**Module 3 Assignment 3: ERD Diagram**

**Haoze Zhang**

**Ira A. Fulton Schools of Engineering, Arizona State University**

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**Prof. Dinesh Sthapit**

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**1: Requirements:**

Create a Basic ERD diagram that Relates a Student with the Courses and Student Contacts.

Export the ERD Diagram in PDF Format.

**Ans:**

**Github url:** [**https://github.com/zhzhaoze/IFT458-M3-A3-ERD-Diagram-Haoze-Zhang**](https://github.com/zhzhaoze/IFT458-M3-A3-ERD-Diagram-Haoze-Zhang)

**Entity:**

Student

Course

Student Contacts

**For student entity:** it has student\_id (pk), student\_name, student\_address, student\_gender, student\_major

**For Course entity:** it has course\_id (pk), course\_name, course\_professor, course\_description, course\_time, credits.

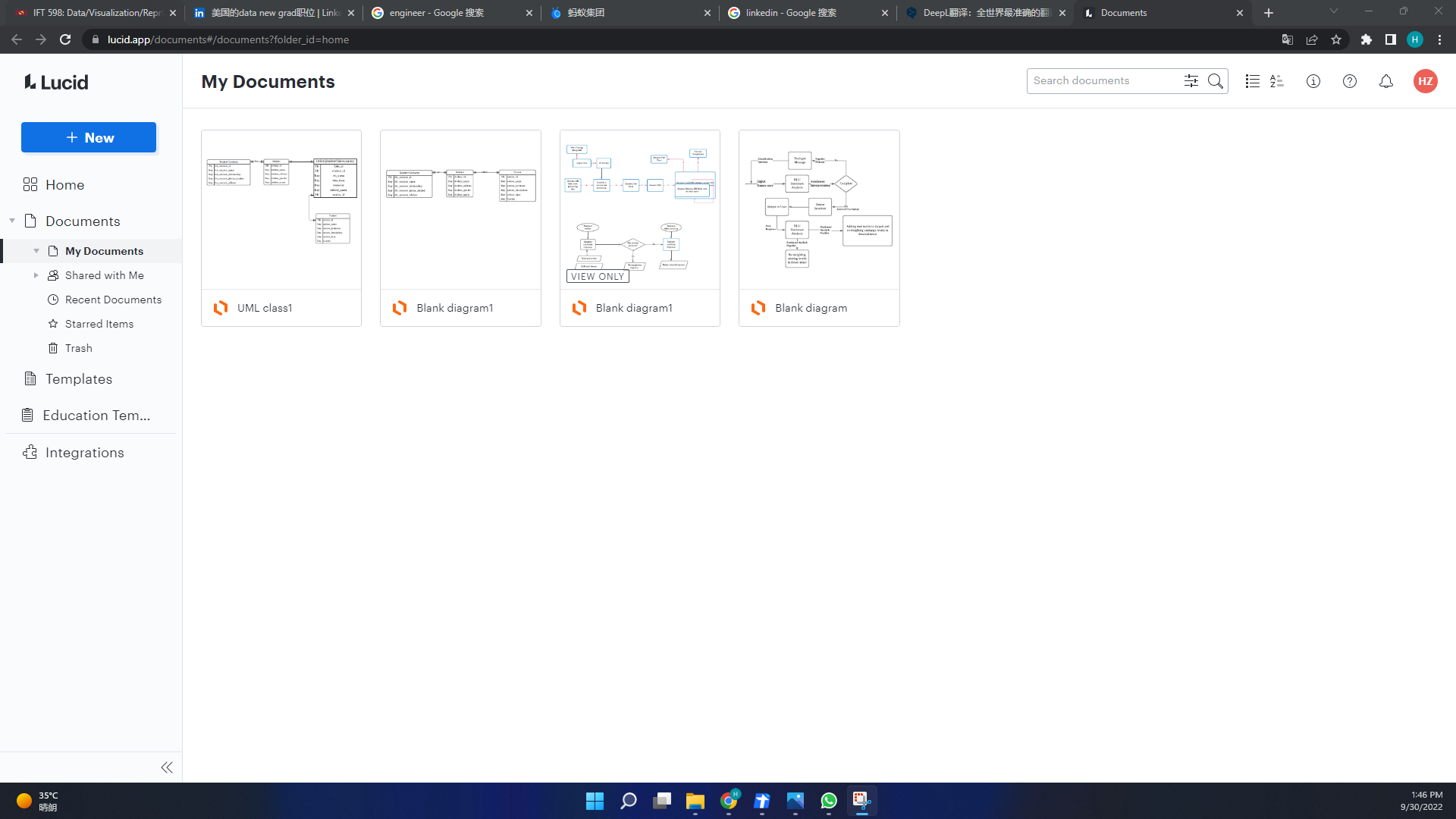
**For Student Contacts entity:** it has stu\_contacts\_id (pk), stu\_contacts\_name, stu\_contacts\_relationship, stu\_contacts\_phone\_number, stu\_contacts\_address

