

Deployment Instruction

Step1

Open terminal at directory, run making script to make virtual environment by:

```
./env.sh
```

You should see 3 running containers by:

```
docker ps
```

If you build successfully, jump to step 2.

If you got error of network occupied (either of two error messages):

```
Hongning-3:Desktop HongningShangguan$ docker network create --subnet=172.18.0.0/16 mynetwork
Error response from daemon: network with name mynetwork already exists
Hongning-3:Desktop HongningShangguan$ docker network create --subnet=172.18.0.0/16 newnetwork
Error response from daemon: Pool overlaps with other one on this address space
```

This is because network or IP address is already occupied in your device, to fix this, you could remove exists network bridge by follow steps.

- Check name of running network by:

```
docker network ls
```

```
Hongning-3:Desktop HongningShangguan$ docker network ls
```

NETWORK ID	NAME	DRIVER	SCOPE
c924fd5dd3e6	bridge	bridge	local
837542a2a1b0	host	host	local
c7730c010ce4	mynetwork	bridge	local
57dac2680586	none	null	local

Networks whose name other than “bridge”, “host”, “none” are your custom networks, in my case, it’s “mynetwork”.

- Check which network occupied deserved IP address, inspect each custom network by:

```
docker network inspect [your network name]
```

```
Hongning-3:Desktop HongningShangguan$ docker network inspect mynetwork
```

```
[
  {
    "Name": "mynetwork",
    "Id": "c7730c010ce44e2f3d6517e7fd917060750746a1cdcb870c7c29621cdc882e07",
    "Created": "2019-04-03T14:49:26.4955392Z",
    "Scope": "local",
    "Driver": "bridge",
    "EnableIPv6": false,
    "IPAM": {
      "Driver": "default",
      "Options": {},
      "Config": [
        {
          "Subnet": "172.18.0.0/16"
        }
      ]
    },
    "Internal": false,
    "Attachable": false,
    "Ingress": false,
    "ConfigFrom": {
      "Network": ""
    },
    "ConfigOnly": false,
    "Containers": {},
    "Options": {},
    "Labels": {}
  }
]
```

- Since I am using IP address (172.18.0.0/16), so you may need to remove the one whose subnet IP address is the same by:

```
docker network rm [your network name]
```

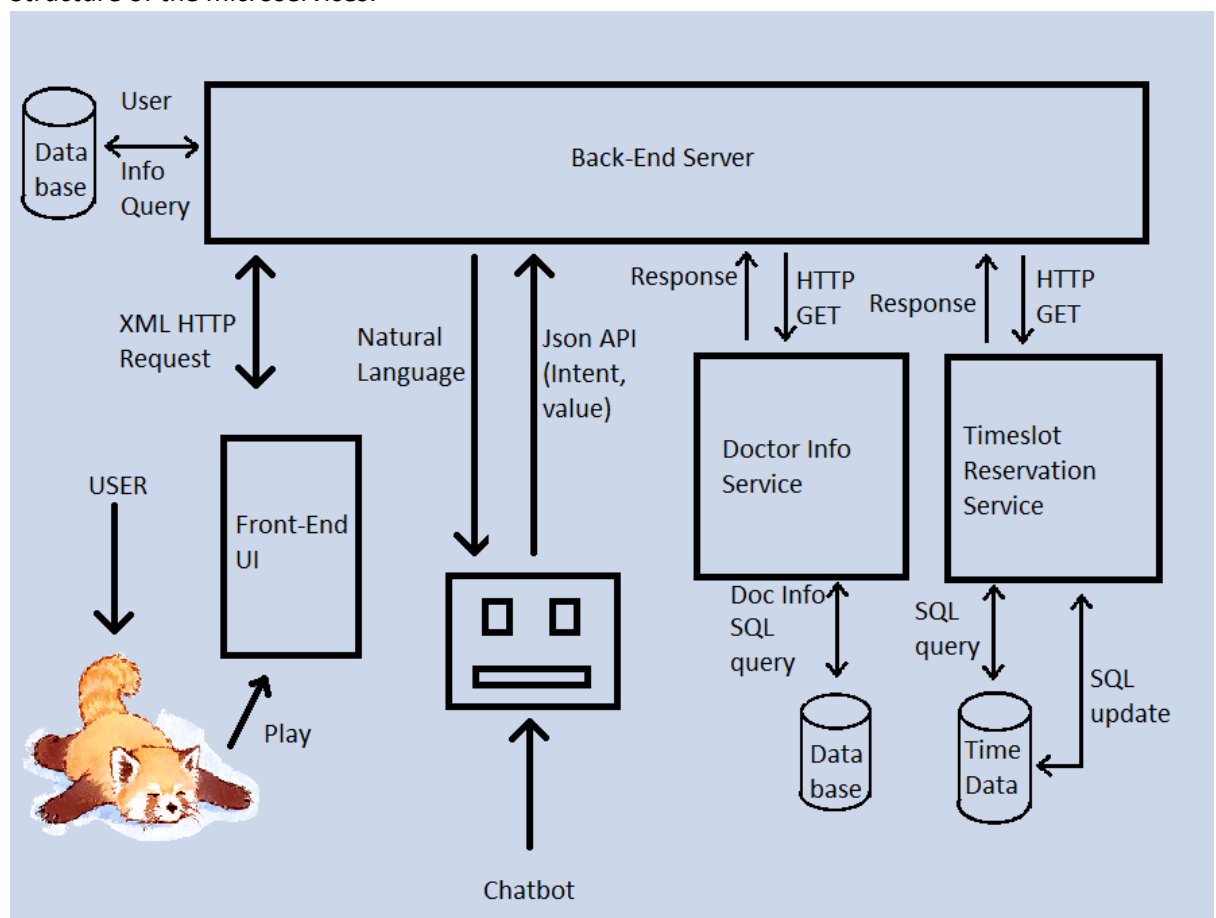
```
Hongning-3:Desktop HongningShangguan$ docker network rm mynetwork  
mynetwork
```

