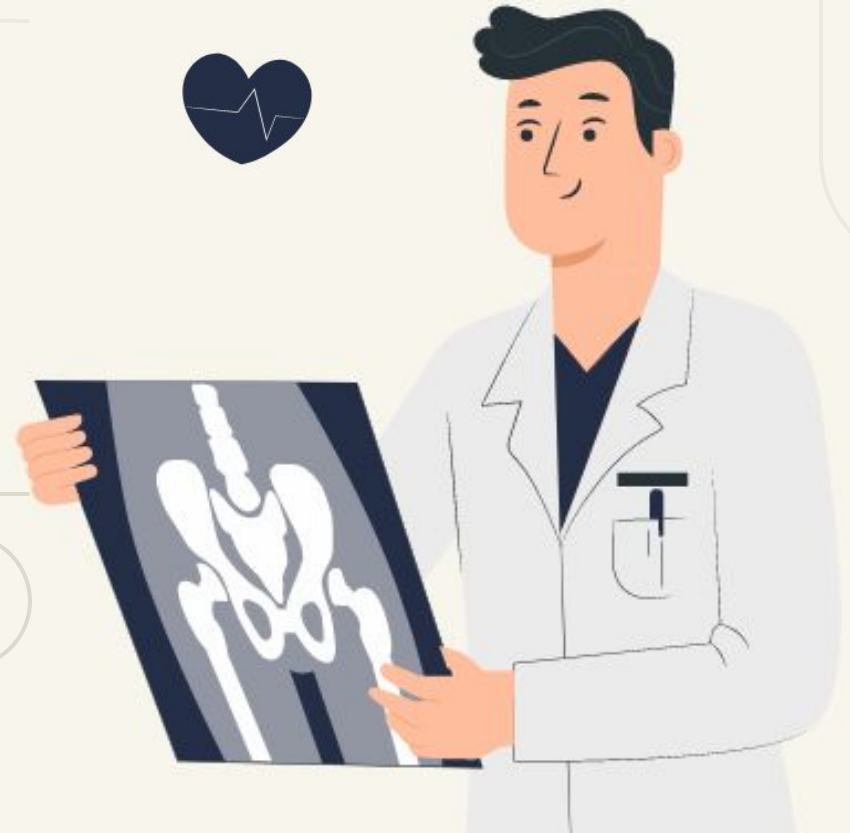


# I U (I See You)

A pre-consultation tool for  
virtual health care



# 404: Team Name Not Found



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# What We'll Cover

**01**

**Problem  
& Solution**

**02**

**Demo**

**03**

**Chatbot**

**04**

**Backend**

**05**

**Challenges**

**06**

**Milestones**

# 01

## The Problem & Solution

---

Transparency and efficiency in  
telehealth consultations



# Background

## Telehealth: medical care without in-person visits

Since March 2020, the use of telehealth services has expanded to **38 times** its pre-pandemic size.

## Teladoc: a major player in the telehealth industry

Teladoc delivered **10.5 million** virtual visits in 2020.

# The Problem

## → **Transparency in patient-physician communication**

- Transparency in medical visits is extremely important to a patient's understanding and sense of autonomy.<sup>1</sup>
- In a telehealth context, communication issues are heightened by “black box” worries.<sup>2</sup>

## → **Efficiency through pre-consult screenings**

- Screenings done during consultations are often repetitive and use up time that could be better spent for both patient and physician.
- Current examples of pre-consult screening software do not draw conclusions from raw patient data.

<sup>1</sup> *Identifying Transparency in Physician Communication*, National Library of Medicine (2011)

<sup>2</sup> *Privacy and Security Concerns in Telehealth*, AMA Journal of Ethics (2014)

