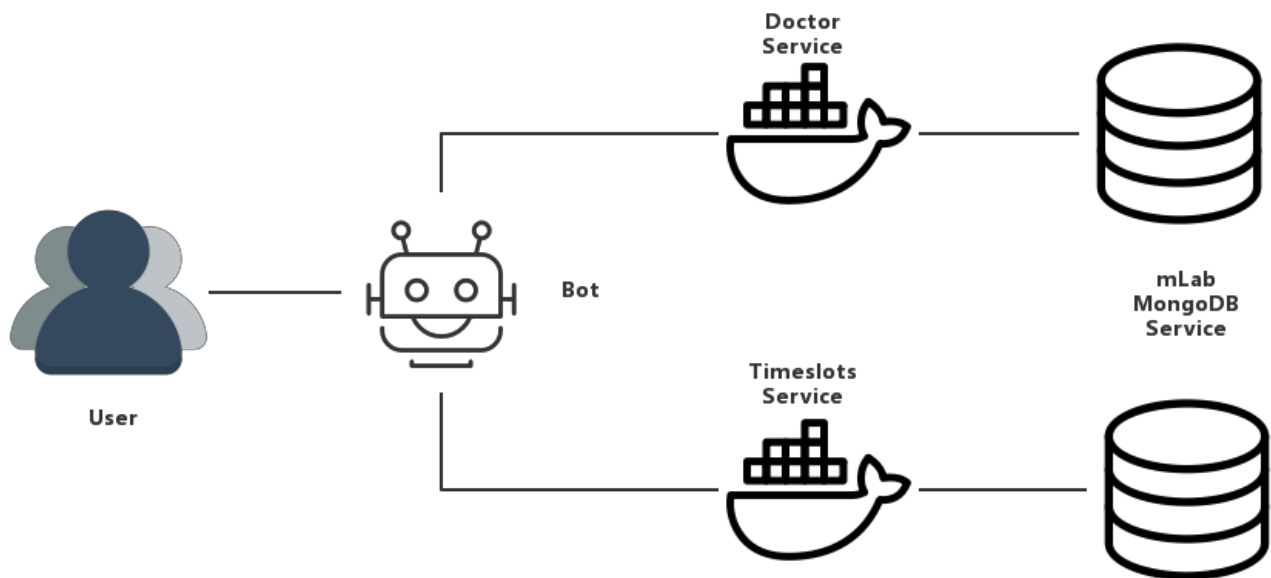


Assignment 1: Building a Chatbot using Microservices as Back-end

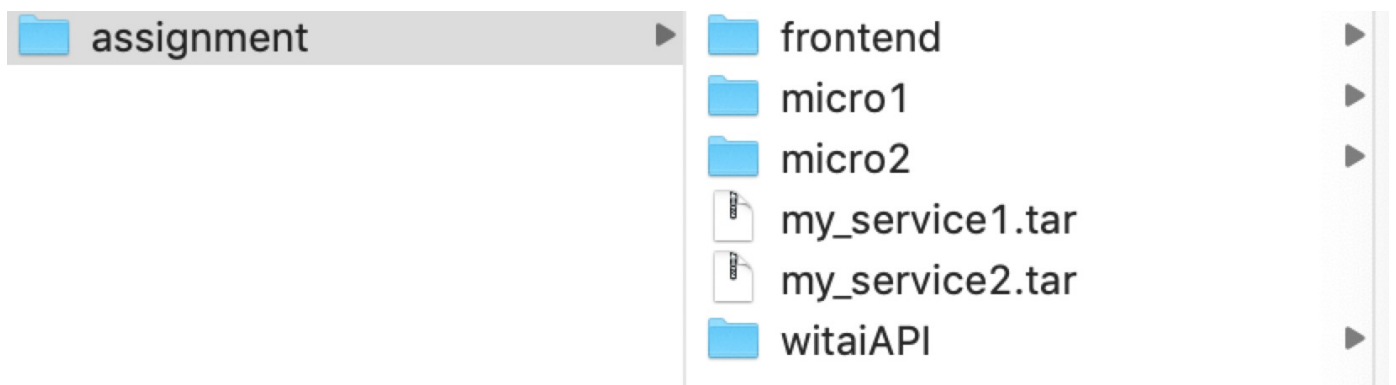
Yuyou Xu z5143390



The dentist and Timeslot services are deployed in two docker container as microservices and the Bot communicates with them through REST API calls. The data is stored in two different MongoDB databases with required doctor and timeslots information.

