Hospital Management System

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1. Objective

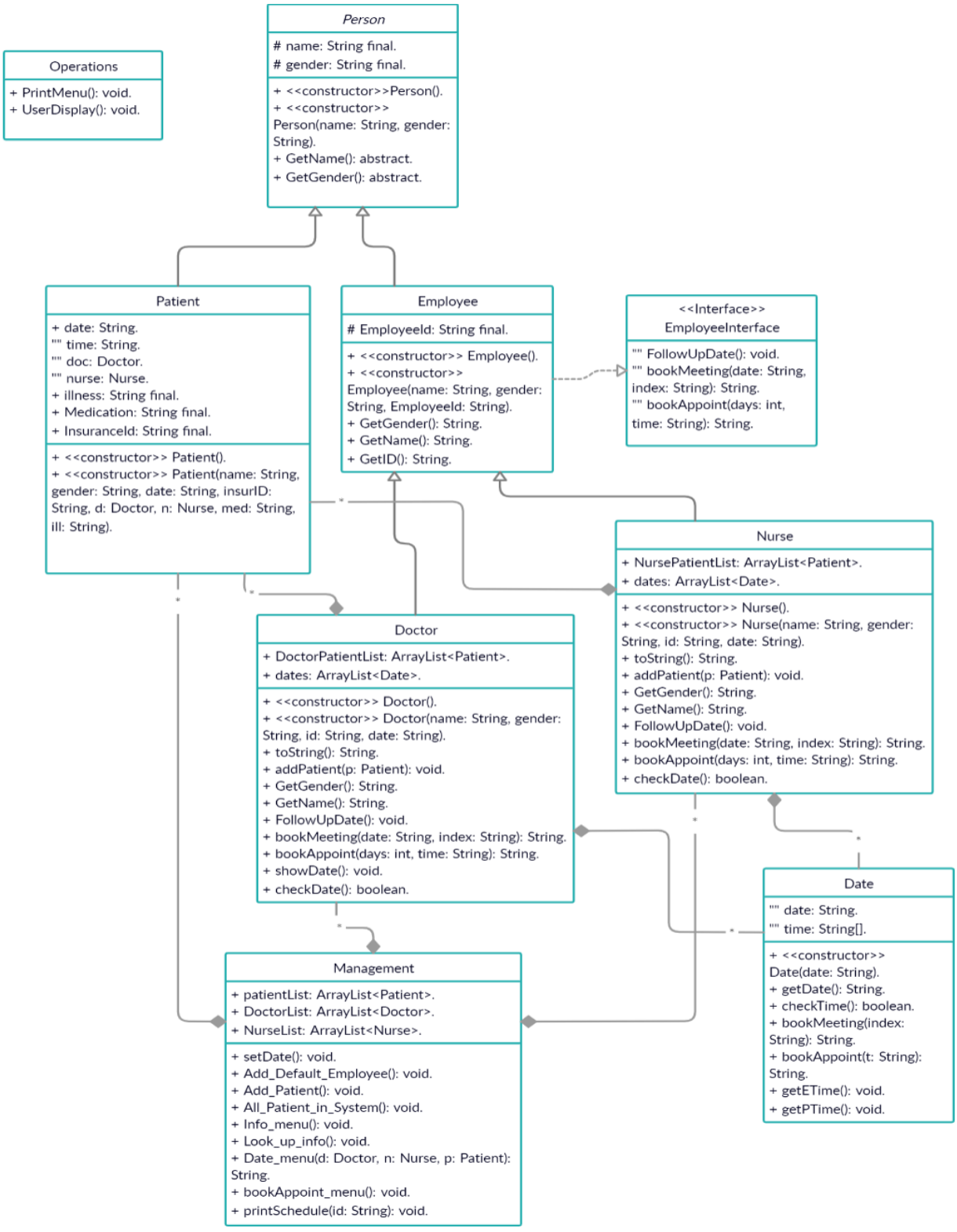
The objectives of this project are to practice working remotely in team of two and to design a Hospital Management System that assists doctors and nurses with tasks such as scheduling a follow up, adding patients in the system, looking up patient information, etc.

