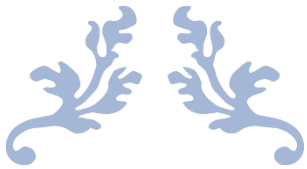

REQUIREMENT ANALYSIS

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Overview:

The system is going to help students to submit their programming work for different course. The TA for each course could collect the assignments and get the information about each assignment. The system also could help the instructor to manage the course, students and TA.

Step 1:

Identify different types of User

1. Students
2. TA
3. Teacher

Step 2:

a. Student

1. students should have their own account, which is unique and private.
2. students could change their password whenever they want.
3. students could submit their submit programming work within the required time.
4. students could also resubmit their programming work before the deadline.
5. students could download or view the programming work they have submitted.
6. students could see their programming work's grades after the assignment be graded.

b. TA

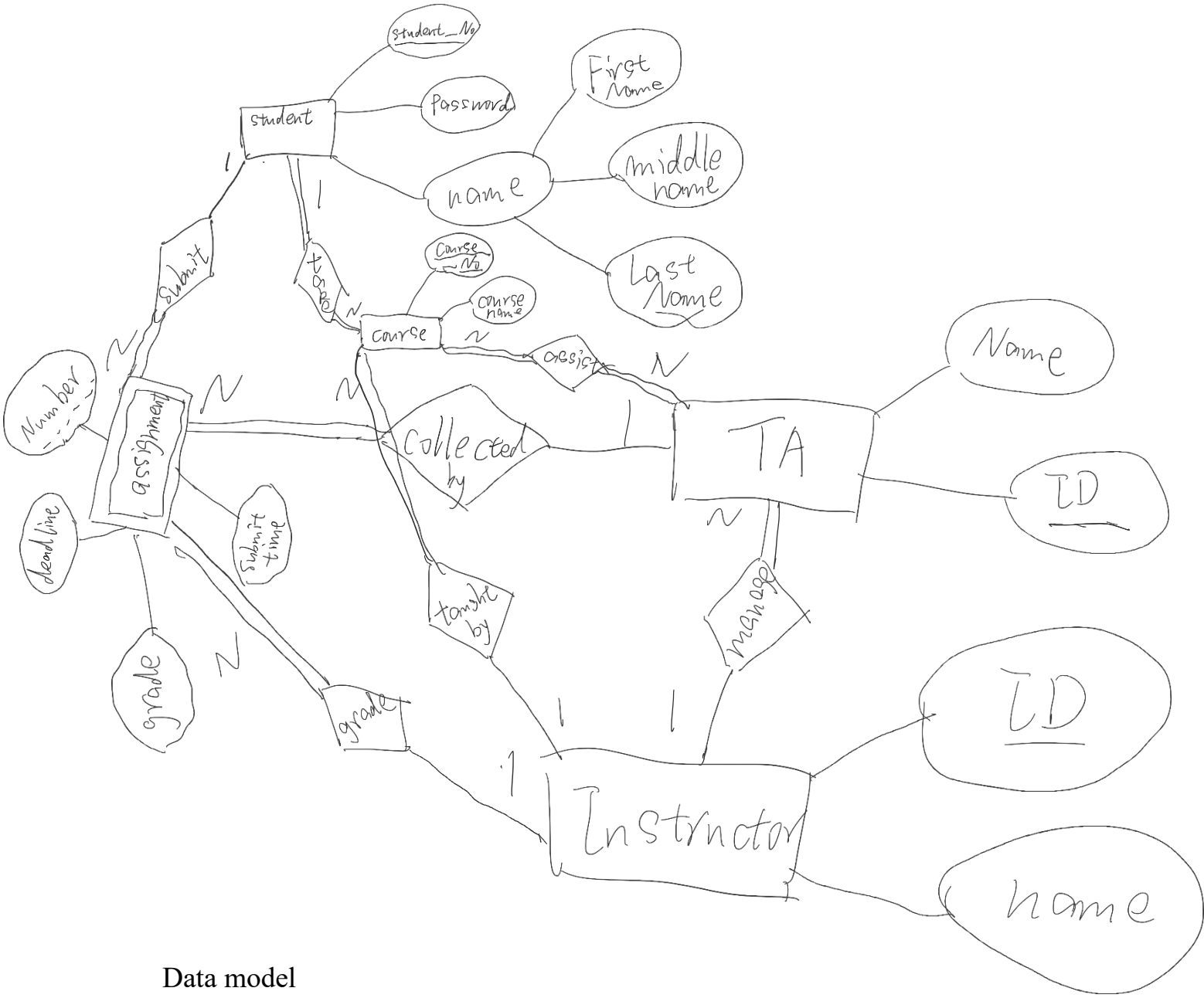
1. TA could collect assignment.
2. TA could do statistics information about the assignment, including the average grades, the highest grades, the lowest grades and the distribution of the grades.
3. TA could get all the information about the assignment including the submit time of the assignment and the programmer's name.
4. TA could download or view students' assignment.
5. TA could grade assignment.