# Our Solution

## 01 Pre-consultation

Patient completes symptom screening in portal



## Analyze Info 02

Chat logs stored, analyzed, and initial diagnosis made

## 04 After Appointment

Physician inputs diagnosis and care steps in portal

## Before Appointment 03

Physician reviews pre-screen and diagnosis

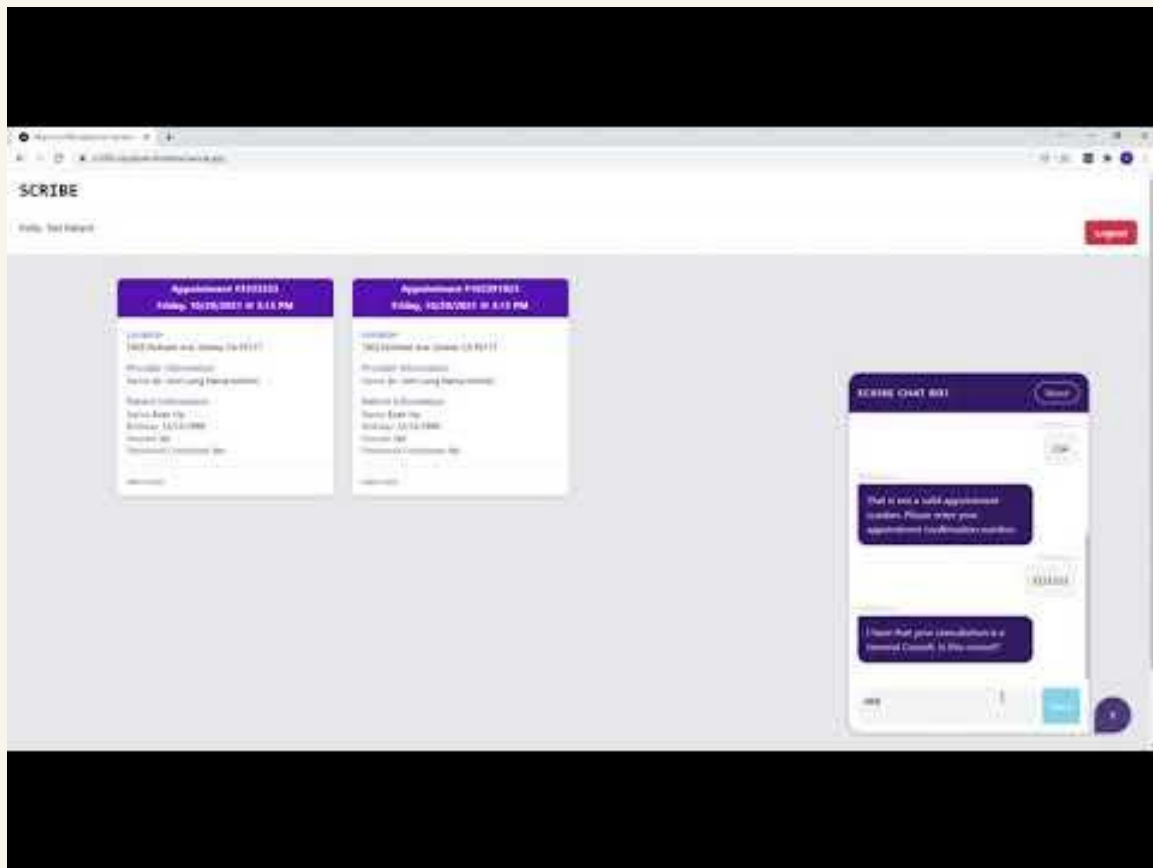
# 02

# Demo

---







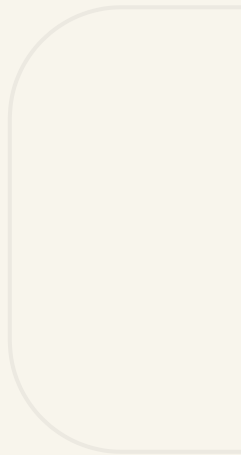