2. Introduction/Functionality

Hospital Management System is designed to help nurses and doctors keep track of their patient's medical history, schedules, and follow ups. The system is very user friendly, since there is 5-choice menu to pick from. The user must pick one of the choices or they can exit the system by entering –1. In the menu, the users (doctors and nurses) can register a new patient by entering the patient information into the system; users can look up existing records of patients; users can schedule a meeting or book an appointment with doctor or nurse; and users can follow up their appointments and meeting time. For the case that patients do not acknowledge when they must visit their doctors/nurses, the doctors and nurses can use the "follow up date" function to remind their patients or book another appointment with their patients if the patients forget to show up. However, doctors and nurses cannot delete or edit the previous the meeting or appointment.

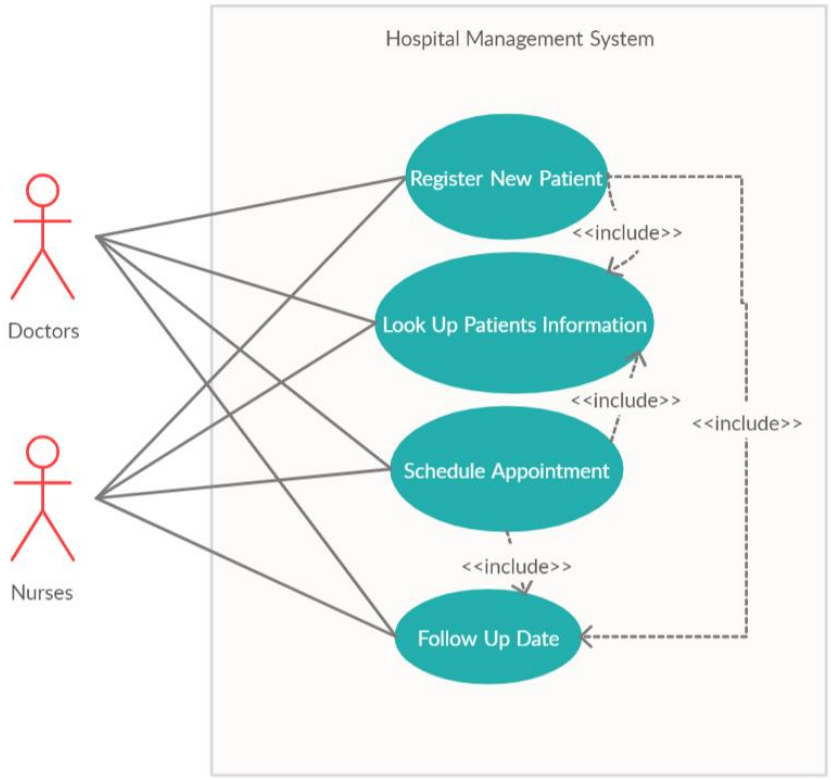
3. Diagram

3.1 Classes



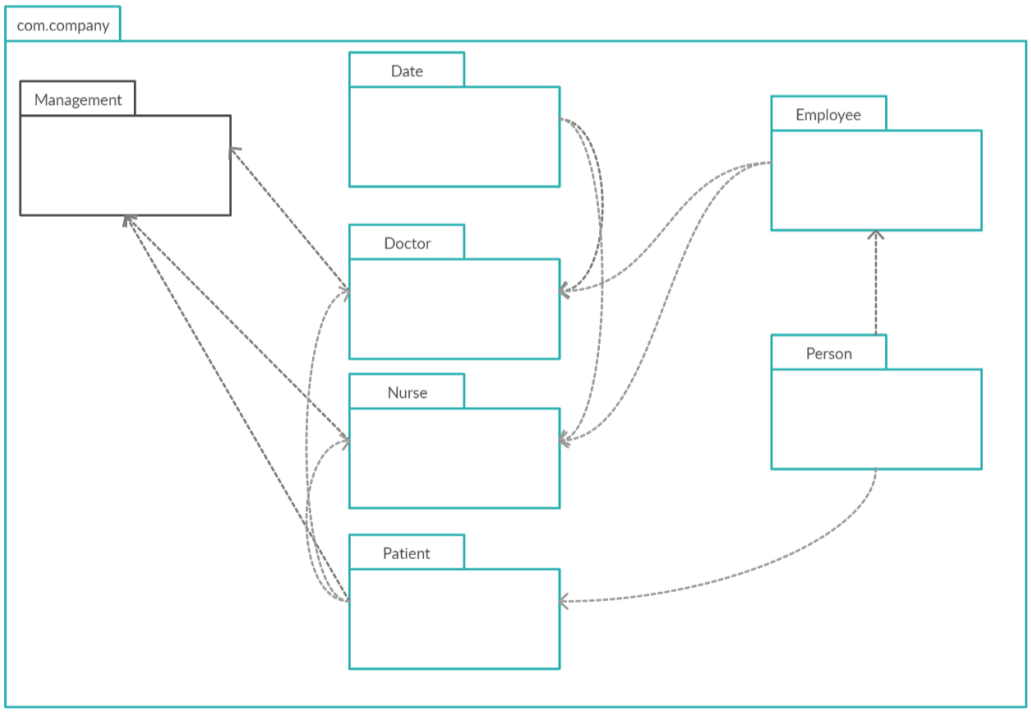
