**This year, when participating in Harvard Summit for Young Leaders in China(HSYLC), I programed one code and one project to assist HSYLC operations.**

HSYLC is a conference for 600 top high school students selected from more than 3000 applicants across China. It includes seminars taught by Harvard alumni, guest speeches, Harvard admission panel and etc.

**ABOUT THE CODE: I designed and created a course assignment program for HSYLC.**

**Notes: I used XXX language. It is embedded in an excel file. It will automatically generate a desired output file after putting input in the excel file and then double clicking the sheet.**

Before the conference, students get to choose 8 seminars among 60 courses in order of preference. Then, the HSYLC committee will make an assignment for each student of the 4 final courses in order of days he or she will take.

I implemented a code (an embedded piece of code in an excel file) to generate the optimal assignment for HSYLC, which reduced the manual work like filling the sheets to a single click, and after using better algorithms to generate the assignment, improved the assignment by giving more chance for students to get the seminars they prefer more. I also wrote an instruction of my course assignment program for HSYLC/AUSCR committee members for future use and maintenance. It was used in HSYLC 2015 course assignment, and will be continue in use.

**ABOUT THE PROJECT: I designed and created an online seminar portal, including student management and grading system for HSYLC.**

**Notes: I used Java Script and XXX. I used and set up Java Web Server Environment(JDK/JRE, MYSQL, VPSMATE, TOMCAT) on a Ali Yun (Chinese Amazon Cloud) server.**

Students are supposed to receive grades and be ranked for all those classes. Before, seminar leaders write the grades for all their students down, and at the end of the conference, volunteers will manually combine all the forms and calculate all the different but necessary indices. I then designed and programmed using (Language Java Script and ..database .. ) an online seminar portal including student management and grading system for HSYLC, eliminating the extra work of volunteers! The portal was used in HSYLC 2015 and will be continue in use. It is currently on Ali Cloud Server, the Chinese version of Amazon Cloud Server. I wrote two design plans(one overall abstract plan, and one database design plan) for convenience of HSYLC/AUSCR committee members for future use and maintenance.

For more details, I attached the system overview(requirements) of the second project.

**1.System Overview (Requirements)**

1. User
   1. SL/TA: Each SL/TA has one unique ID. They could use the ID to log in the portal, input attendance and letter grade for each student in their seminar A B C D. SL/TA could only see information only related to their seminar.
   2. Admin: Beijing and Shanghai should have one Admin account each. Admin account could upload [Student input sheet] and [Seminar input sheet] for Beijing and Shanghai site separately, and download a [Master output sheet] that includes each student’s course list, letter grade for each course, and whether they could graduate as honor student. Admin could see information of all seminars.
2. ID type: Student ID, SL ID, TA ID, Admin ID, Seminar ID, and House
3. Function
   1. Admin should be able to upload the excel version of [Student input sheet] and [Seminar input sheet]; and download the [Master output sheet] as excel file.
   2. TA/ SL should be able to submit each student’s grade online. Letter grade for both seminar and honor program essays.
   3. The grading portal could instantly calculate and auto update the student grade once admin upload the sheet and SL/TA submit the grade.
4. Input & Output
   1. Input of [Student input sheet] and [Seminar input sheet]





* 1. There are two option for SL/TA upload the grade

(1) Input a letter grade for each day for each student, and the portal will automatically calculated the cumulative GPA (GPAi) for that student🡪 highly recommend SL/TA to choose this, easier to keep track student’s performance

(2) Input an overall GPA (GPAo) that could overwrite the cumulative GPA as student’s final grade for this seminar.

* 1. The way we calculate the GPAi are as follows:

Wi={1, 0} 1 meaning attending the seminar, 0 meaning missing; Gi= { A+, A, A-, B+, B, B-, C+, C, F }

Input 3 days’ of student’s daily letter grade [Gi | G1, G2, G3], and student attendance weight [Wi | 0, 1];

count (Wi=0) >= 2;

if true GPAi= F;

if false GPAi= (1/3)\*Σ(Wi\*Gi), Wi={1, 0}, Gi= {A+, A, A-, B+, B, B-, C+, C, F};

Output GPAi

* 1. The way for student earn the honor is to get A or A+ for all four seminar and get at B+ or above for the two seminar research paper they choose to write.
  2. The letter grade scales are as follows

|  |  |
| --- | --- |
| A+ | 4.3 |
| A | 4.0 |
| A- | 3.7 |
| B+ | 3.3 |
| B | 3.0 |
| B- | 2.7 |
| C+ | 2.3 |
| C | 2.0 |
| F | 0 |

* 1. When TA and SL log on the portal, they see a web page as in the excel tab “web page”
     1. They can choose attendance (yes/no) for each student in each day of each session of their seminar
     2. They can choose letter grade for each
     3. They can write an overwrite GPA
     4. They can mark grade for students’ paper
     5. They need to click “submit” every time they make any changes
  2. Admin ID could export an excel spreadsheet with the following info:
     1. A master excel sheet that includes the “web page” sheet data of all seminars of the corresponding site (Beijing/shanghai)
     2. A master excel sheet that includes all information of all students of the corresponding site (Beijing/shanghai), listed by students (see excel tab: master export spreadsheet)