

Consider the process of obtaining prescription eyeglasses in a healthcare system.

- First, the patient needs to get a prescription from an optometrist (an eye doctor).
- To get a prescription, during the appointment, the patient describes their symptoms to the doctor.
- The doctor then considers the patient's symptoms.
- Then, the doctor performs an examination.
- After performing the examination, the doctor considers results.
- If the health problem warrants prescribed glasses, the doctor gives the patient a prescription; the patient receives the prescription; otherwise, the doctor gives a recommendation and the patient receives the recommendation.
- To place an order with the dispensary, the patient needs to select a frame (that fits and the patient likes).
- Once the frame is selected, the patient needs to present their prescription to the dispensary clerk.
- The dispensary clerk then creates an order for the patient's glasses, enters prescription data, enters data about the frame the patient selected, and suggests suitable fitting date/time. The patient needs to confirm that the date/time is suitable (if not, the clerk needs to suggest another date/time).
- With that, the clerk submits the order for fulfillment.
- Once the glasses have been made by a technician, the patient returns to the store for fitting and adjustment, pays and receives the glasses (the glasses are "fully made" after they are fitted and adjusted).

1. Draw a high-level UML activity diagram for the entire process of obtaining glasses; focus on the subprocesses rather than actors, individual activities, and decisions.

2. Draw a use-case diagram for the entire system of obtaining glasses. Make sure to include all relevant actors and focus on essential, overview use cases.

3. Complete a use-case description for the "Get Prescription" use case using the form in the template.

4. Draw a low-level UML activity diagram for the "Get Prescription" use case.

5. Complete a use-case description for the "Place Order" use case using the form in the template.

6. Draw a low-level activity diagram for the "Place Order" use case.