Project Milestone 1

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Class diagram
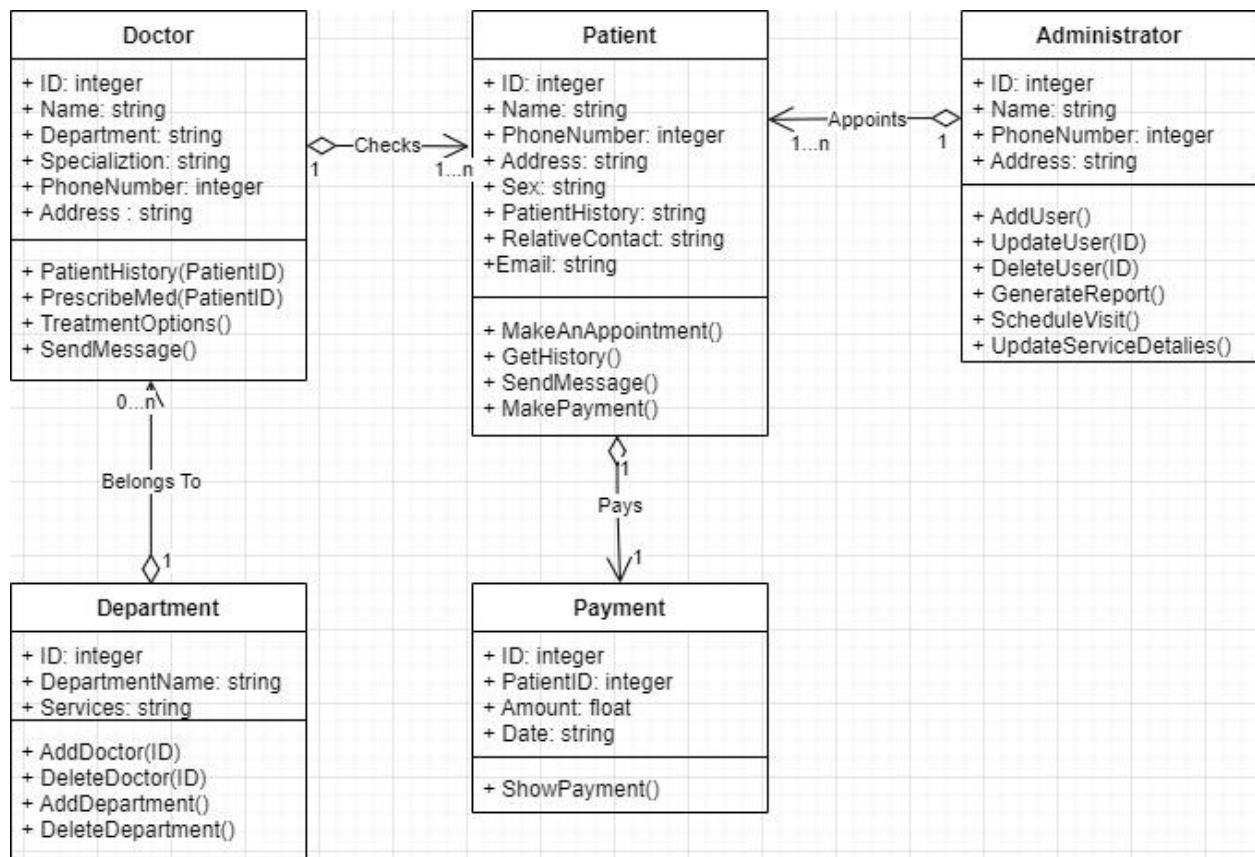