3. Diagram

3.2 Use Case



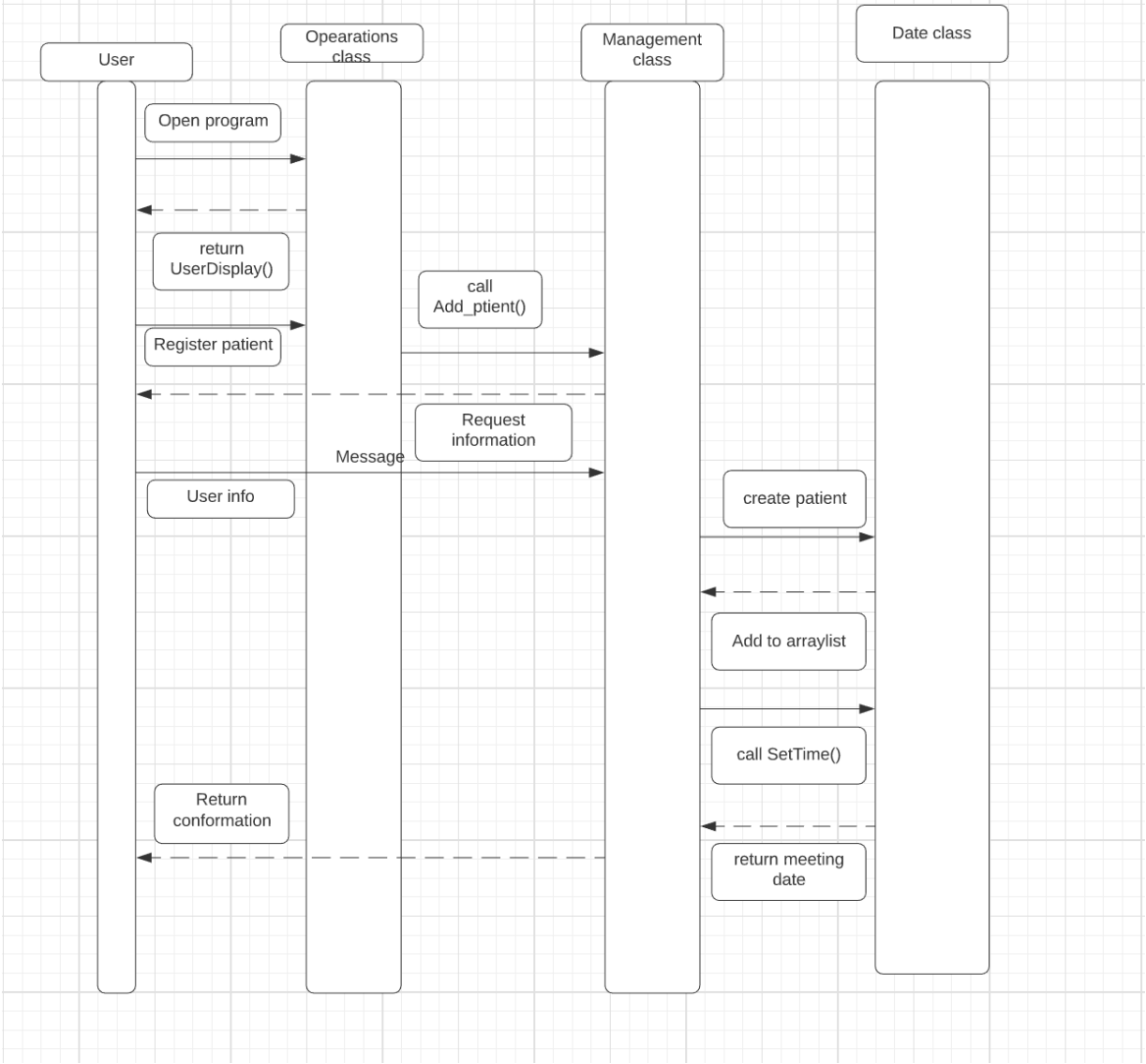
3. Diagram

3.3 Packages



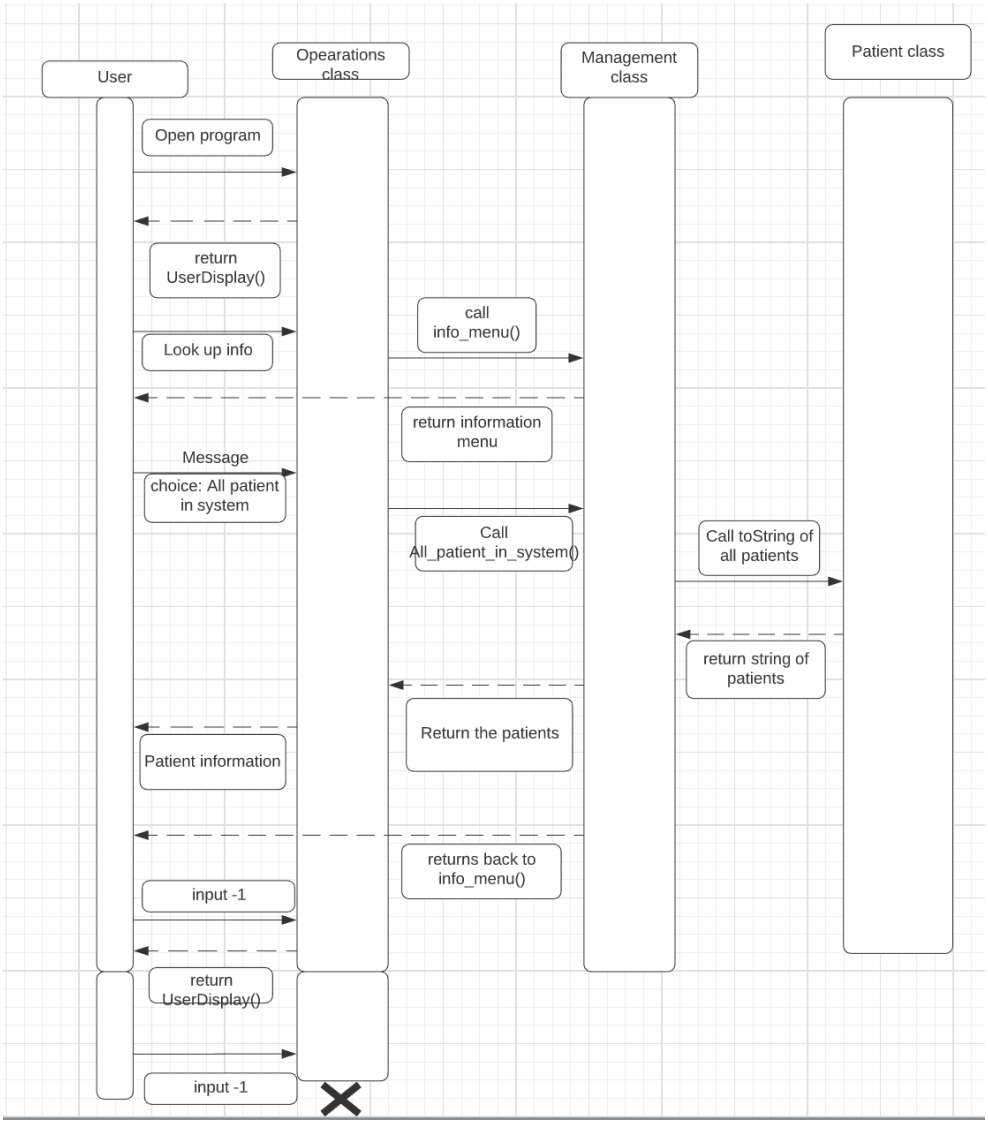
3. Diagram

3.4 Sequence Diagrams



3. Diagram

3.4 Sequence Diagrams



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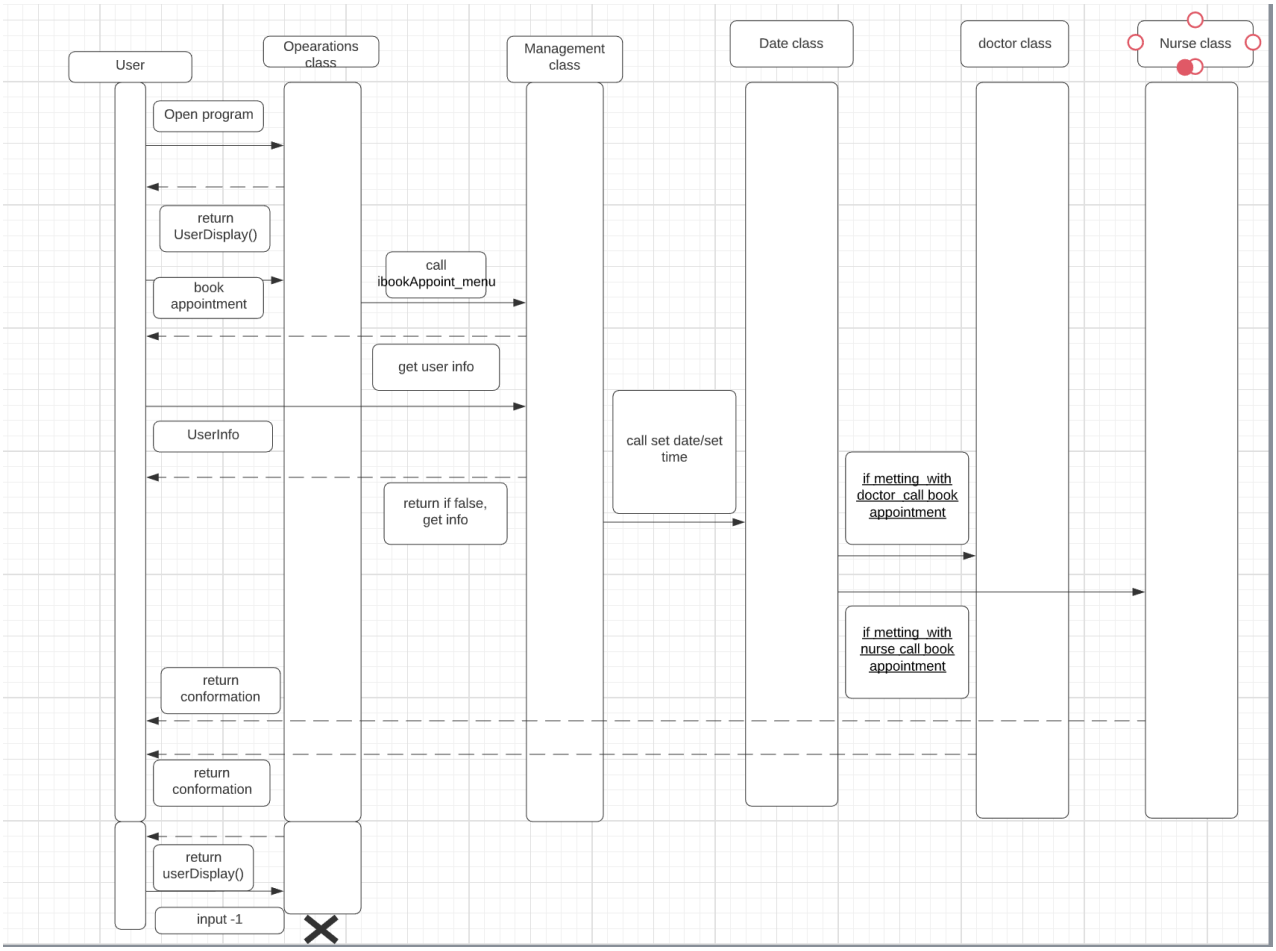
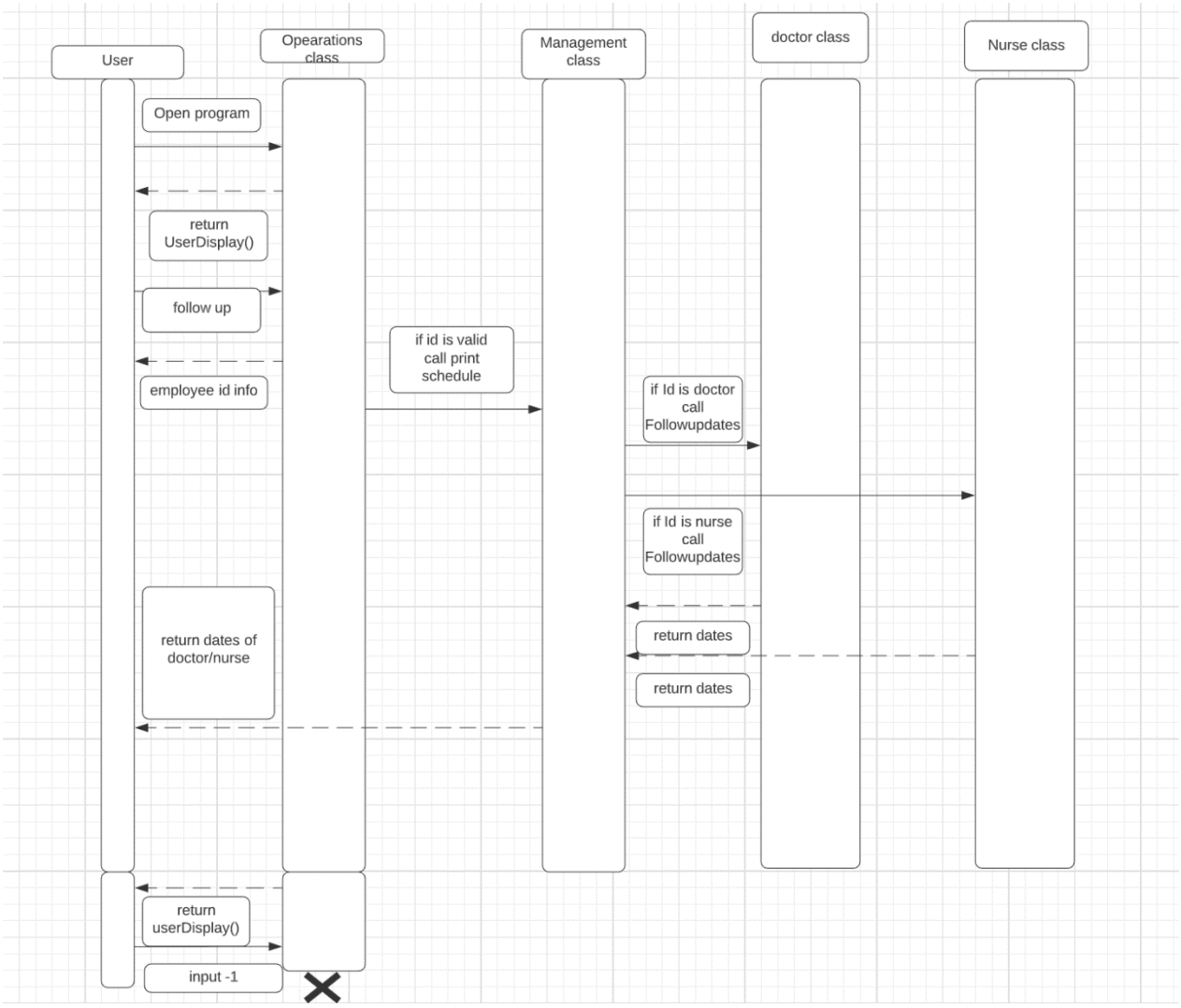