- Ran script may already started some container, you may need to remove them
- After clear the way, re-run script:

```
./env.sh
```

Step 2

Structure of the microservices:



Back end service run on <http://127.0.0.1:9102>

Doctor Information API Service run on <http://127.0.0.1:9101>

Timeslot Reservation API Service run on <http://127.0.0.1:9100>

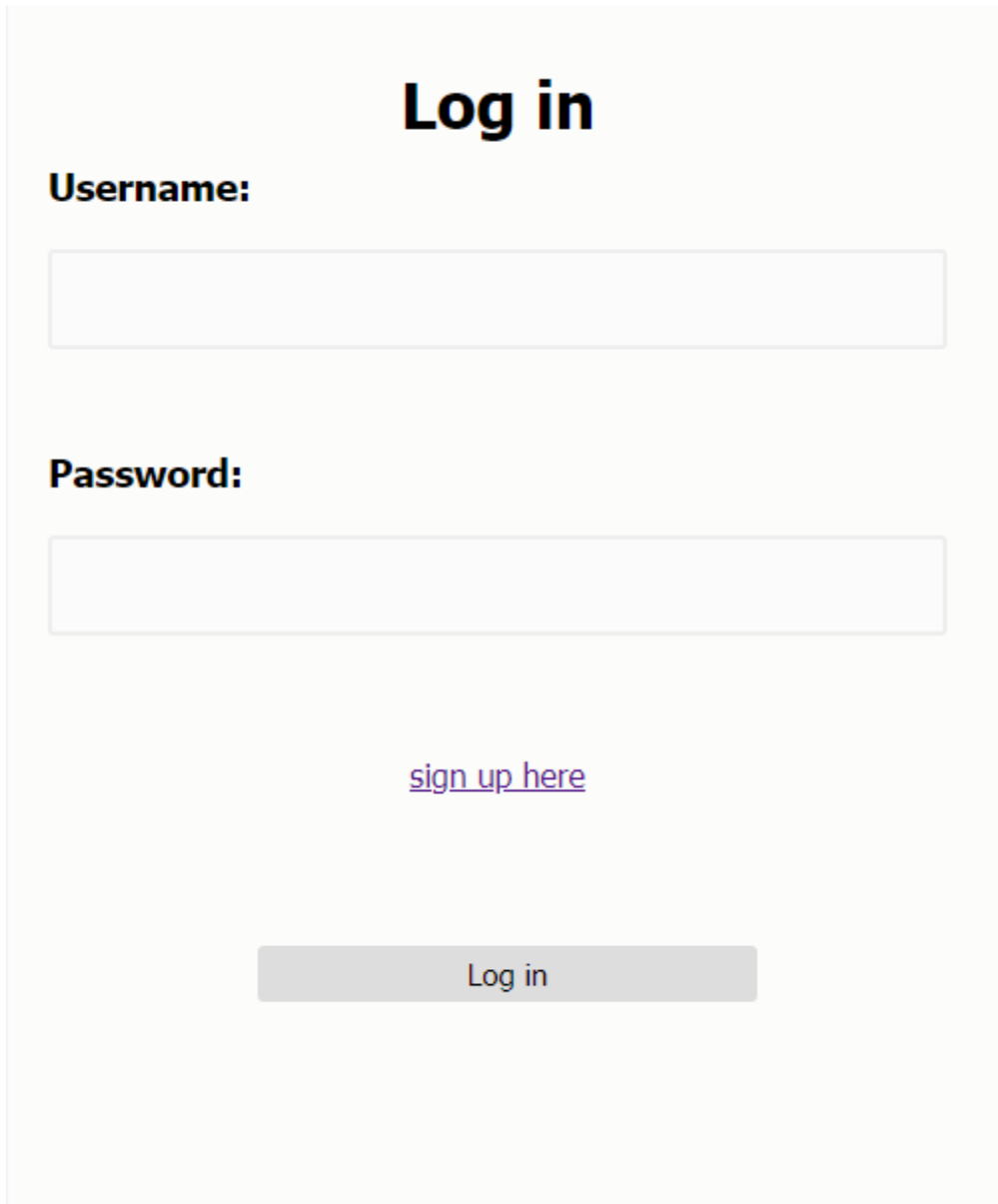
FYI, their virtual IP are 172.18.0.3, 172.18.0.2 and 172.18.0.4.