# 03



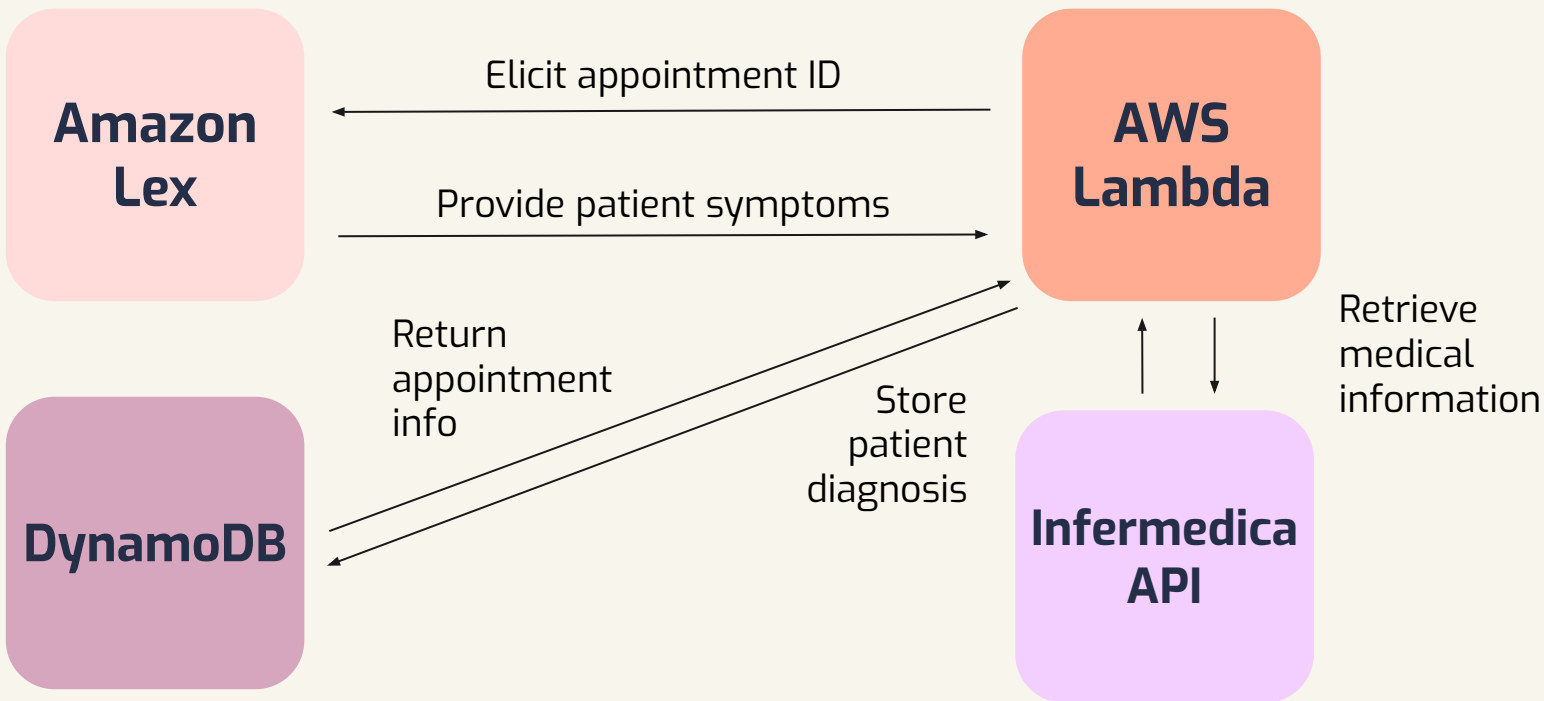
## Chatbot

---

How the patient completes their pre-consult



# Chatbot Architecture



# 04

## Backend

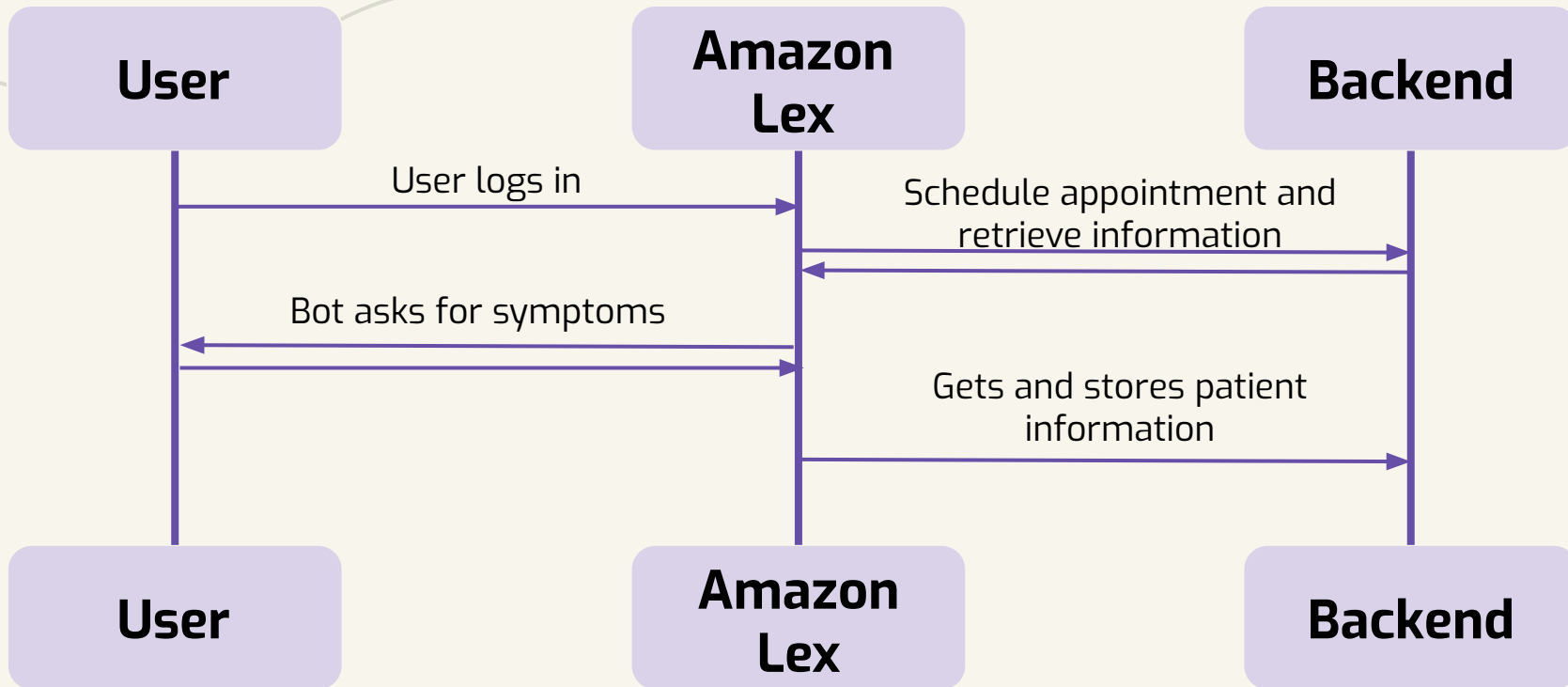


---

How our patient-physician  
information is stored

# Backend

## Patient Sequence



# 05

## Challenges

---

Hurdles we've faced so far

- Getting started
- Reconciling aspects of our tech stack
- Sifting through outdated documentation

