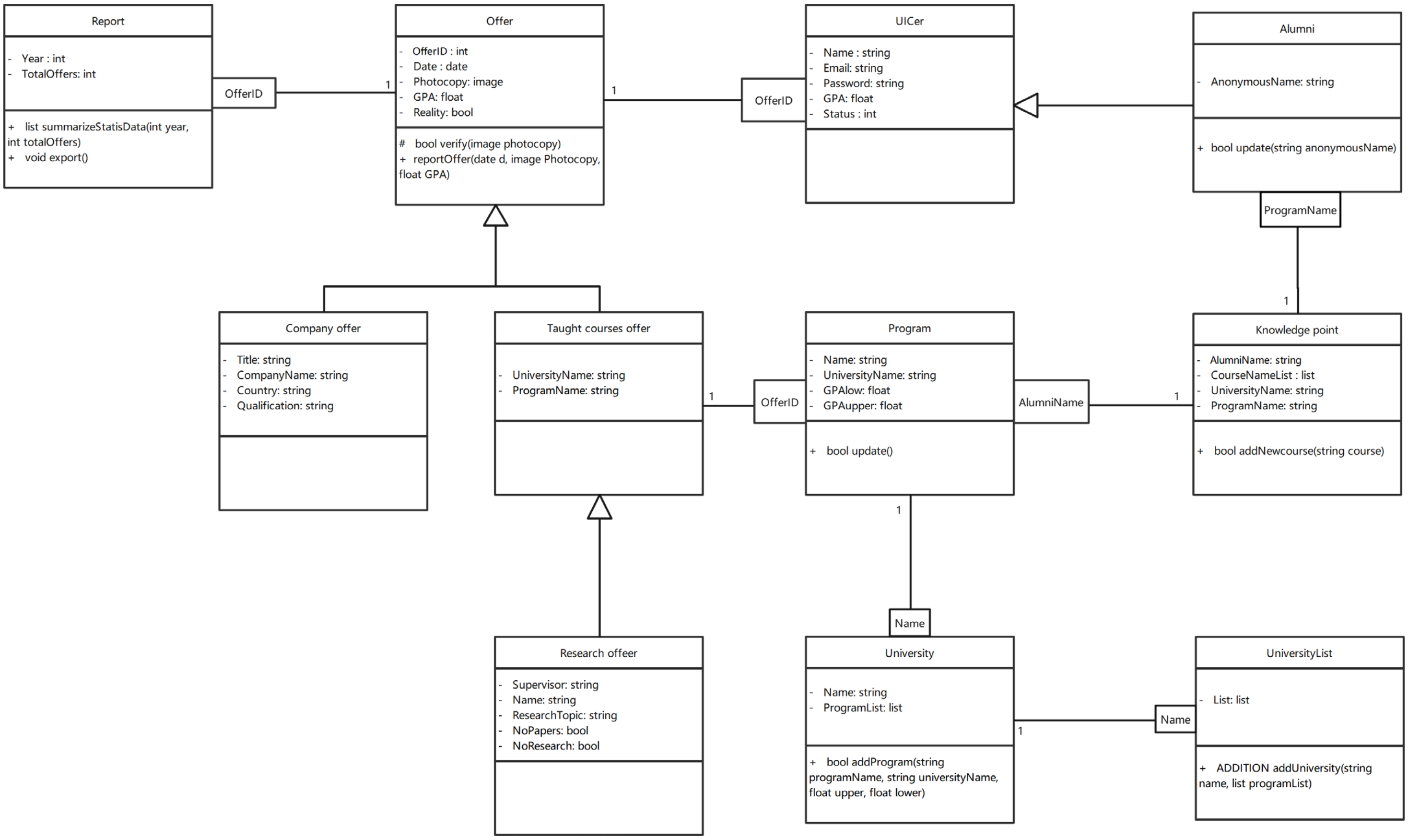
2.2 Refinements

Specify visibility and signature of each class.
Specify pre- and post- conditions.
Restructuring the relationship if necessary.
Add new attributes and operations if necessary.

