# Assignment 1 UML Design

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# Scenario Description

The COVID-19 pandemic has led to a dramatic loss of human life worldwide and presents an unprecedented challenge to public health, food systems and the world of work. To safeguard the well-being of SUSTech members and support the prevention and control work of the epidemic, the university has developed *Health Declaration System*. As a member of SUSTech, it is our duty to do the daily health declaration. In this assignment, you are required to design a similar system like *Health Declaration System*. In particular, your system should meet these following requirements:

***Let's declare some nouns first:***

```
health declaration information 健康申报信息
student 学生
faculty 教职工
administrative staff 行政人员
administrator 管理员
```

***Examples of health declaration inforamtion:***

```
1. Are you on campus today?
2. Current location?
3. Please upload itinerary QR code
```

- When using *Health Declaration System* for the first time, the administrator will register accounts for all SUSTech members (including `students`, `faculty`, `administrative staff` and `administrators`). When registering an account, the adminstrator will enter the basic information (including `Name`, `Age`, `Cellphone number`, `Department` and `Student ID/Employee ID` ) of the personnel, and these information **CANNOT be modified** (e.g., update, add or delete) by anyone **EXCEPT** the administrator.
- For `all SUSTech members`, they need to do the health declaration everyday. The information to be declared is **NOT fixed** (may update), and the answer form is **NOT unique** (including text, options, etc.). And `all SUSTech members` can check their previous declaration information.
- The `administrator` will modify (e.g, update, add or delete) the health declaration form that needs to be declared according to the current epidemic situation. Also, they can view the health declaration information of all SUSTech members.
- `Administrative staff` are authorized to view the health declaration information of `students` and `faculty` in their departments.
- At 12:30 and 16:30 every day, the system will remind those who have not yet submitted a health declaration to do so. At 20:00, the system will send the information of those who have

not filled in the health declaration to the `administrative staff`.

# Question 1: Draw a use case diagram according to the scenario above. (30 points)

# Question 2: Class diagram: Finding out all entity class according to your design, and draw the class diagram. (40 points)

In this section, you need to indicate the **class name**, **relevant attributes** and the **relationship between classes**.

# Question 3: Draw a sequence diagram to represent the *Health Declaration* process according to the scenario (30 points).

## *Health Declaration* process scenario:

The user can click the `healthy declaration` button to start the Health Declaration process, and then the system provide some questions in front-end page for user to check/fill in.

One question the user must be filled everyday is that whether he has been to medium/high-risk areas.  If user click yes item, the front-end page will added another input area for user to write down the specific medium/high-risk areas. After that the page will notify him a message that he should proactively contact the school for quarantine for 14 days. If no, directly upload the data to the system.

After finishing all questions, the user needs to click on the `submit` button. If all the questions are already answered, the system will return the `Submitted successfully` information and then upload the data into the system's database. If not, the system will remind the user which question hasn't been filled in, and the user needs to repeat the submitting process.

# What to Submit?

Complete all the questions and combine the UML diagrams into a single PDF file. If necessary, given several explanations about your diagrams.

Any handwriting UML diagrams are not allowed for this assignment.