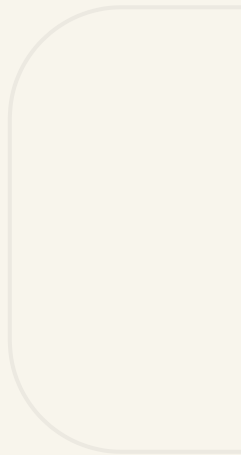
# 06



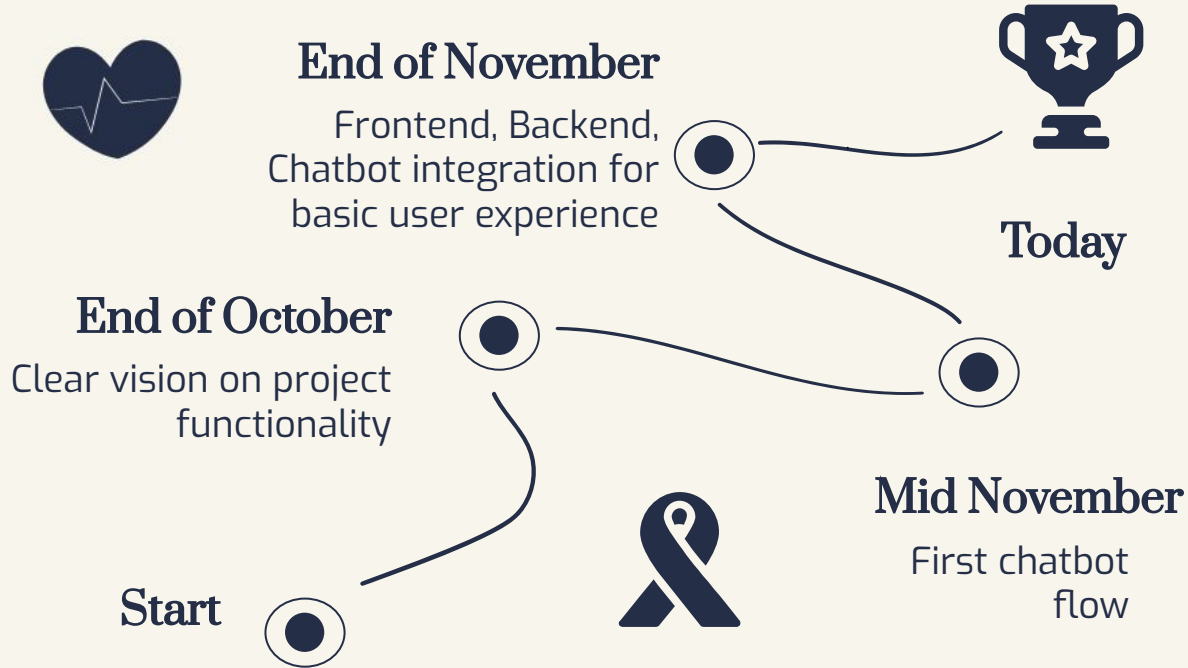
# Milestones

---

Our progress so far and plans  
for Winter 2022



# Milestones reached





# Key Next Steps

---



## Chatbot

Make more dynamic,  
currently deterministic.  
Include chat log  
summarization



## Seamless Communication

Examine better  
communication  
architectures



## User Experience

Refine user experience for  
a pleasant flow

---



# Thank You

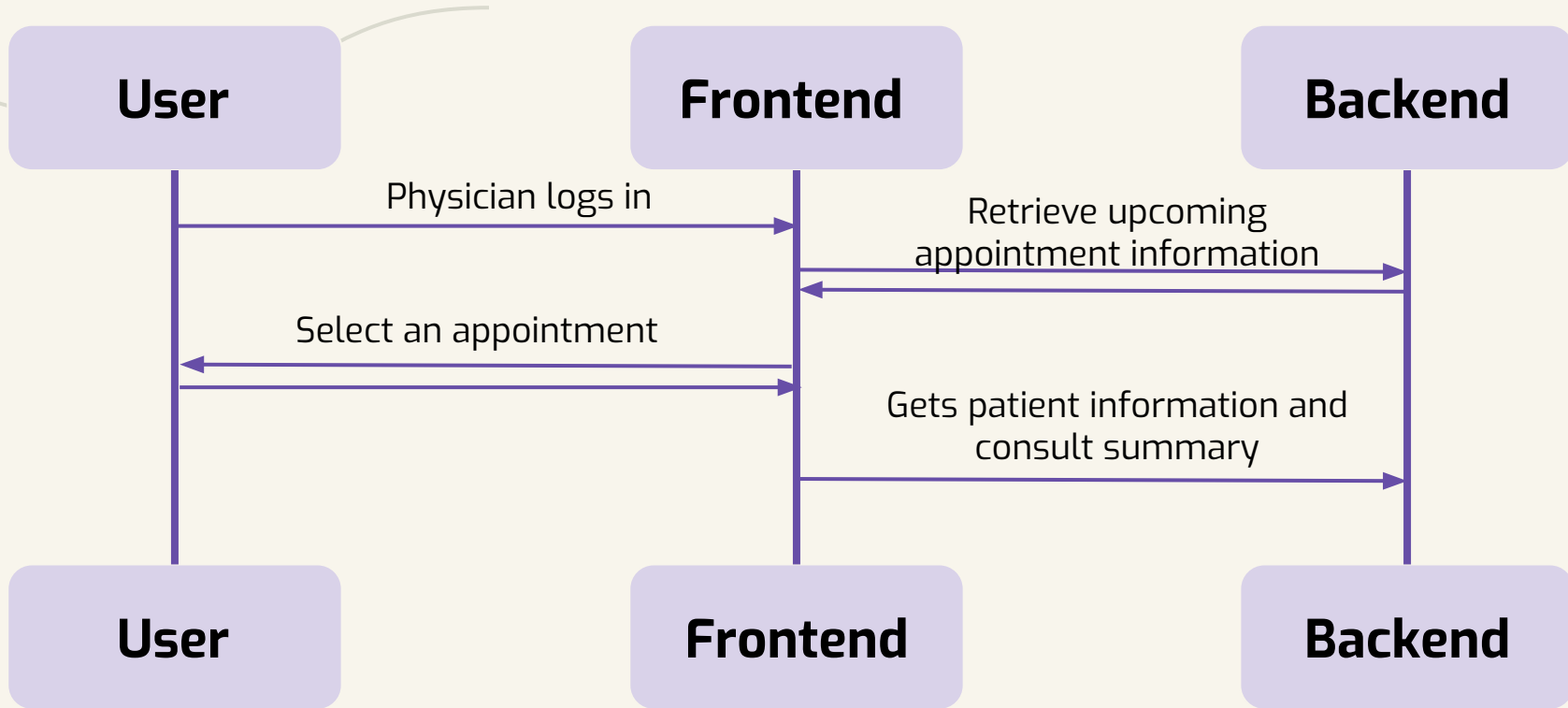


In particular, to:  
Our Teladoc mentors  
Professor Su & Mason

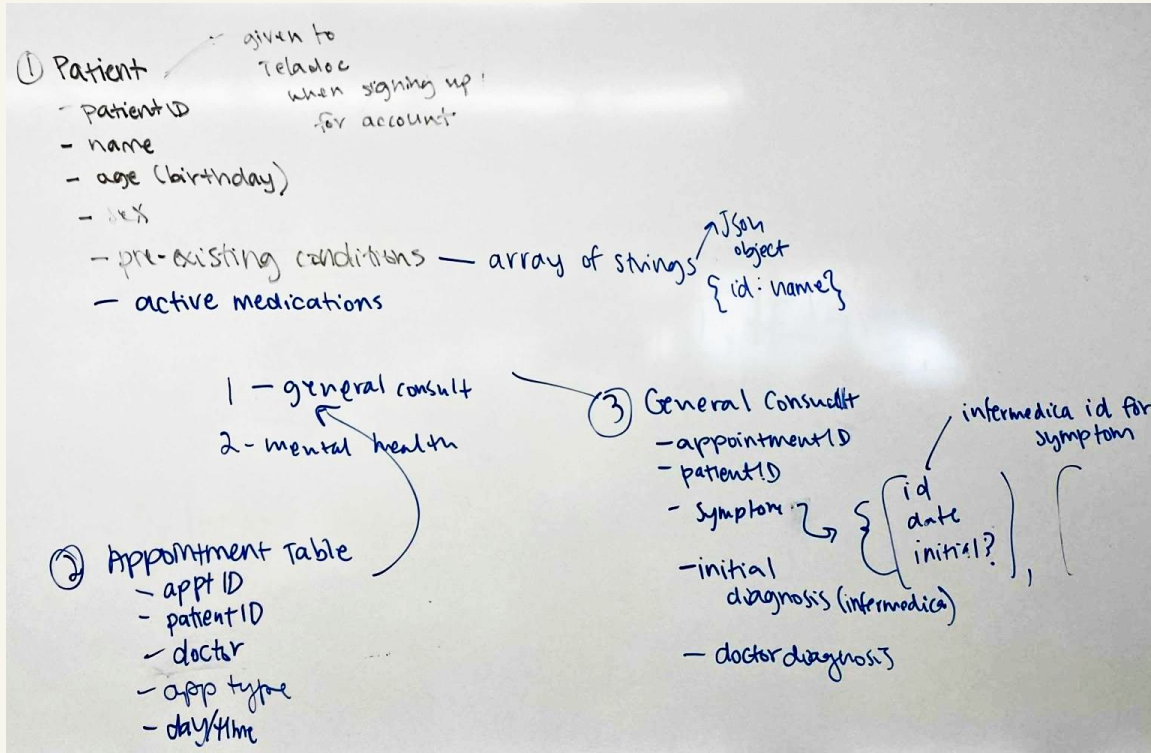
Any Questions?

# Backend

## Physician Sequence



# Backend



# Backend

DynamoDB > Tables

Tables (3) [Info](#)



Actions ▾

Delete

Create table

Find tables by table name

Any table tag

< 1 >



<input type="checkbox"/>	Name ▲	Status	Partition key	Sort key	Indexes	Read capacity mode
<input type="checkbox"/>	appointment	Active	appointment_id (Number)	patient_id (Number)	0	Provisioned with auto scaling (1)
<input type="checkbox"/>	general_consult	Active	appointment_id (Number)	patient_id (Number)	0	Provisioned with auto scaling (1)
<input type="checkbox"/>	patient	Active	patient_id (Number)	-	0	Provisioned with auto scaling (1)

Tables (3)



Tag

Any table tag

Find tables

< 1 >



appointment

general\_consult

patient

► **appointment**

Expand to query or scan items.

Items returned (6)