Figure 1. Class diagram
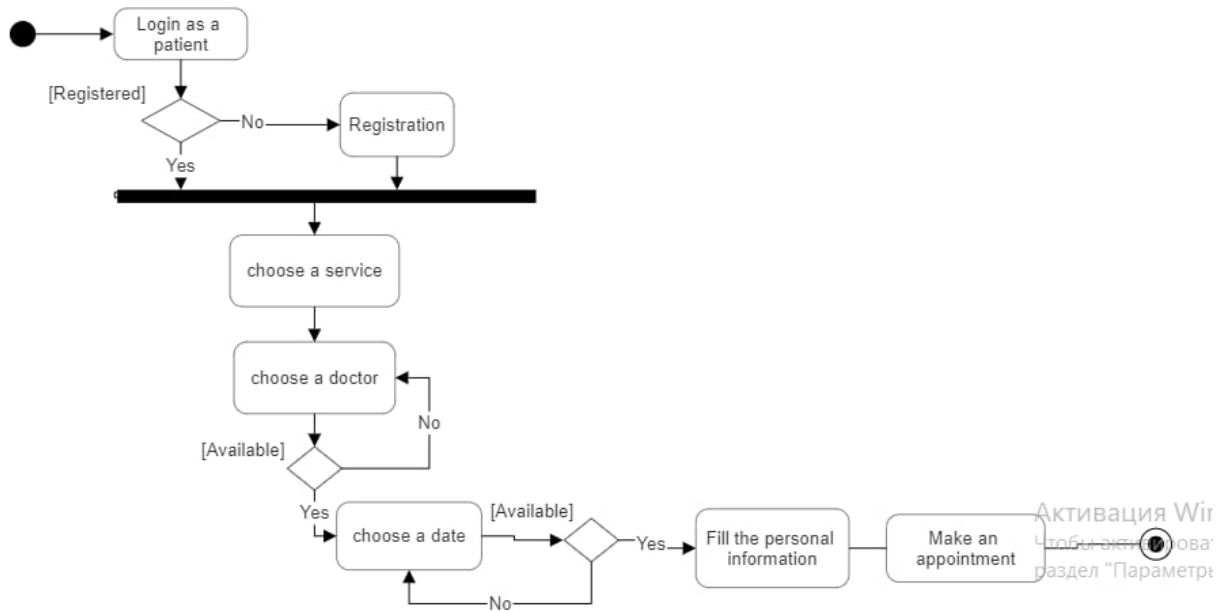
Activity diagram
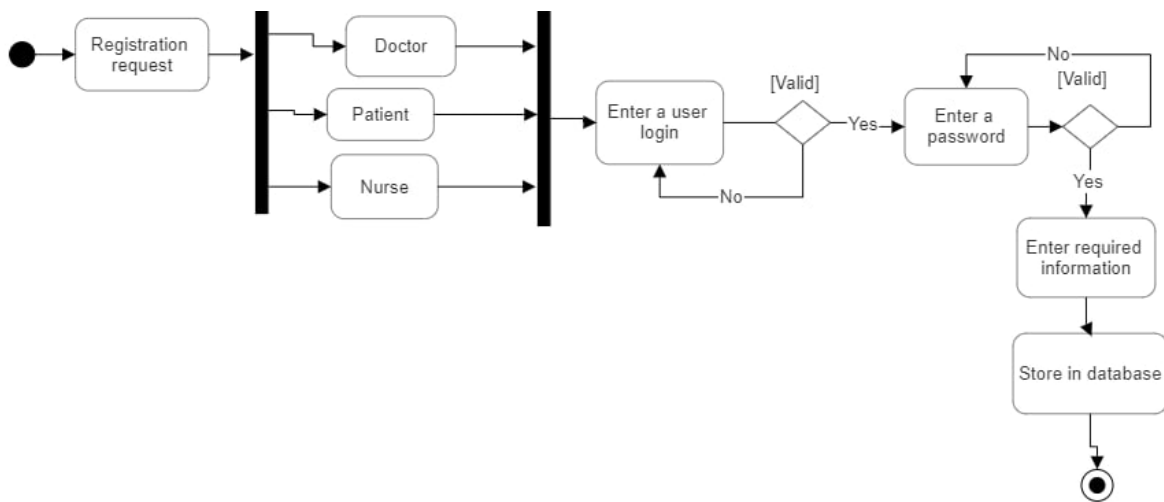

Figure 2. Making an appointment process.