You can click above URL or input <http://127.0.0.1:9101> and <http://127.0.0.1:9100> into browser to see documented description of APIs with swagger UI.

Finally, you can go to <http://127.0.0.1:9102> and play with chatbot.

Step 3

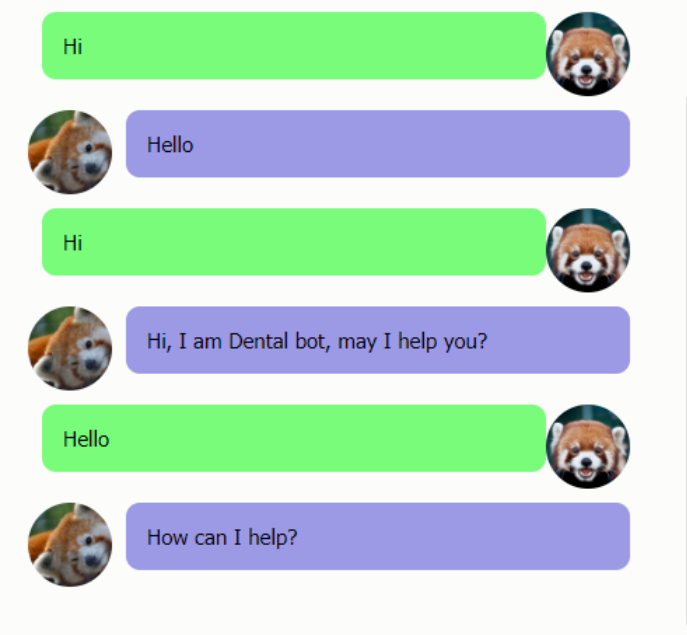
Server uses JWT cookie to authenticate user, you will be redirected to Login page if you do not have a valid token.

A login form with a light gray background. At the top, the text "Log in" is displayed in a large, bold, black font. Below it, the label "Username:" is in a bold black font, followed by a white rectangular input field with a thin gray border. Further down, the label "Password:" is in a bold black font, followed by another white rectangular input field with a thin gray border. Below the password field, the text "sign up here" is centered and underlined in a purple font. At the bottom, a gray rectangular button with the text "Log in" in black is centered.

You can always go to <http://127.0.0.1:9102/login> to log in or go to <http://127.0.0.1:9102/signup> to register. By click log out inside chatbot UI will remove your JWT cookie and you need to re-login to get to chatbot.

Step 4

Now it's time to play with chatbot, you can greet with chatbot and get some random greeting back.



This screenshot shows a chat window with a light gray background. It contains five message bubbles. The first, third, and fifth bubbles are green and sent by the user, containing the text "Hi", "Hi", and "Hello" respectively. The second, fourth, and sixth bubbles are purple and sent by the chatbot, containing the text "Hello", "Hi, I am Dental bot, may I help you?", and "How can I help?" respectively. Each bubble is accompanied by a circular profile picture: a red panda for the user and a raccoon for the chatbot. Below the chat window is a text input field with the placeholder text "greet". At the bottom of the interface are two buttons: "Log out" on the left and "Send" on the right.

