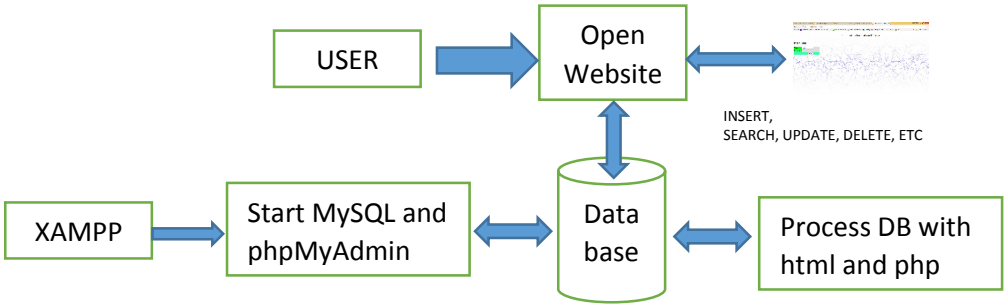
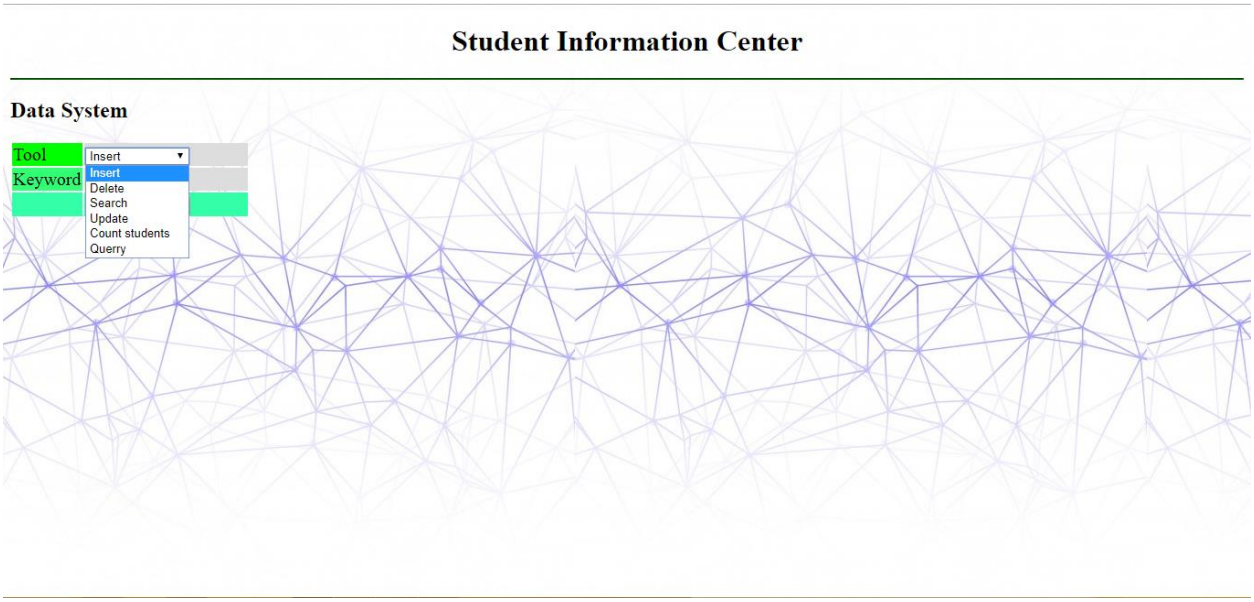
DBMS FINAL PROJECT DESCRIPTION

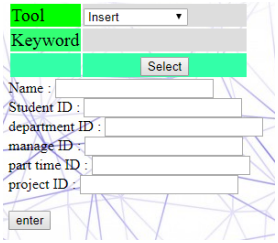
- 系統架構與環境 & 介面截圖與使用說明
  系統架構:



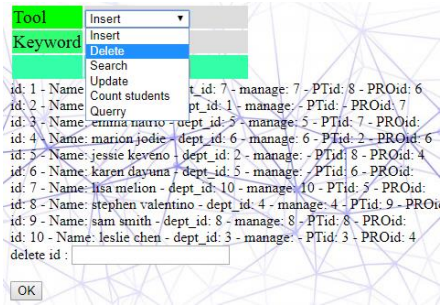
系統環境: WINDOWS 8.1 and using Website to display
介面截圖與使用說明



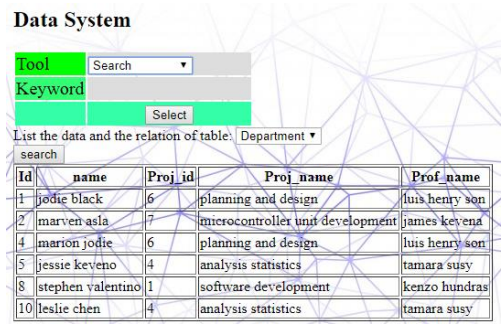
First, the display is just like above, and to change data in database, you just need to select one option of the tool options and click “select” then you will told to fill in some data to fulfill your demand.
In the insert tool, to add a new data, user must fill new data in the textbox and the new data will be added in the database after you click the enter button.



In the delete option, the user will be given the list of the student order by id and user is told to insert the one of those id to be deleted from the database.

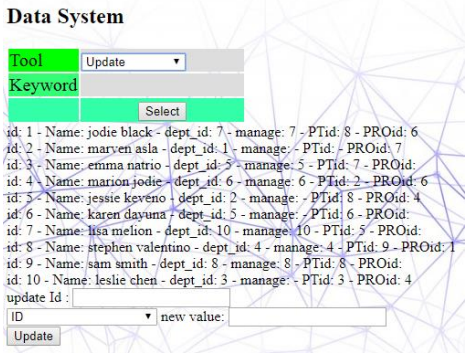


In the search tool, user is told to select a table to list the relation of it with other table.

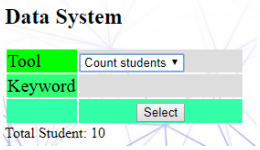


Id	name	Proj_id	Proj_name	Prof_name
1	jodie black	6	planning and design	luis henry son
2	marven asla	7	microcontroller unit development	james kevena
4	marion jodie	6	planning and design	luis henry son
5	jessie keveno	4	analysis statistics	tamara susy
8	stephen valentino	1	software development	kenzo hundras
10	leslie chen	4	analysis statistics	tamara susy

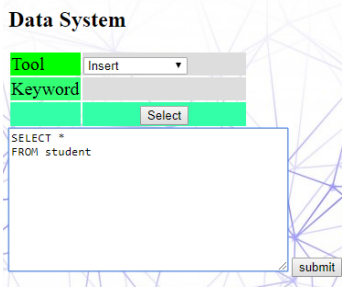
In the update tool, it is the same as delete tool, list all the student table list and let user fill in the textbox which id is going to be updated with the new value.