Figure 3. Registration process

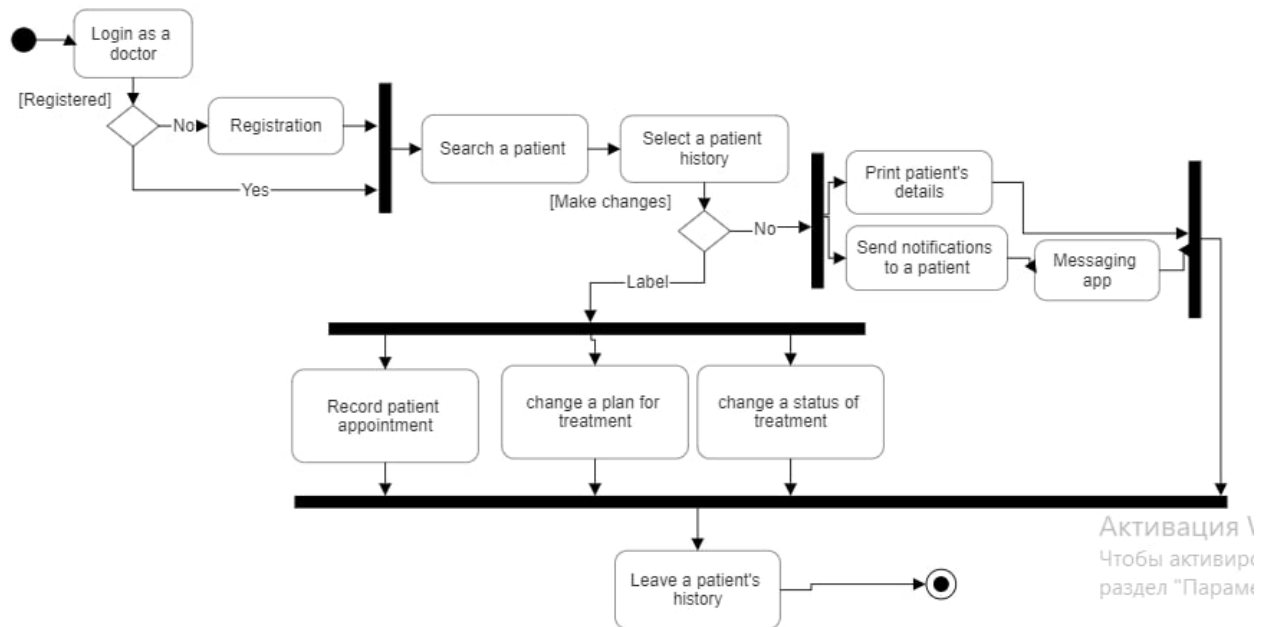**Figure 4. Process of maintaining patient's history**

