

Homework 2 - Personas and Problem Scenarios

Persona 1: Dr. Vangel Markovski - General Practitioner (Doctor) at a public hospital.

Screening Question:

- Do you regularly issue prescriptions to patients?
- Do you use a digital or partially digital system for prescriptions?

Persona Description



Dr. Vangel is 41 years old and works in a busy local hospital. He usually wears a white medical coat, formal shoes, and carries a tablet. He examines 25–35 patients per day and often needs quick access to patient medical history and prescription records. He has over 15 years of experience. However, he becomes frustrated when systems are slow or incomplete. He currently uses a partially digital hospital system, but sometimes still relies on paper prescriptions or fragmented patient data. He worries about prescribing medication that could cause allergic reactions or interact with existing treatments. He wants fast access to medical records and prescription history. His main goal is to treat patients efficiently while minimizing medical errors.

Thinks

- “If I make a mistake in prescribing medication, it could seriously harm someone.”
- “The system should help me, not slow me down.”
- “Everything should be in one place.”

Sees

- Fragmented patient records across systems.
- Paper prescriptions being used in some cases.
- Increasing digitalization in healthcare.

Feels

- Time pressure during peak hours.
- Concern about patient safety.
- Frustration when systems are slow or crash.
- Relief when processes work smoothly and reliably

Does

- Logs into the hospital system daily.
- Issues multiple prescriptions per shift.
- Updates diagnoses and treatment plans.

Problem Scenario 1: Adding a new patient

Dr. Vangel gets a request from a new patient to become his/her general practitioner, so he needs to add the patient to the centralized database. He needs quick access to the patient's medical record, ID and all information. He must ensure that the patient does not already exist in the national system, the data entered is complete and accurate and the record is instantly accessible for future prescriptions. The current fragmented system increases risk of duplicate records and delays the treatment.

Current Alternatives

Without a centralized cloud-based system, Dr. Vangel may:

- Use a local hospital system that is not synchronized with other institutions.
- Fill in paper registration forms, which are later manually entered into a computer.
- Risk creating duplicate patient records due to lack of centralized validation.

Our Value Proposition

With the Cloud-Based Pharmacy Management System:

- Patient data is stored in one cloud-based centralized database.
- The unique ID is validated instantly.
- The system automatically checks for duplicates in real time.
- Input validation reduces human error.
- The doctor's patient list updates automatically.

Problem Scenario 2: Searching for a patient

A patient comes for an examination and Dr.Vangel needs to open the patient's medical record, so he searches for the patient in his records. Dr. Vangel must quickly access full medical history, previous diagnoses, allergies and active prescriptions.

Current Alternatives

Without a centralized cloud-based system, Dr. Vangel may:

- Search through a local-only hospital database.
- Look through paper files if the digital record is incomplete.
- Call other institutions to request patient history.

Our Value Proposition

With the Cloud-Based Pharmacy Management System:

- Doctor searches using a unique ID with instant validation.
- The system retrieves the complete medical record in real time.
- Data is synchronized across all branches and hospitals.

Persona 2: Pharmacist Lea Zajkov - pharmacist at a private pharmacy.

Screening Questions:

- Do you dispense prescription medicine to patients?
- Do you use a digital or partially digital system to search, view prescriptions, and complete dispensing?

Persona Description



Lea Zajkov is 35 years old and works in a private pharmacy that is part of a larger chain as a pharmacist. She spends most of her shift behind the sales counter to provide help with how different medicines work or choosing the right medicine. On an average day, she processes a lot of prescriptions and needs quick access to patient medical records and prescription details. She has 11 years of experience in pharmacy and medications, but she gets annoyed when systems are slow and when information is missing. She uses older-style systems where patients' and medications' data is inconsistent and therefore requires manual data entry. It also happens that pharmacy branches are not always synchronized. She is afraid that situations like dispensing medication to a wrong patient or missing information about the amount of particular medication can occur. Her goal is to be of service to the patients in a timely manner while keeping everything accurate and safe.

Thinks

- “If I miss a prescription detail, it could make the patient’s health worse”
- “The system should provide the correct information.”
- “Prescription status for particular patient and the stock levels should update automatically”

Sees

- Patients’ expectations are fast service and immediate access to their prescription.
- Different branches happen to have different information.
- A lot of manual steps, i.e. retyping prescription, checking shelves for stock or inputting a patient in the system.

Feels

- Pressure during busy hours when the number of patients is bigger than usual.
- Confident when everything works ‘by the book’

Does

- Logs into the pharmacy system if she is the first on her shift.
- Issues multiple prescriptions per shift.
- Searches for patients by unique ID to open their medical record.
- Checks allergies, conditions, and prescription details before dispensing.
- Marks prescriptions as completed so stock is updated automatically.
- Opens the alerts section to check low stock and soon-to-expire medicines.

