

# [HealthLink]

## CS353 Project Overview

Team 13

[HealthLink]

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[Register](#)

Tired of always filling in  
forms at the Doctor's rooms?

Register to [HealthLink] to seamlessly share your information to your healthcare  
provider and more!

[Register →](#)



# Overview of [HealthLink]. What it is

## A Medical App in the Web to Simplify Medical Data Administration

- Reducing inefficiencies in healthcare: [HealthLink] streamlines medical data management by combining pharmacists, patients, and consultants into a single, seamless system.
- Reducing human error: Data input and communication mistakes are less likely when automated procedures and patient account creation are used.
- Eco-friendly initiative: [HealthLink] promotes sustainability by doing away with paper-based prescriptions. It digitizes paperwork to reduce overhead expenses.
- Better User Accessibility: Accurate data is accessible to patients and clinicians, which lowers mistakes and improves the quality of treatment.



# [HealthLink]'s motivation

## The Need for Innovation in Modern Healthcare



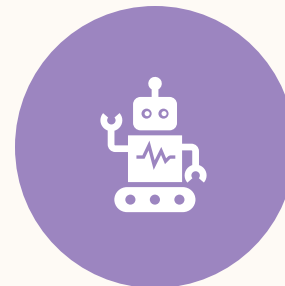
Data mismanagement problems: Complexities and inefficiencies are frequently caused by mistakes made when entering and communicating patient data.



Healthcare systems that are fragmented: When patients, consultants, and pharmacists are not integrated, there are delays and additional administrative duties.



Growing need for digital solutions: As the number of patients increases, scalable and effective digital resources are essential for long-term healthcare administration.



Keeping Up with Current Trends: Promotes healthcare's digital revolution and enhances system interoperability.

# Features of the HealthLink Application That Empower Healthcare Stakeholders



User Types: Features designed to optimize healthcare processes for consultants, patients, and pharmacies that can be customized.



Script Management: Enables script authoring, safe storage, and sharing via QR codes, improving accessibility.



Effective Information Flow: Gets rid of mistakes and delays in patient-provider communication for prescriptions.

[HealthLink]

Doctor Information

Issue Prescriptions

Medical Document Archive

Sign out

Register

Update Doctor Information

Email

doctor@gmail.ie

Enter the your email to make

First Name

Edgar

Please enter your first name

Surname

Levin

Please enter your surname

Date of Birth

19/08/1984

Please enter your date of birth

Sex

Male

Other

Other

Please enter additional details if applicable

Address

55 Crescon

Please enter your address

Submit

Submit

Cancel

HealthLink]

Home

Services


How It Works

About Us

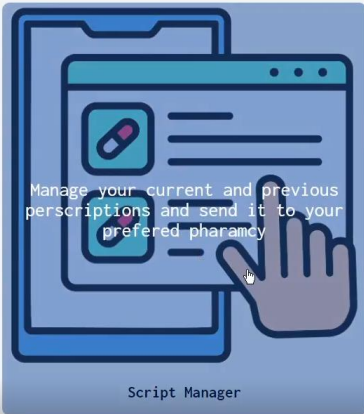
Sign in

Register


Our Services



Patient Information



Script Manager



Medical Document Archive

Issue Prescription

Prescription issued successfully

Patient ID (e.g., 240024)

Medication (e.g., Paracetamol)

Dosage (e.g., 500mg)

Duration (e.g., 7 days)

Submit Prescription

Go to Doctor Info

Welcome, Patient

Your Patient ID: 240003

Active Prescriptions

Date Created: 14/12/2024 21:20:28

Medication: Garamycin

Dosage: 10mg

Duration: 20 days

Status: ready

Doctor ID: 675df574761c98c52ca79085

Archive

Archived Prescriptions

Date Created: 14/12/2024 21:19:51

Medication: Amoxil

Dosage: 500mg

Duration: 14 days

Status: archived

Doctor ID: 675df574761c98c52ca79085

Delete

# Technologies and Tools for Building a Strong Healthcare Platform



Frontend Development: ReactJS and Vite for a smooth UI and fast development.