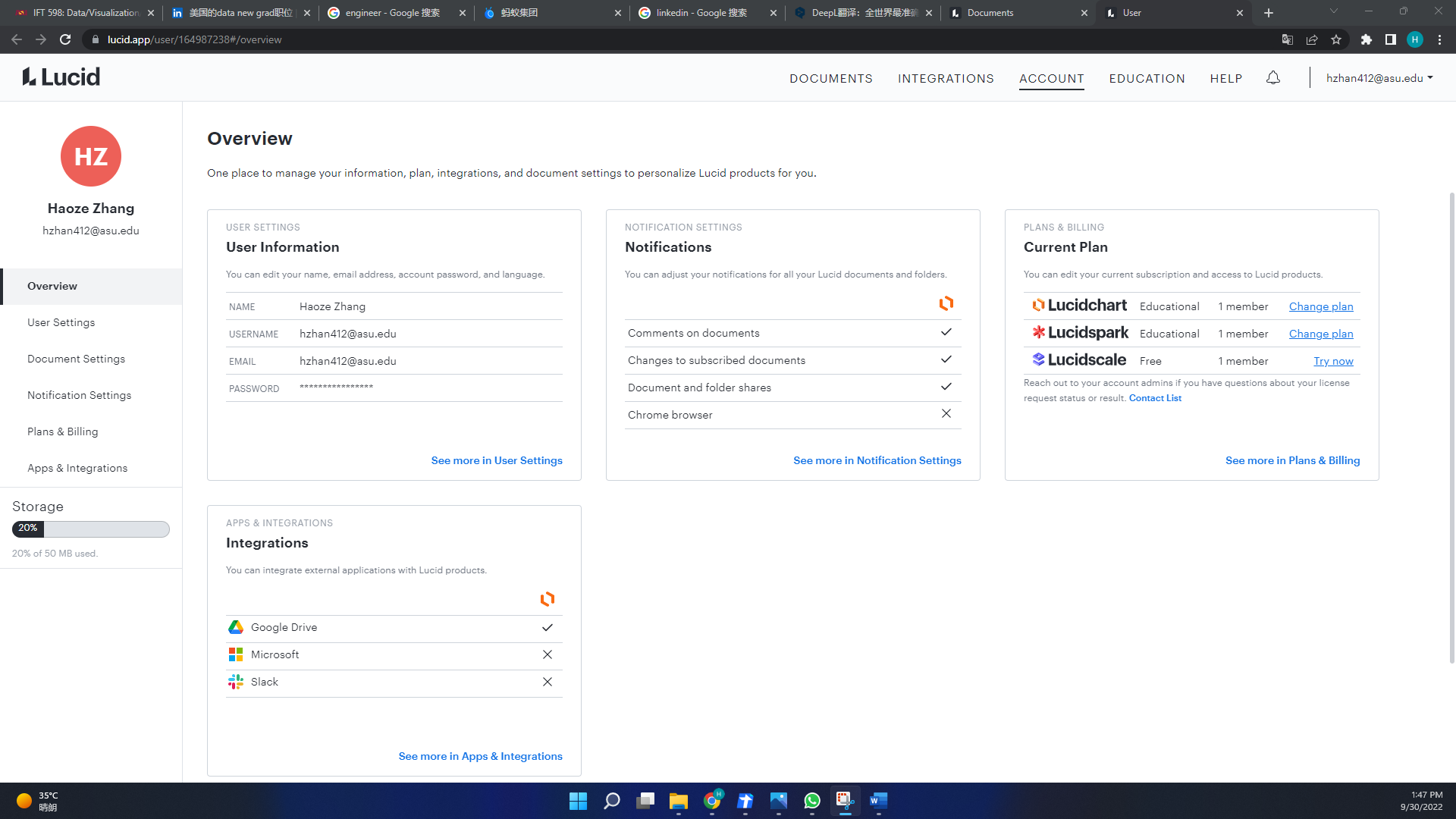
**Relationship:**

**As for relationship between Student and Course:** Many students can take one course, 2 or 3 courses and 0 course, so it is many-to-many(zero) relationship.