For deployment:

1. Go to assignment folder and load the docker images:



```
→ assignment docker load --input my_service1.tar
Loaded image: my_service1:latest
→ assignment docker run -p 5002:5000 -t my_service1
* Serving Flask app "__init__" (lazy loading)
* Environment: production
```

```
docker load --input my_service1.tar
docker run -p 5002:5000 -t my_service1
```

```
→ assignment docker load --input my_service2.tar
Loaded image: my_service2:latest
→ assignment docker run -p 5001:5000 -t my_service2
* Serving Flask app "__init__" (lazy loading)
* Environment: production
```

```
docker load --input my_service2.tar
docker run -p 5001:5000 -t my_service2
```

2. Go to witaiAPI folder and run the bot service:

```
→ witaiAPI cd app/demo
→ demo ls
__init__.py static v1
→ demo python3 __init__.py
* Serving Flask app "__init__" (lazy loading)
* Environment: production
```

```
python3 __init__.py
```

3. Run the front-end (React.js):

```
→ assignment cd frontend
→ frontend git:(master) x npm start
```

```
npm install (Install all the dependencies.)
npm start
```

4. Install chrome plugins to avoid CORS policy

[Home](#) > [Extensions](#) > Allow-Control-Allow-Origin: *

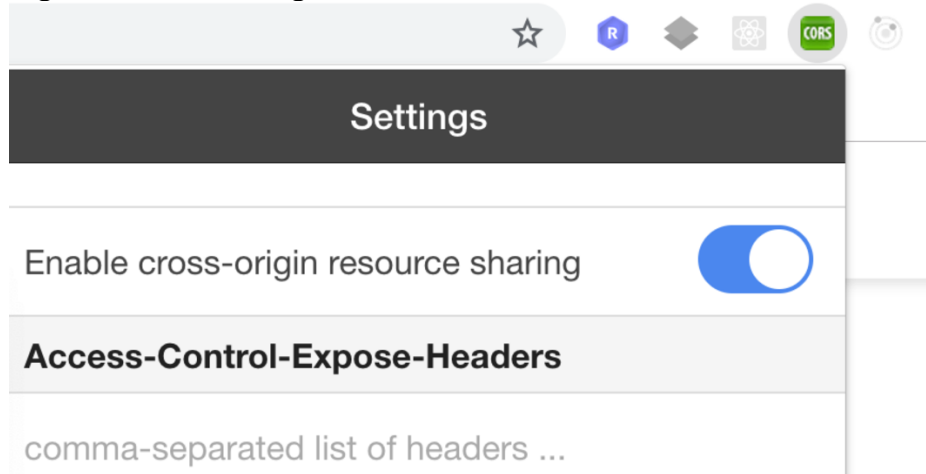
Allow-Control-Allow-Origin: *

[Remove from Chrome](#)

Offered by: vitvad

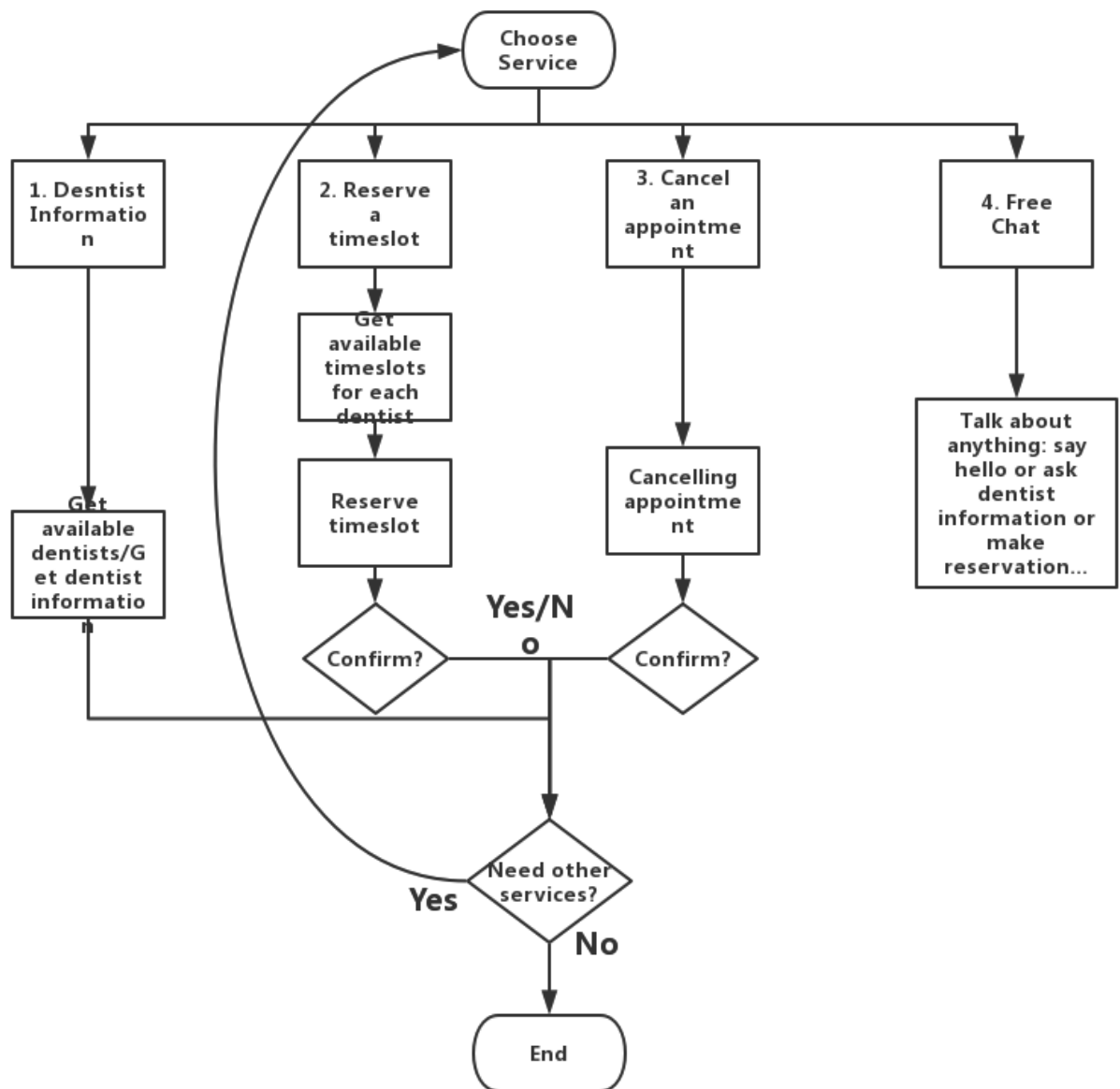
★★★★★ 824 | [Developer Tools](#) | 638,315 users