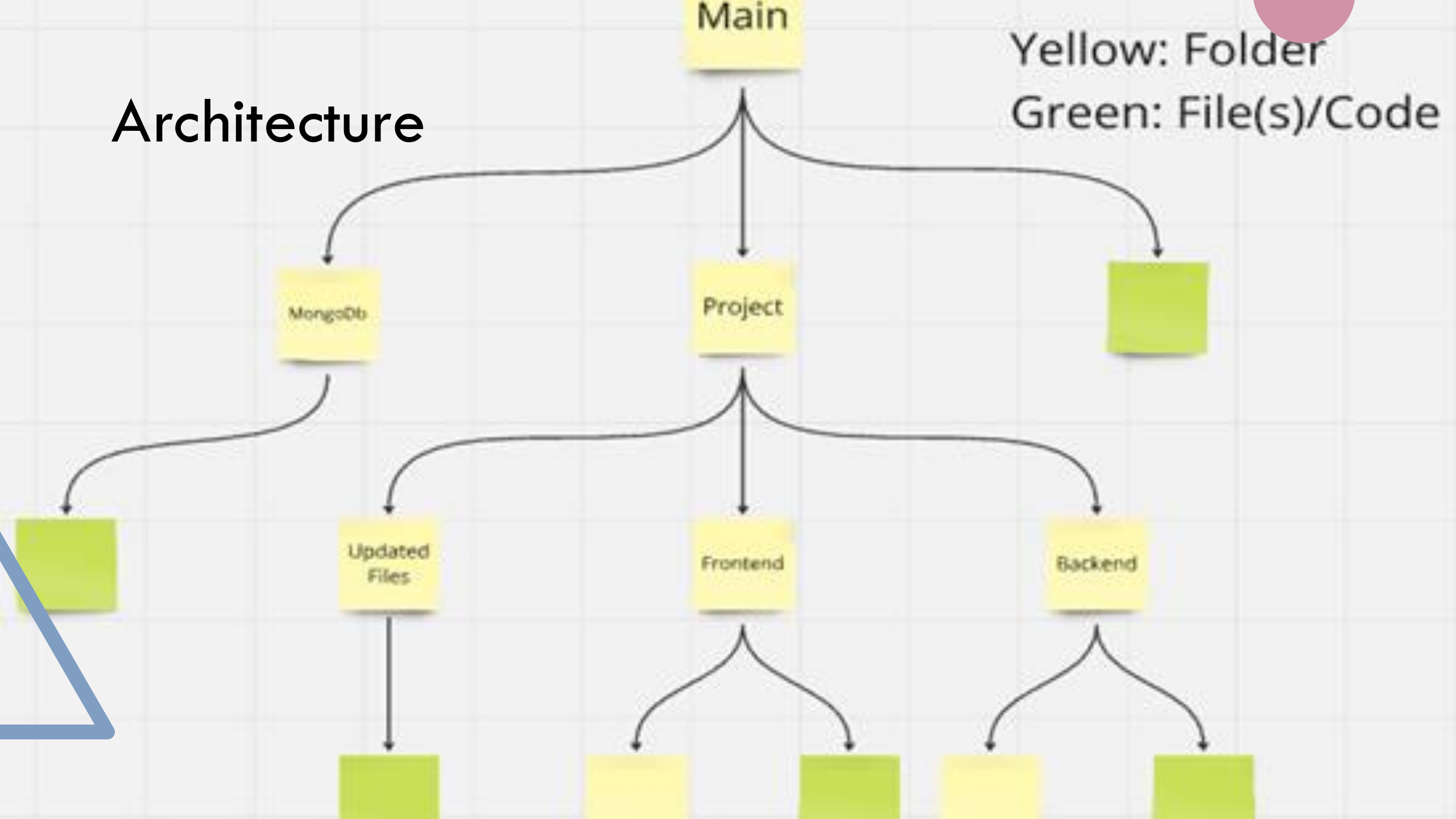
Backend Integration: NodeJS for server-side processing and MongoDB for effective data management.



DevOps and Testing: GitLab for version control, Thunder Client for API testing.