3. Detailed design

3.1 Class diagram

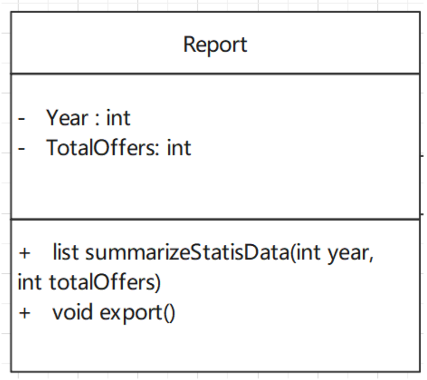
<Give the class diagram after restructuring, explaining any relationships that have been changed compared to the class diagram in section 2.1>



Use qualifier to reduce multiplicity for all the one-to-many relationships:
E.g., report-offer, UICer-Offer, Program-Taught course offer, University-Program, UniversityList-University, Program-Knowledge point and Alumni-Knowledge point.

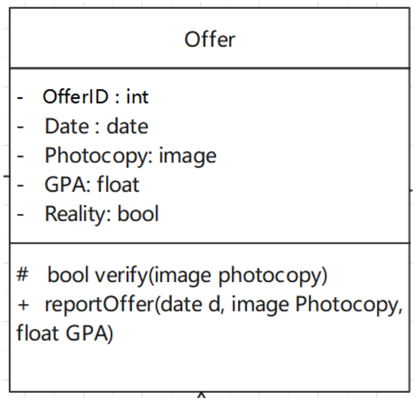
3.2 Classes

3.2.1 Report



Explanations
Specify the signature and visibility of valuables and operations.

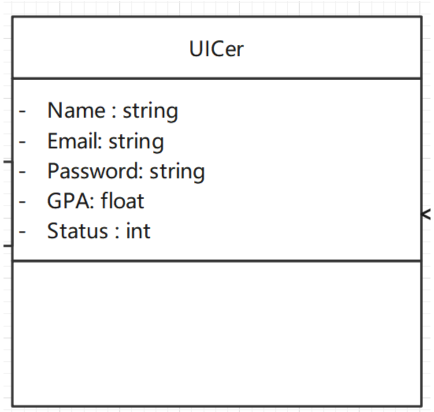
3.2.2 Offer


Offer
- OfferID : int
- Date : date
- Photocopy: image
- GPA: float
- Reality: bool
# bool verify(image photocopy)
+ reportOffer(date d, image Photocopy, float GPA)

Explanations

Add attributes “OfferID” to unify offers, one offer has only one ID.
“Reality” to identify whether the offer is real or feck. If AR mark the offer is real, then Reality is TRUE, otherwise it is FALSE.
“reportOffer()” with 3 parameter is to create new offer.

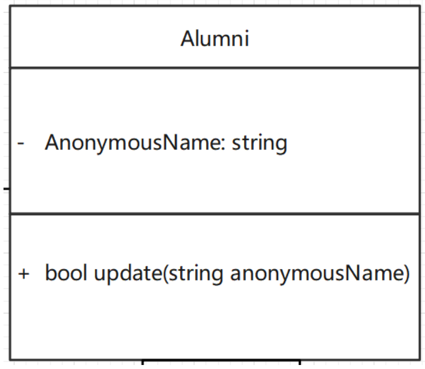
3.2.3 UICer



Explanations

Add “Status” attribute to identify whether this user is student, alumni or administrator.

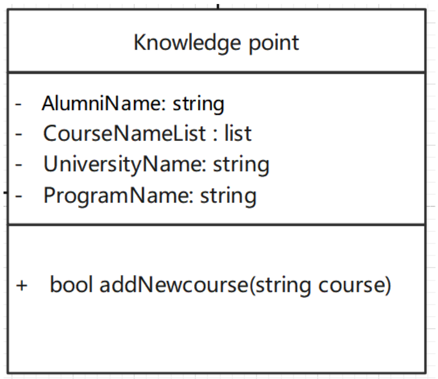
3.2.4 Alumni



Explanations (optional)

Remove “Status” attribute because it is not used in Alumni. It is for identify whether this user is student, alumni or administrator.

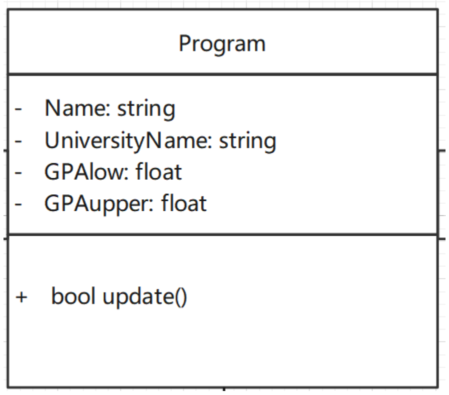
3.2.5 Knowledge point



Explanations

Add “AlumniName” to identify the knowledge provided by which alumni.