Enable cross-origin resource sharing:



Then the bot service is online and can respond correctly.


Here's the logic for the chatbot:



Since the bot service is based on wit.ai, usually user need to type sentences to chat with it (e.g. “when is Dr.Feng available?”)

Demo of the chatbot:

Online Dentist Reservation



Hello :) I'm Isaac, the lovely dentist reservation bot.

What kind of service do you need?

Dentist Information Reserve a timeslot

Cancel an appointment Free chat

Type the message ... ➤

Online Dentist Reservation

What kind of service do you need?

Dentist Information

You can ask me any dentist information (e.g. 'Who is available?', 'Available dentists', 'Information of Dr.Lily', 'Introduce Dr.Feng').

Who is available?

Who is available?:

Dr.Michael, Dr.Feng, Dr.Lily

Type the message ... ➤

Online Dentist Reservation

Reserve a timeslot

Need available timeslots of your favorite dentist? Just ask me (e.g. 'timeslots of Dr.Feng', 'when is Dr.Feng available?', 'Show me timeslots of Dr.Feng ').

when is Dr.Feng available?

when is Dr.Feng available?:

Monday 10:00 - 11:00 am, Monday 12:00 - 13:00 pm, Monday 14:00 - 15:00 pm, Monday 15:00 - 16:00 pm, Monday 16:00 - 17:00 pm, Tuesday 9:00 - 10:00 am, Tuesday 10:00 - 11:00 am, Tuesday 11:00 - 12:00 am, Tuesday 12:00 - 13:00 pm, Tuesday 14:00 - 15:00 pm, Tuesday 15:00 -

Type the message ... ➤

Online Dentist Reservation

Friday 9:00 - 10:00 am, Friday 10:00 - 11:00 am, Friday 11:00 - 12:00 am, Friday 12:00 - 13:00 pm, Friday 13:00 - 14:00 pm, Friday 14:00 - 15:00 pm, Friday 15:00 - 16:00 pm

Please tell me which doctor and timeslot you want to reserve (e.g. 'Reserve with Dr.Michael at Monday 9:00 - 10:00 am', 'reserve Dr.Michael at Monday 13:00 - 14:00 pm').

Reserve with Dr.Michael at Monday 9:00 - 10:00 am

Are you sure?

Yes No

Type the message ... ➤

Online Dentist Reservation

Yes

Reserve with Dr.Michael at Monday 9:00 - 10:00 am :

This Timeslot is already booked, please check other timeslots, such as Monday 10:00 - 11:00 am, Monday 12:00 - 13:00 pm, and Monday 14:00 - 15:00 pm.



Anything else can I help you?

Yes

No

Type the message ...

Online Dentist Reservation

Cancel my reservation with Dr.Michael at Monday 9:00 - 10:00 am



Are you sure?

Yes

Cancel my reservation with Dr.Michael at Monday 9:00 - 10:00 am :

Already canceled the reservation at Monday 9:00 - 10:00 am with Dr.Michael.

Type the message ...

Online Dentist Reservation



Anything else can I help you?

Yes

Free chat



Tell me something :)

hello

hello:

Hello, nice to meet you:) How can I help you today?

Type the message ...

Online Dentist Reservation

info of Dr.Lily

info of Dr.Lily:

Dr.Lily is located in Lowercampus, specialised in Oral Surgery.



Tell me something :)

introduce Dr.Michael

introduce Dr.Michael:

Dr.Michael is located in Uppercampus,

Type the message ...