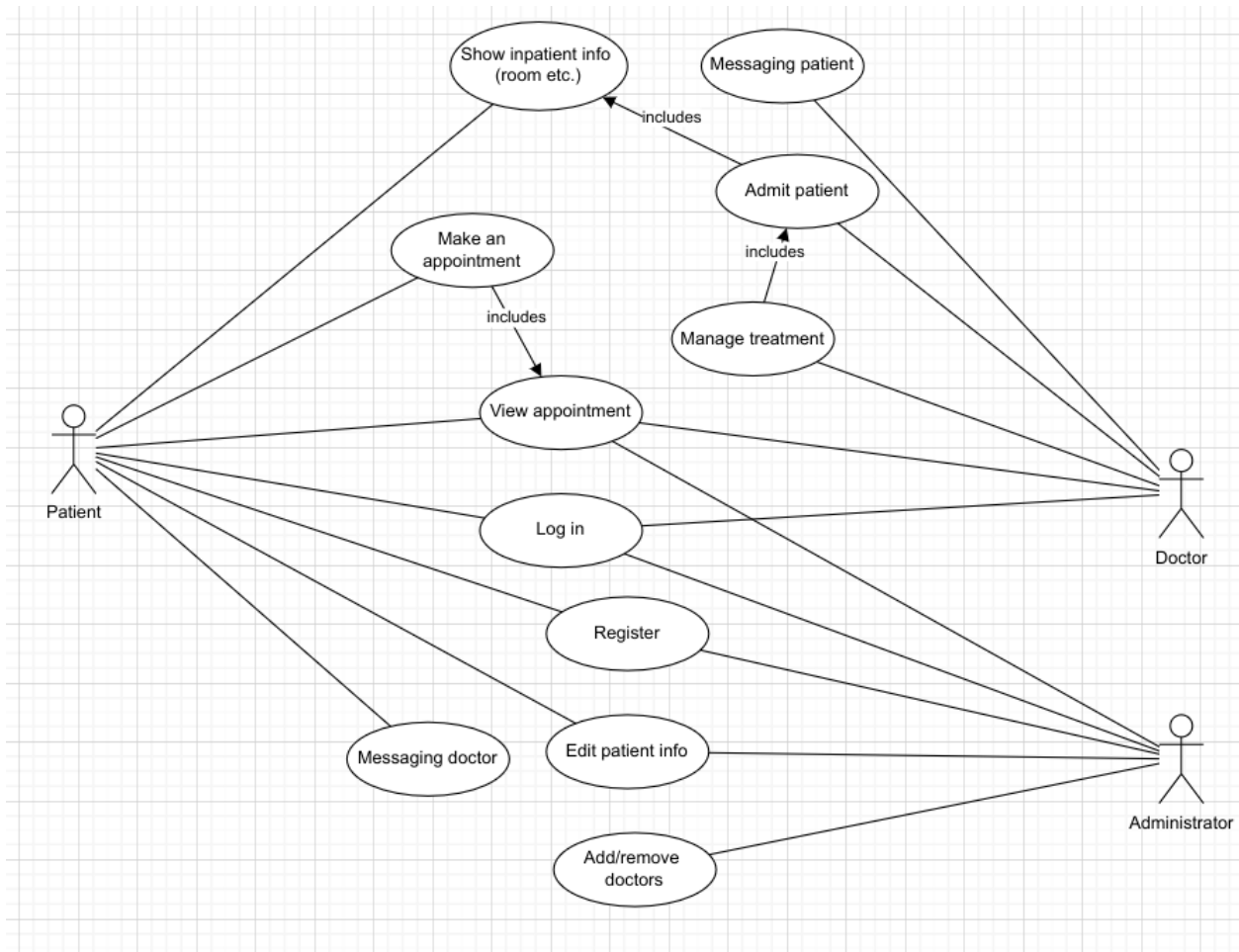**Figure 5. Process of prescribing a medication in online format.**

Figure 6. Use case diagram

Technology stack

Django

To create a backend part of the site, our team decided to use the Django framework for several reasons. We considered three main factors: the language, available tools, and convenience. Django was the most optimal decision, as it fulfills our needs in developing the functional part of the program, while not spending a lot of time adding and debugging small components.

The majority of the team are python programmers, and Django precisely offers the utility to create web applications via python. This framework has strong security options and is simple, we would learn programming patterns through the convenient documentation it provides. Moreover, Django is time efficient as most of the modules were already implemented.

As a backend technology stack, Django fits the requirements of the medical system. It has modules created for authorizing and messages, which would simplify the creation of login and chat procedures. Designed frontend parts of the application that would open fast through

View modules. Moreover, the modules and features of Django would allow us to implement simple and smart medical system applications.

Bootstrap/HTML/CSS

The frontend part of the project will be implemented through the usage of classical markup languages: HTML and CSS. However, to improve efficiency of the work, our team decided to use Bootstrap framework. The team will create minimal design without unnecessary details and animation, as the work is intended for a medical institution.

PostgreSQL

PostgreSQL was chosen as a DBMS since it is highly compatible with Python and especially compatible with a versatile framework such as Django. Moreover, PostGreSQL supports JSON and is cross-platform. Considering the fact that this DBMS is open-source and free, it provides creation of own functions, triggers etc. Its features are easily available and can be implemented automatically unlike, for instance, Microsoft SQL. PostgreSQL also provides more data types than MySQL, even in case of using basic data types both DBMS are equally good, however, due to additional versatility PostgreSQL is a more convenient choice for this project

Git Version Control System

Git is a very versatile and popular version control system with a powerful support for different platforms. It is a convenient technology in software development as it allows to divide the whole project into small tasks and control the flow of development from each individual in the team. Everyone in our team is already familiar with Git, which makes it a perfect choice for the version control system.