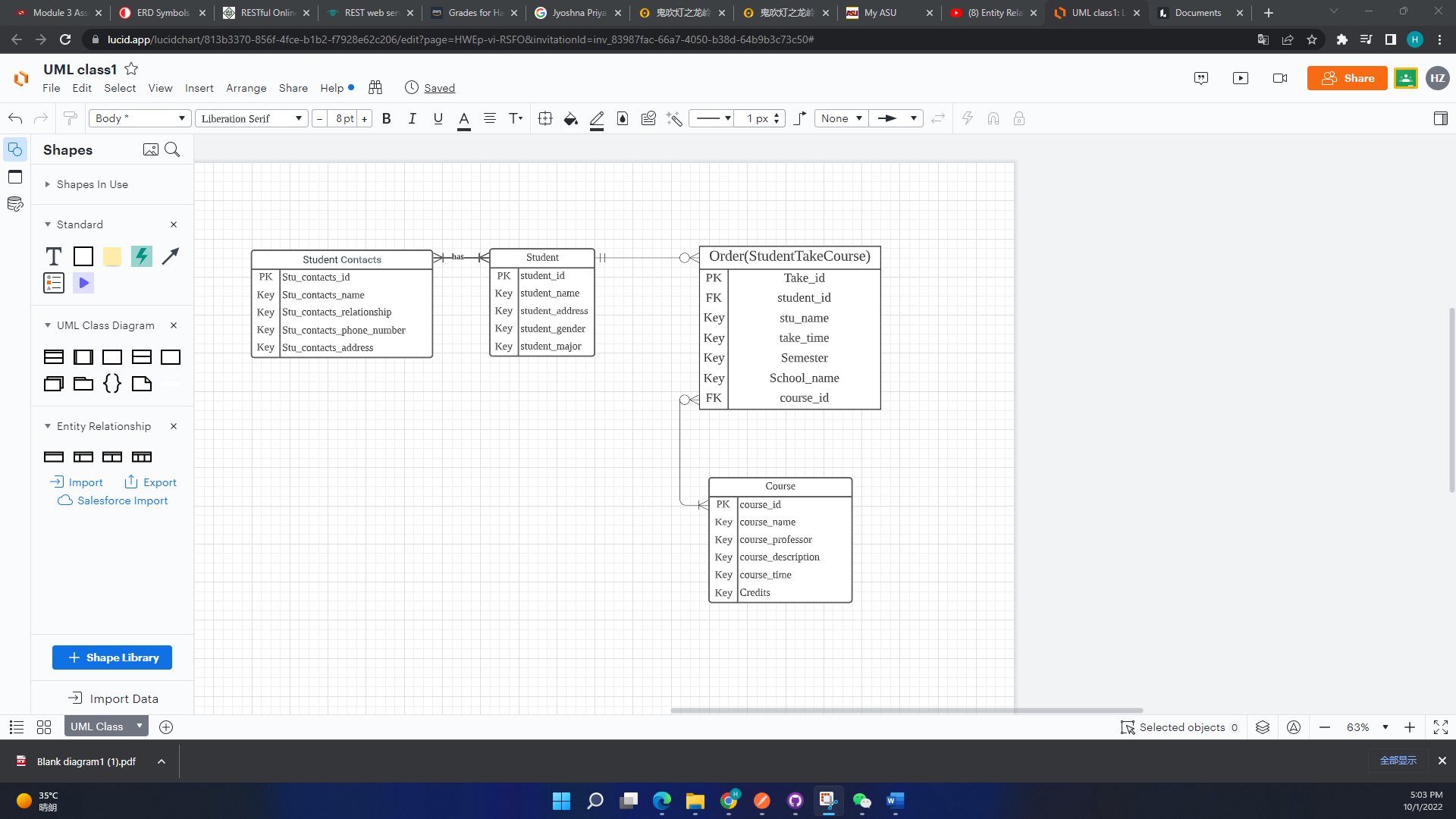
**As for relationship between Student and Student contacts:** 2 or 3 students can have one contacts because these students may have been born in the same family. Also, one student can have many contacts such as his mother, father and other relatives. So it is many-to-many relationship.