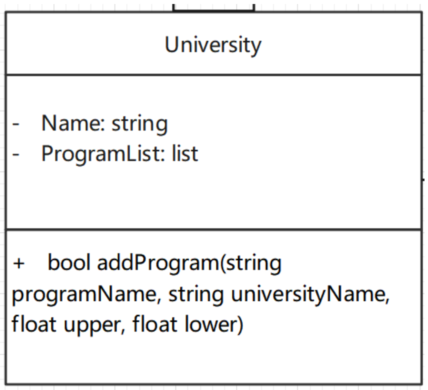
3.2.6 Program



Explanations

Specify the signature and visibility of each variable.
The update() function should be bool in order for the system to check whether it is update correctly or not.

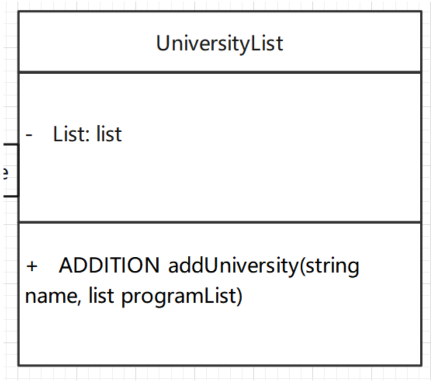
3.2.7 University


University
- Name: string
- ProgramList: list
+ bool addProgram(string programName, string universityName, float upper, float lower)

Explanations

Specify the signature and visibility of variables and operations.

3.2.8 UniversityList

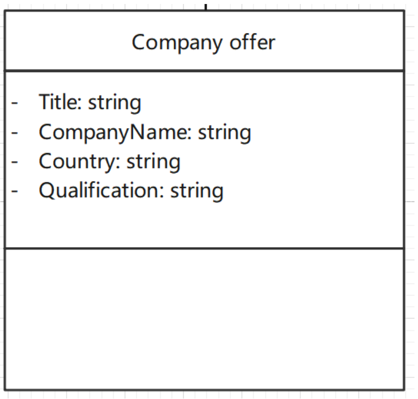


Explanations
Add the operation of the conditions.

Constraints
ADDITION={EXISTED, NO_UNIVERSITY,OK}
ADDITION addUniversity(string name, list programlist)

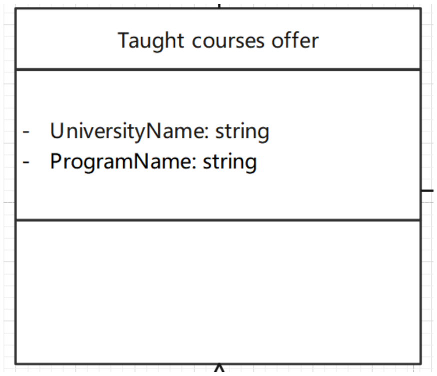
Pre:name and programlist are not null;
Post: The return value corresponds to the following values.
1: if the university name has been existed in the list, return EXISTED
2: if there is no such a university name in the world return NO_UNIVERSITY
3: otherwise return OK

3.2.9 Company offer



Explanations
Add attributes: country and qualification to process information in detail.

3.2.10 Taught course offer



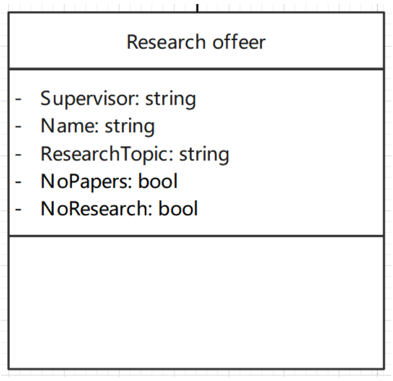
Explanations (optional)

No more changes compared to the class in section 2.1.

Constraints (optional)

No pre- and post- conditions.

3.2.11 Research offer



Explanations (optional)

No more changes compared to the class in section 2.1.

Constraints (optional)

No pre- and post- conditions.

4. Alternative detailed design (Optional)

5. More considerations

Focus on the changes of the attribute to set a primary key and some operations.