Problem Scenario 1: Searching for a patient to dispense medication

A patient comes to pick up medication. Lea needs to find the patient by entering their unique ID in the system. The system should return the correct record within a few seconds. She must check for allergies and prescription details, and then dispense the medicine. After that, she marks the prescription as completed so the system updates stock and records the sale. If the patient is not found, the system should clearly show a “No records found” message so she can try again or ask the patient for clarification.

Current Alternatives

Without a centralized cloud-based system, Lea may:

- Use a local desktop system that is not connected to other branches.

- Retype prescription information manually from paper or external platforms.

Our Value Proposition

With the Cloud-Based Pharmacy Management System:

- She can search by unique ID and get the prescription record in real time.
- Marking a prescription as completed updates stock levels instantly.
- Input validation reduces human error.

Problem Scenario 2: Handling a prescription update from a doctor

A patient arrives at the pharmacy to pick up a prescription, but the doctor has updated the dosage and added an additional medication earlier that day. Lea needs to ensure she has the latest prescription details. She searches for the patient's record in the system, but the local system does not automatically sync with updates from the doctor's office. She must manually compare the paper prescription or faxed update with the system's record. This process is time-consuming and prone to errors, especially during busy hours. She must verify allergies, check stock levels, and confirm the new dosage before dispensing the medication. If the system had real-time updates, she could safely dispense the medication without delays or risk of giving the wrong dose.

Current Alternatives:

- Call the doctor's office to confirm changes.
- Manually check paper records against the system.
- Delay dispensing until she is sure the information is correct.

Our Value Proposition:

With the Cloud-Based Pharmacy Management System:

- Prescription updates from doctors are synced automatically in real time.
- Alerts notify Lea if a prescription has been modified since the patient's last visit.
- She can safely dispense the updated medication without manual cross-checking, reducing errors and saving time.

Persona 3: Elena Petrova – Foreign University Student

Screening Questions:

- Have you ever needed medical attention while studying abroad?
- Did you have to register again because your medical records were not available in the country you were studying in?

Persona Description



Elena Petrova is 22 years old and studies Computer Science abroad. She moved to another country to continue her university education. Although she has health insurance, she often faces difficulties when seeking medical care because her medical records are stored only in her home country. When visiting a doctor or pharmacy, she is usually asked to provide her medical history, allergy information, and previous prescriptions manually. Sometimes she does not remember exact medication names or dosages. This makes her feel stressed and uncertain. She wants her medical records and prescriptions to be securely accessible wherever she is, without needing to re-register or repeat paperwork. Her main goal is to receive fast, safe, and reliable medical treatment while studying abroad.

Thinks

- “I hope they can see my medical history.”
- “What if I forget to mention an allergy?”
- “Why do I need to register again every time?”
- “My data should already be in the system.”

Sees

- Different healthcare systems in different countries.
- Manual registration forms.
- Doctors asking for repeated information.
- No connection between her home and host country systems.

Feels

- Anxious when visiting a new doctor.
- Frustrated by repeated paperwork.
- Concerned about possible medical mistakes.

- Relieved when healthcare staff have access to accurate information.

Does

- Provides personal information repeatedly.
- Explains her medical history from memory.
- Keeps photos of prescriptions on her phone.
- Contacts her family doctor back home for confirmation.

Problem Scenario 1: Seeking Medical Attention Abroad

Elena becomes ill while studying abroad and visits a local hospital. The doctor needs access to her medical history, allergies, and previous prescriptions. However, her records are stored only in her home country's healthcare system. She has to explain her medical background manually. There is a risk of incomplete or incorrect information, which could delay treatment or cause medical errors.

Current Alternatives

Without a centralized cloud-based system, Elena may:

- Register as a completely new patient.
- Provide medical history verbally from memory.
- Show paper documents or photos of prescriptions.
- Wait for records to be sent from her home country.

Our Value Proposition

With the Cloud-Based Pharmacy Management System:

- Elena's medical records are stored in a centralized cloud database.
- Authorized doctors can securely access her medical history using a unique ID.
- Allergies and active prescriptions are instantly visible.
- No repeated registration is required in different hospitals or countries.
- Treatment becomes faster, safer, and more accurate.

Problem Scenario 2: Emergency Care While Traveling

Elena develops a severe allergic reaction while attending a university event abroad. She is rushed to the nearest emergency clinic. The doctors need her allergy history, current medications, and any chronic conditions immediately. Since her records are only stored

in her home country, the medical staff has no access to them. Elena struggles to recall all details accurately under stress, and she worries that missing information could lead to a medical error. Valuable time is lost while staff try to verify her records with her home doctor.

Current Alternatives:

- Provide allergy and medication details from memory.
- Show any saved photos or printed medical documents.
- Ask staff to contact her home doctor for confirmation.

Our Value Proposition:

With the Cloud-Based Healthcare System:

- Elena's allergy history, chronic conditions, and medications are securely accessible in real time.
- Emergency staff can immediately view critical information using a unique ID.
- Treatment is faster, safer and reduces the risk of medical errors in urgent situations.