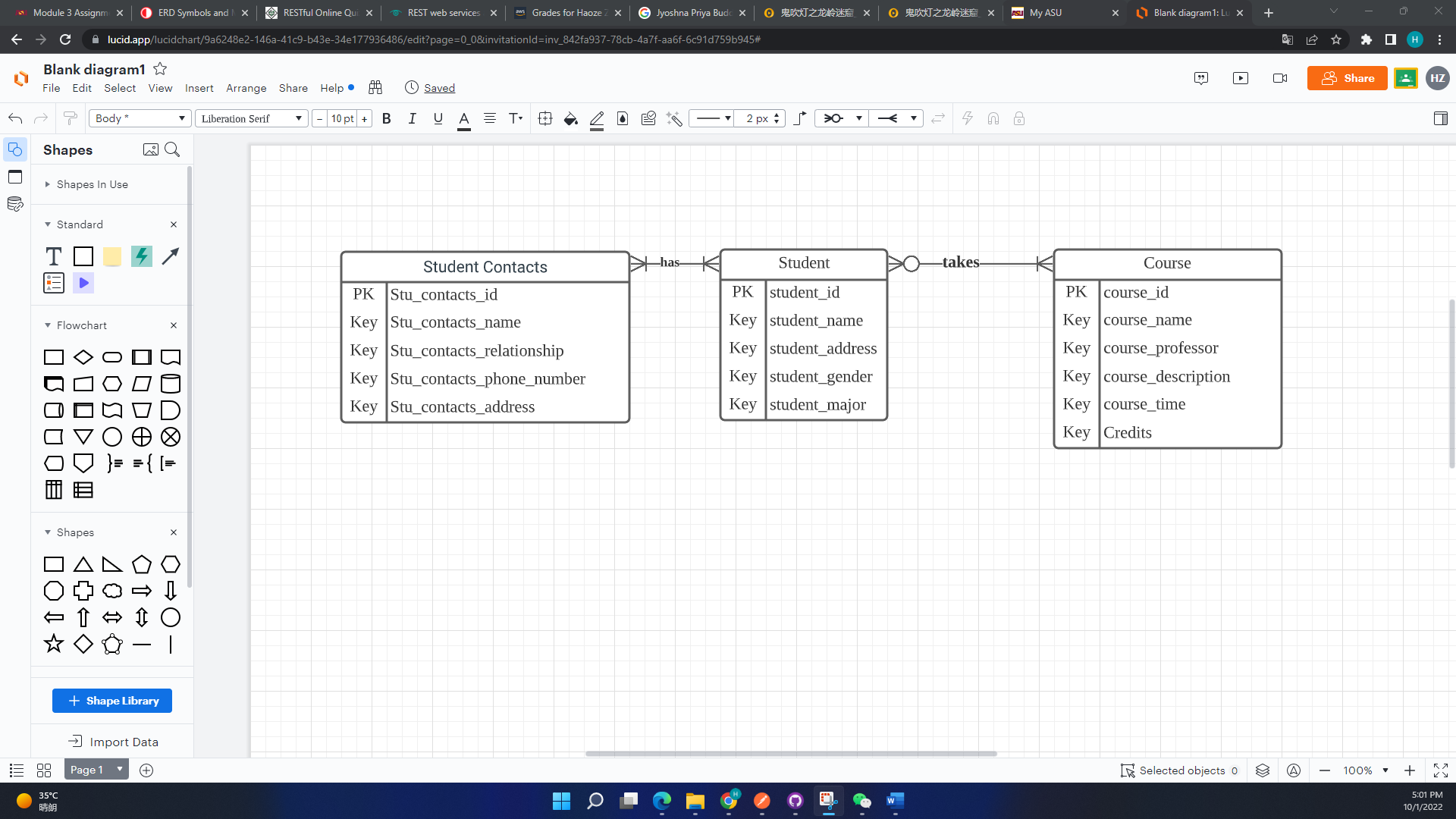
**Lucid chart account:**

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**The ERD Diagram is as followings:**

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**Project Estimates:**

Generally speaking, it's the process of analyzing available data to predict the time, cost, and resources needed to complete a project. Typically, project estimation includes scope, time-frames, budget, and risks.

For this project:

**Scope:** It can be used in a school's management system to monitor students' course selection and related contact information.

**Time:** The project development time required is about 1.5 months, the first half month is used for requirement analysis and project design, the development needs 25 days, need to use 5 days to test the system online.

**Language:** We can use Javascript, PHP, Java to develop the system, also we can use framework such as vue and react to develop it. As for database, we can use MongoDB, Oracle and Mysql.

**Risk:**

1: We need to clarify the relationship between the student and the course, the student and the student contact.

2: Too much data will affect the rate of the select table.

3: Is the extensibility of the framework to meet more needs.