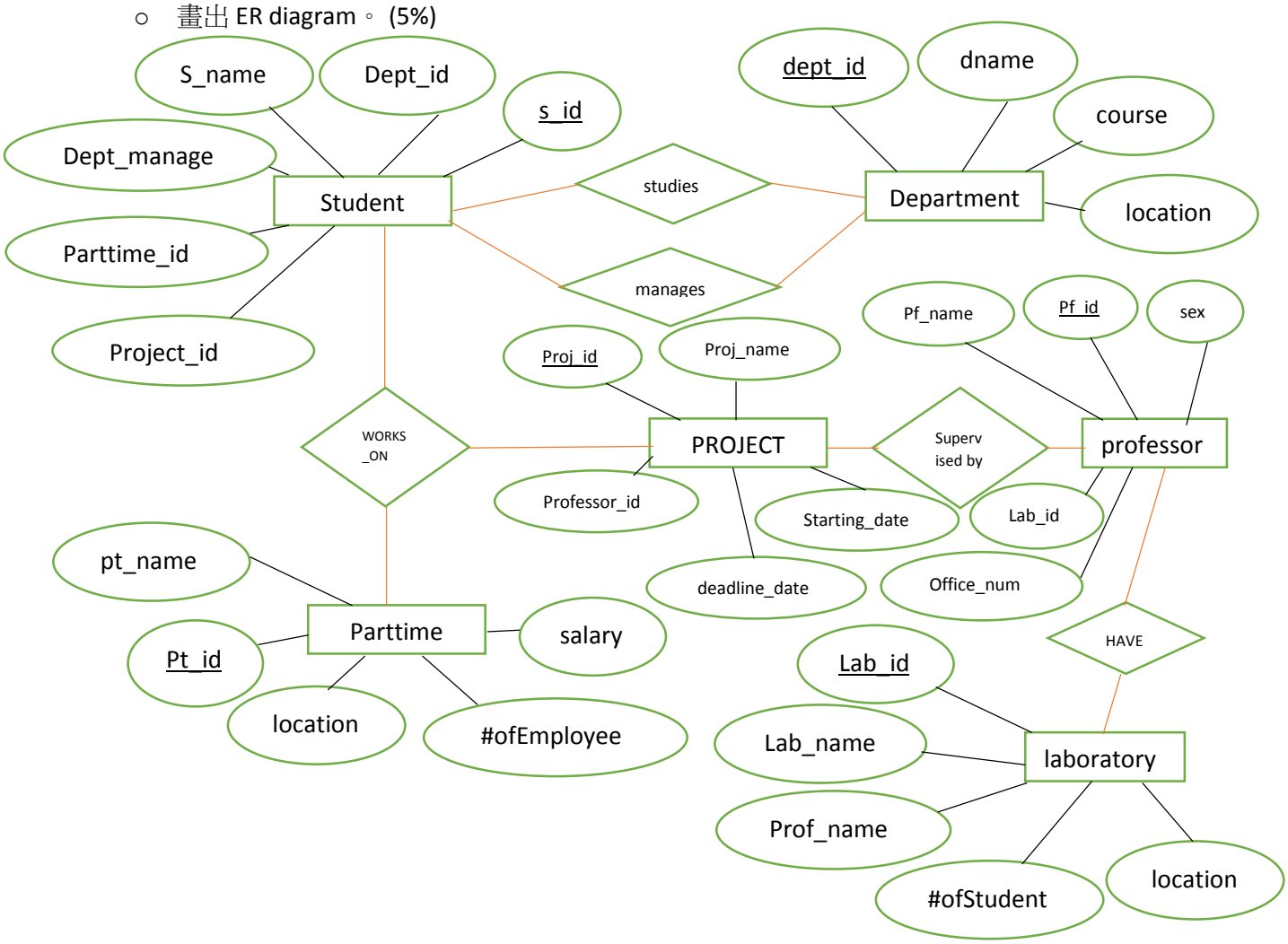
In the count student tool, it simply just show how many student are there on the database.



Above are the button GUI, to insert to query GUI, user must select the query option in the tool option and it will exist a textbox to insert the sql code for the user to operate on.