# Architecture

Yellow: Folder  
Green: File(s)/Code



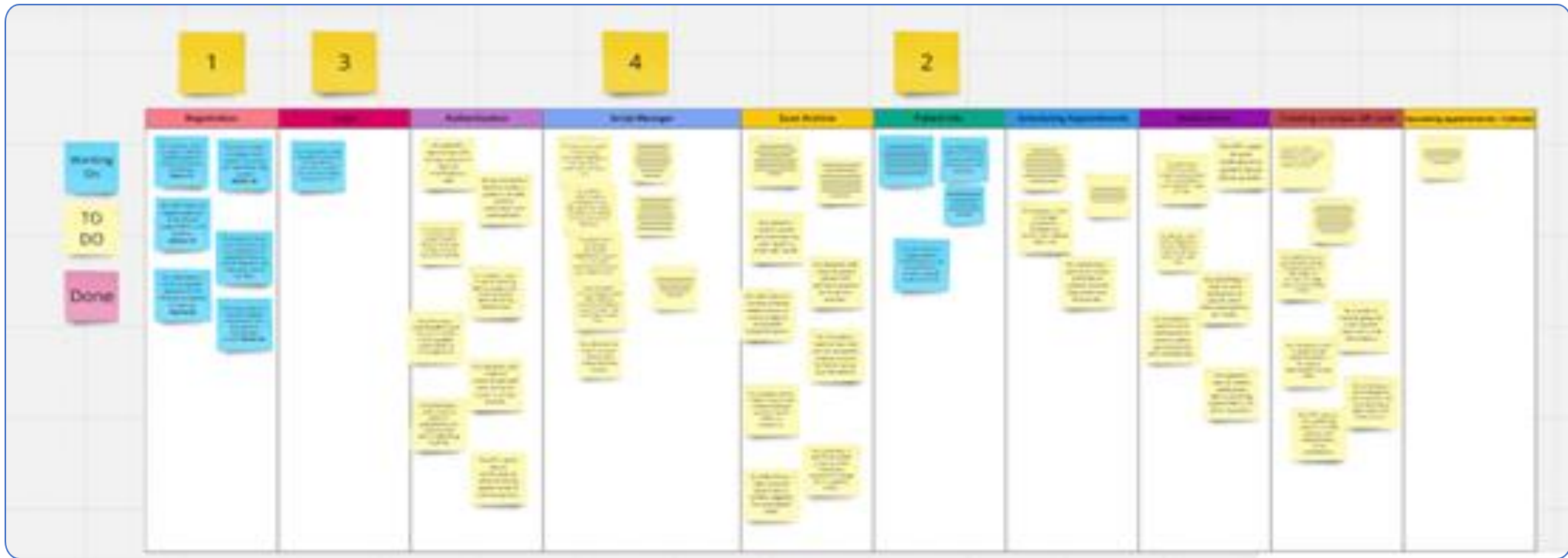




# Introduction to SCRUM

- Agile Principles: Focuses on teamwork, adaptability, and iterative development.
- Benefits in [HealthLink]: Enhanced collaboration, continuous improvement, and delivery of high-priority features.
- Adaptation for [HealthLink]: Applied SCRUM for feature-specific sprints and real-time adjustments based on feedback.





## Story Mapping and Sprints

### Prioritizing Features and Tasks in [HealthLink]

- Story Mapping: Organized features based on user demands, prioritizing high-value functionality.
- Sprint Planning: Four sprints have been scheduled, including tasks like as registration, QR codes, and prescription administration.
- Task Progression: An iterative method that maintains focus on essential characteristics while adjusting to difficulties.

# Testing and Version Control

## Ensuring Quality in Development

- API Testing: Thunder Client was used to test all endpoints thoroughly.
- Debugging: Visual Studio Code has integrated debugging tools for easy troubleshooting.
- Version control: GitLab is used for branching, dispute resolution, and collaborative coding.

# Challenges and Solutions



Workload allocation problems: Front-end and back-end teams' overlapping duties caused inefficiencies, which were fixed by realigning the team.

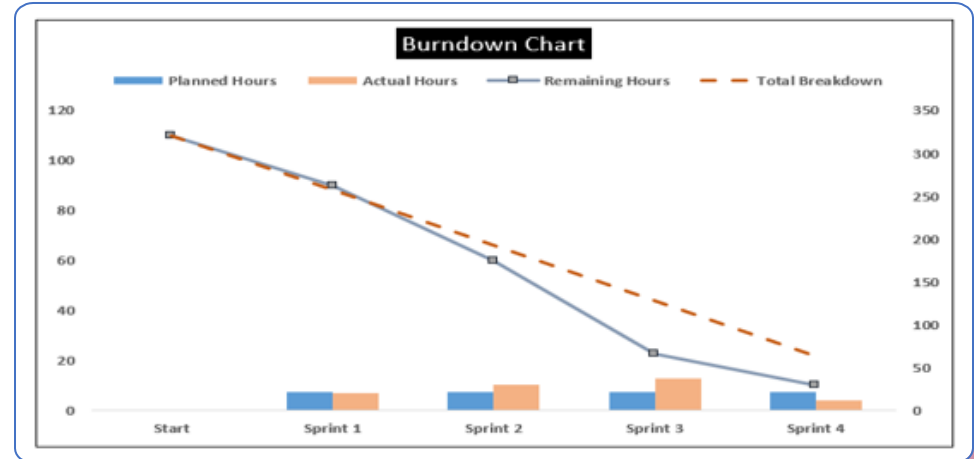


Integration issues: There were issues synchronizing MongoDB with front-end modules, which were resolved by breaking up the work into more manageable portions.



Underestimated work complexities: Planning Poker and other sophisticated estimating techniques were prompted by initial task estimations that understated the amount of work needed.

TASK	FINAL ESTIMATE (HOURS)
Registration	20
Login	20
Authentication	35
Script Manager	50
Scan archive	20
Patient Information	40
Scheduling Appointments	10
Notifications	15
QR Code Generation	10
Upcoming Appointments	25



# Achievements and Key Insights on [HealthLink] Development



Effective Agile Implementation: Team alignment and adaptive sprint planning were made easier by the SCRUM framework.



Improved Collaboration: Open communication and learning were promoted via frequent stand-ups and retrospectives.



Providing Essential Features: The features for QR code sharing, prescription administration, login, and registration were effectively put into place.



## Possible Work for Improving [HealthLink]'s Capabilities in the Future



Features of Biometric Login: Use face and fingerprint recognition to increase security.



Advanced Analytics: Include instruments for tracking patient trends and forecasting medical findings.



Wider System Integration: Increase interoperability with more clinic and pharmaceutical systems.

That's All!