Actions ▾

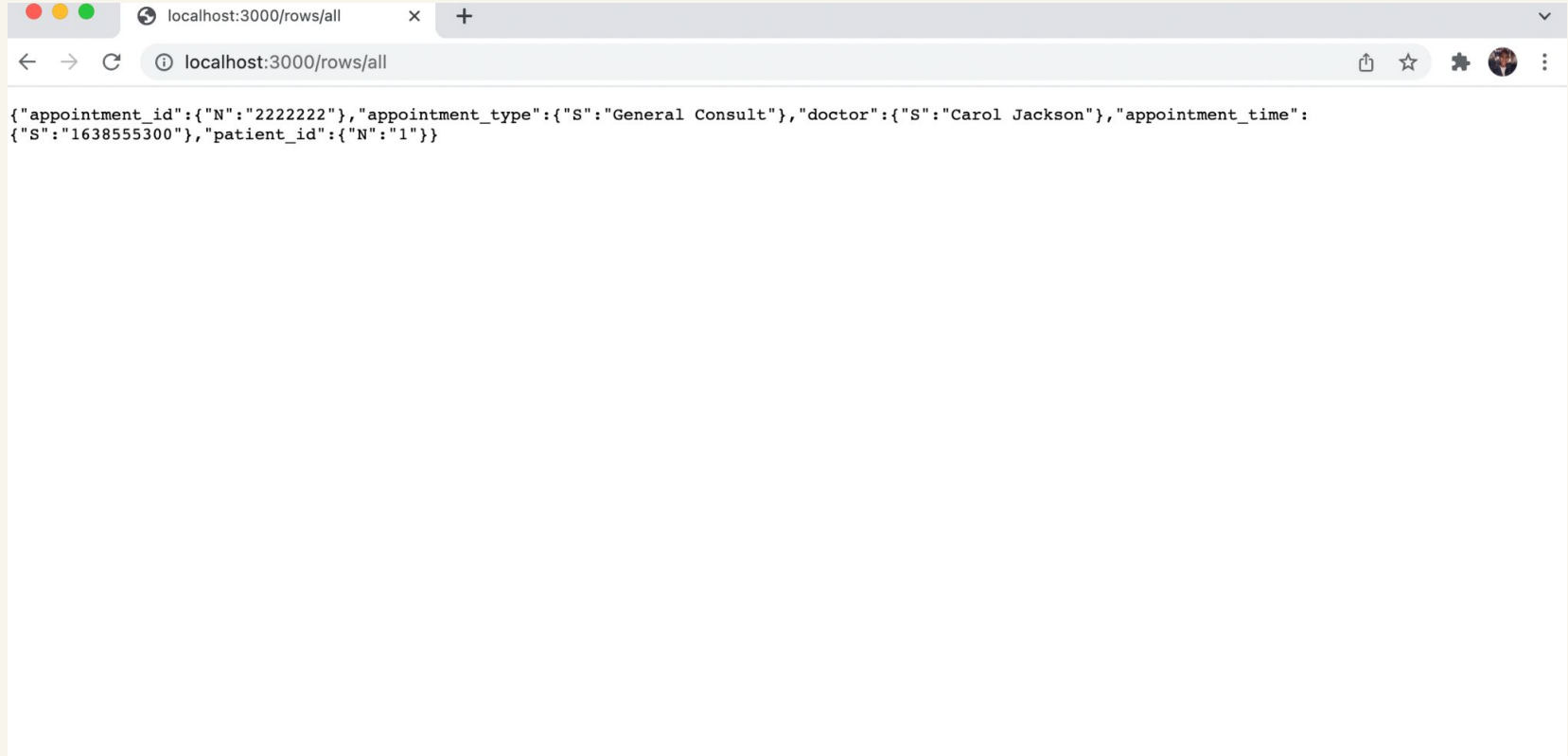
Create item

< 1 >



<input type="checkbox"/>	appoin... ▾	patient... ▾	appointment_time ▾	appointme... ▾	doctor ▾
<input type="checkbox"/>	10	3	1638558920	General Consult	Steve Robins
<input type="checkbox"/>	3	6	1641847500	General Consult	Ryland Gerald
<input type="checkbox"/>	4	1	1638558900	General Consult	Ruth Robinson
<input type="checkbox"/>	12	2	1638558940	General Consult	Jerry Main
<input type="checkbox"/>	1	2	1638225000	General Consult	Christopher Anderson