- 資料庫設計
  - 畫出 ER diagram。 (5%)



  - 畫出第三正規化後的 Relation Schema。 (10%)

Student

S_id	S_name	Dept_id	Dept_manage	Parttime_id	Project_id

Project

Proj_id	proj_name	Starting_date	Deadline_date	professor_id

professor

pf_id	pf_name	sex	Office_num	laboratory_id

parttime

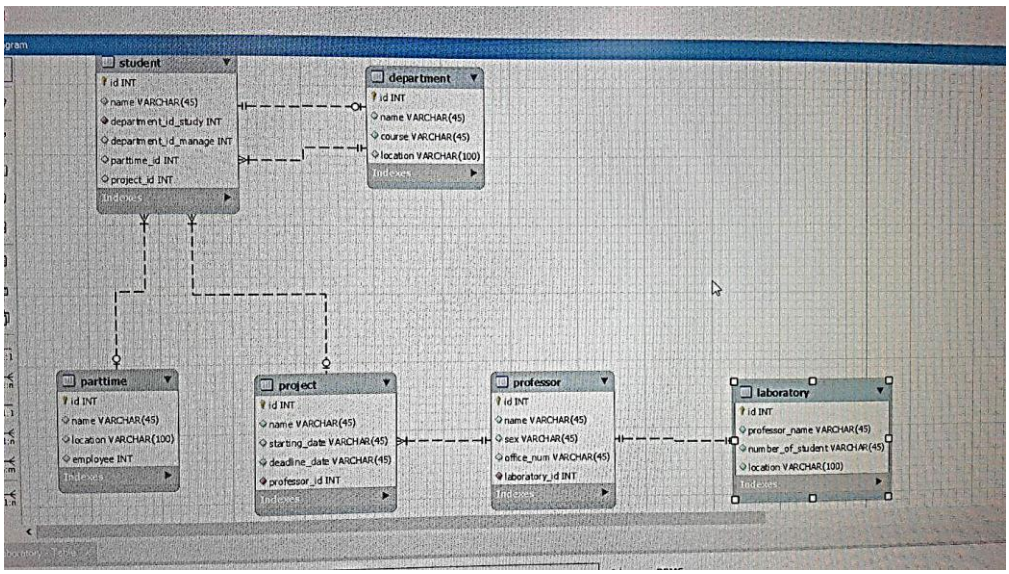
Pt_id	pt_name	salary	location	#ofEmployee

laboratory

lab_id	lab_name	Professor_name	number_of_student	location

department

dept_id	dname	course	location



- 符合規定數量(參考 p5.p6)並需說明每個 table, attribute, relationship 的意義和關係 **(10%)**

  Firstly, I designed this database by drawing the ER diagram and in order to fulfill all of the criteria on the project description (page 5 and 6) I finally created one database system with 6 entity (table) and the relationship criteria is fulfilled too. And insert at least 10 attribute inside each table and each table has a key attribute with each entity has at least 3 attributes.

  Table STUDENT has 6 attributes, such as: s_id, s_name, dept_id, dept_manage, parttime_id and project_id.

Table PROJECT has 5 attributes, such as: proj_id, proj_name, starting_date, deadline_date and professor_id.
Table PROFESSOR has 5 attributes, such as: pf_id, pf_name, sex, office_num, and laboratory_id.
Table PARTTIME has 5 attributes, such as: pt_id, pt_name, salary, location and #ofEmployee.
Table LABORATORY has 5 attributes, such as: lab_id, lab_name, professor_name, number_of_student and location.
Table DEPARTMENT has 4 attributes, such as: dept_id, dname, course and location.
The relation between each table is illustrated in the relational schema above. The STUDENT entity have 4 foreign key: dept_id, dept_manage, parttime_id, project_id from table DEPARTMENT, PARTTIME and PROJECT. So when you are using the website, you can search for the student name and know that he/she has a part time job or a project or neither of them. And also in the student entity has a dept_id and dept_manage which tell us that student has a department(MUST) and manage department (can be NULL) and in the PROJECT entity, user can know the professor who supervises the project and in the professor entity, user can know the laboratory which the professor is on. In the system, user can know the MIN, MAX ,AVG and SUM of the salary of all part time job. And in the tool bar, there exist the count student option, user can select it and know the current amount of the student in the database by COUNT function. In the search option and select student option, the user is displayed the full information of all student by using the EXISTS and NOT EXISTS function. In the search button, user can know all the information of the entity the user want to select.