3. Diagram

3.4 Sequence Diagrams



4. Contributions

The work was divided evenly among Kushal and Huy to be more efficient with time. Classes and methods design planning was overseen by both members. Kushal worked on the registration of patients and information look up sections as well as input validations, while Huy worked on scheduling meeting section and follow up meetings as well as the UML diagram. Both members were responsible for creating additional methods to improve the system as well as fixing any errors present. Kushal and Huy worked well together to create the best system in the given time frame.

5. Conclusion

The purposes of this project are to practice working remotely in a team of two and to design a Hospital Management System that assists doctors and nurses. This project was done by April 28th, 2020, yet it still can be improved to be more efficient, such as the method type and the functionalities of classes and methods.

First of all, the primary function of the "Look_up_info()" section is to search for the patient whether the one is in the system or not, so the method type should be changed from void to boolean. As a result, in the "bookAppoint_menu()" can reuse the "Look_up_info()" method if there is a patient, who is not in the hospital management system, wants to book an appointment with the doctor or nurse working in that hospital. In this event, the method "bookAppoint_menu()" should recall the "Add_patient()" to register that patient, who is not in the system's record.

The second example which needs to improve is the doctor and nurse classes. The doctor class and the nurse class in this project are too general, and this system does not record the doctors and nurses' specialty. For the ideal management system, each doctor and nurse have their own specialty, so the management system can assign the patient to the right doctor with the right specialty base on the patient's illness. For the case that a patient does not know his or her illness, the system should assign one to a home doctor. However, this system does not have these elements.

In conclusion, the Hospital Management System project meets the constraints, but the project is still can be enhanced and more friendly.

6. References:

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