<input type="checkbox"/>	0	2	1637872200	General Consult	Christopher Anderson

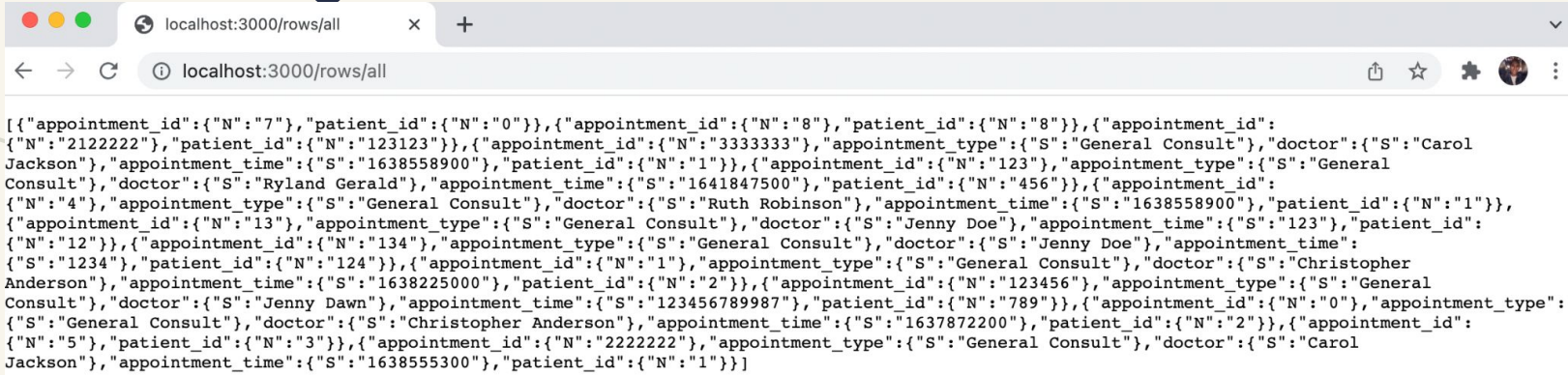
# Query an Item from a Table



A screenshot of a web browser window. The address bar shows the URL `localhost:3000/rows/all`. The page content displays a JSON object representing a query result for a specific appointment.

```
{
  "appointment_id": {"N": "2222222"},
  "appointment_type": {"S": "General Consult"},
  "doctor": {"S": "Carol Jackson"},
  "appointment_time": {"S": "163855300"},
  "patient_id": {"N": "1"}
}
```