c. Instructor

1. Instructor could publish new assignment on website.
2. Instructor could edit assignment.
3. Instructor could grade each programming work.
4. Instructor could edit all student's programming work's grades.
5. Instructor could manage TA for his class.
6. Instructor could modify the course section.
7. Instructor could modify TA for each course.

Step 3:

1.The ER model for the project



Data model

student	TA	Course
student_No	TA_No	Course_No
Password	TA_Name	Course_Name
name		
Assignment	Instructor	
Assignment_name	Instrucor_ID	
Assignment_date	Instructor_name	
Assignmet_deadline		
Assignment_grade		

For student's activity:

students should have their own account, which is unique and private.
Will access 'student' table 'student_No', 'Password'
Constraints: The student_NO should be the same as student's pawprint.

students could change their password whenever they want.
Will access 'student' table 'student_No', 'Password'
Constraints: The Password shouldn't be the previous one.

students could submit their submit programming work within the required time.
Will access 'student' table 'student_No', 'course' table 'Course_No' , 'Assignment' table,
'Assignmet_date' ,'Assignmet_deadline'
Constraints: The latest assignment will cover the previous one if the assignment_date is earlier than the Assignment_deadline

students could download or view the programming work they have submitted.
Will access 'student' table 'student_No', 'course' table 'Course_No' , 'Assignment' table
Constraints could be 'uploading files should be safe and stable'
Constraints could be 'submitting files should be safe and stable'
Constraints could be 'downloading files should be safe and stable'
Constraints could be 'viewing files should be safe and stable'

students could see their programming work's grades after the assignment be graded.
Will access 'student' table 'student_No' 'Password', 'course' table 'Course_No' , 'Assignment' table,'Assignment_grade'
Constraints could be 'Assignment_grade should be just viewed by instructor and TA for this course beside the student himself'

For TA's activity:

TA could grade assignment.
Access 'TA' table and 'course' table and 'assignment' table
Constraints could be 'grading should be stable and just by this courses' TA or instructor'
Constraints could be 'The latest grades will cover previous grades'

TA could do statistics information about the assignment, including the average grades, the highest grades, the lowest grades and the distribution of the grades.
Access 'TA' table and 'course' table and 'assignment' table
Constraints could be 'the TA could only get his course's assignment information'

For instructor's activity:

Instructor could publish new assignment on website.
Access 'instructor' table, 'course' table , 'assignment' table
Constraints could be only instructor for this course could publish or modify section.

Instructor could manage TA for his class.
Access 'Instructor' table 'TA' table
Constraints could be 'only instructor for this course could manage TA for this course'

Instructor could edit all student's programming work's grades.
Access 'Instructor' table, 'Assignment' table and 'Student' table
Constraints could be 'only instructor for this course could modify student's programming work's grades for this course'
Constraints could be 'the editing should be safe and stable'.

Non-function for system
The system needs to meet basic security requirements
The system needs to be able to withstand basic hacking attacks like SQL injection and ARP attack.
The system requires a certain amount of database space to store assignments over a period of time.

Step 4

Identify System constraints and requirements

1. The system could work in different device including Computer, mobile phone, table PC.
2. The system should require no more CPU and running memory than similar products
3. The system could The system can reduce operational efficiency to reduce configuration requirements.
4. The system could work in all kinds of operating system including Mac, Windows, Linux, Ubuntu and so on.
5. The system needs database maintenance including Backup system data and restore database system.
6. The system should have a good architecture.