# Query all Items from a Table



```
[{"appointment_id":{"N":"7"},"patient_id":{"N":"0"}}, {"appointment_id":{"N":"8"},"patient_id":{"N":"8"}}, {"appointment_id":{"N":"2122222"},"patient_id":{"N":"123123"}}, {"appointment_id":{"N":"3333333"},"appointment_type":{"S":"General Consult"},"doctor":{"S":"Carol Jackson"},"appointment_time":{"S":"1638558900"},"patient_id":{"N":"1"}}, {"appointment_id":{"N":"123"},"appointment_type":{"S":"General Consult"},"doctor":{"S":"Ryland Gerald"},"appointment_time":{"S":"1641847500"},"patient_id":{"N":"456"}}, {"appointment_id":{"N":"4"},"appointment_type":{"S":"General Consult"},"doctor":{"S":"Ruth Robinson"},"appointment_time":{"S":"1638558900"},"patient_id":{"N":"1"}}, {"appointment_id":{"N":"13"},"appointment_type":{"S":"General Consult"},"doctor":{"S":"Jenny Doe"},"appointment_time":{"S":"123"},"patient_id":{"N":"12"}}, {"appointment_id":{"N":"134"},"appointment_type":{"S":"General Consult"},"doctor":{"S":"Jenny Doe"},"appointment_time":{"S":"1234"},"patient_id":{"N":"124"}}, {"appointment_id":{"N":"1"},"appointment_type":{"S":"General Consult"},"doctor":{"S":"Christopher Anderson"},"appointment_time":{"S":"1638225000"},"patient_id":{"N":"2"}}, {"appointment_id":{"N":"123456"},"appointment_type":{"S":"General Consult"},"doctor":{"S":"Jenny Dawn"},"appointment_time":{"S":"123456789987"},"patient_id":{"N":"789"}}, {"appointment_id":{"N":"0"},"appointment_type":{"S":"General Consult"},"doctor":{"S":"Christopher Anderson"},"appointment_time":{"S":"1637872200"},"patient_id":{"N":"2"}}, {"appointment_id":{"N":"5"},"patient_id":{"N":"3"}}, {"appointment_id":{"N":"222222"},"appointment_type":{"S":"General Consult"},"doctor":{"S":"Carol Jackson"},"appointment_time":{"S":"163855300"},"patient_id":{"N":"1"}}]
```

# Insert Data to a Table

```
http://localhost:3000/api/insert/appointment

POST http://localhost:3000/api/insert/appointment

Body
  none form-data x-www-form-urlencoded raw binary GraphQL Text

1 [JSON]
2   "appointment_id": "1011",
3   "patient_id": "1011",
4   "appointment_type": "General Consult",
5   "doctor": "Kelly James",
6   "appointment_time": "1638558950"
7 [JSON]

Body Cookies Headers (7) Test Results
200 OK 379 ms 587 B Save Response

Pretty Raw Preview Visualize JSON

1 [JSON]
2   "the_table_name": "appointment",
3   "body": {
4     "appointment_id": "1011",
5     "patient_id": "1011",
6     "appointment_type": "General Consult",
7     "doctor": "Kelly James",
8     "appointment_time": "1638558950",
```

**appointment** [View table details](#)

Expand to query or scan items.

Items returned (7) [Refresh](#) [Actions](#) [Create item](#)

< 1 > [Settings](#) [Close](#)

<input type="checkbox"/>	appoint...	patient_id	appoint...	appointment_...	doctor
<input type="checkbox"/>	1010	1010	1638558920	General Consult	Steve Robins
<input type="checkbox"/>	123	456	1641847500	General Consult	Ryland Gerald
<input type="checkbox"/>	4	1	1638558900	General Consult	Ruth Robinson
<input checked="" type="checkbox"/>	1011	1011	1638558950	General Consult	Kelly James
<input type="checkbox"/>	1012	1012	1638558940	General Consult	Jerry Main
<input type="checkbox"/>	1	2	1638225000	General Consult	Christopher Anderson
<input type="checkbox"/>	0	2	1637872200	General Consult	Christopher Anderson