Hi

Hello

Hi

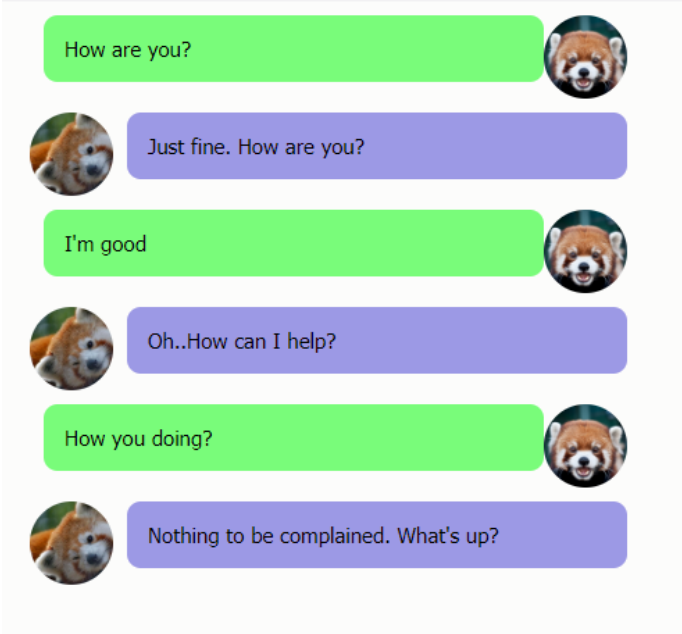
Hi, I am Dental bot, may I help you?

Hello

How can I help?

greet

Log out Send



This screenshot shows a chat window with a light gray background. It contains five message bubbles. The first, third, and fifth bubbles are green and sent by the user, containing the text "How are you?", "I'm good", and "How you doing?" respectively. The second, fourth, and sixth bubbles are purple and sent by the chatbot, containing the text "Just fine. How are you?", "Oh...How can I help?", and "Nothing to be complained. What's up?" respectively. Each bubble is accompanied by a circular profile picture: a red panda for the user and a raccoon for the chatbot. Below the chat window is a text input field with the placeholder text "Pretty good!". At the bottom of the interface are two buttons: "Log out" on the left and "Send" on the right.

How are you?

Just fine. How are you?

I'm good

Oh...How can I help?

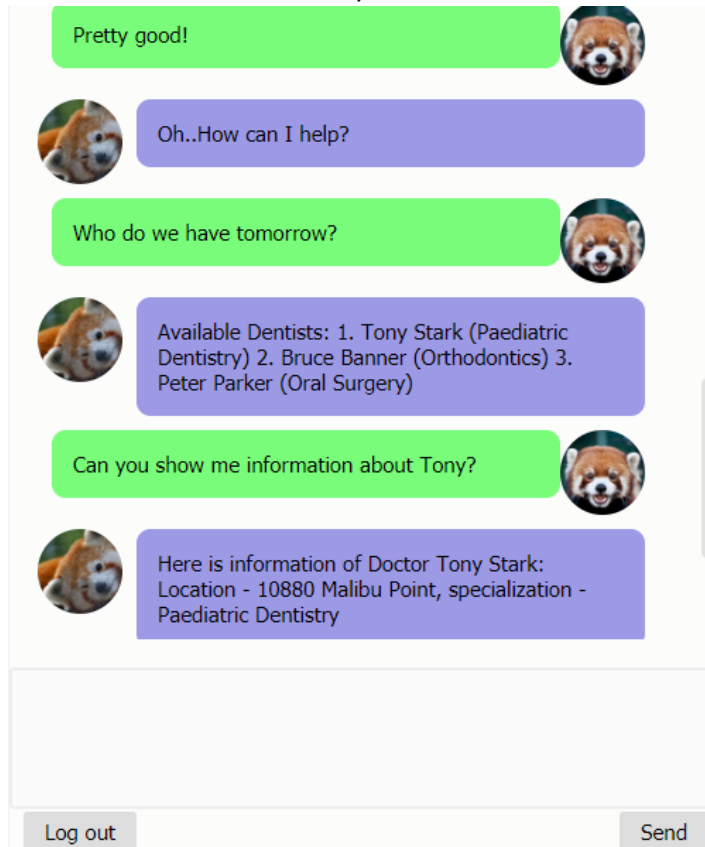
How you doing?

Nothing to be complained. What's up?

Pretty good!

Log out Send

You can tell chatbot to show you dentist list



A screenshot of a chatbot interface. The chat area has a light gray background. User messages are in green bubbles on the left, and bot responses are in purple bubbles on the right. Each bubble is preceded by a circular profile picture of a red panda. The conversation starts with the user saying "Pretty good!". The bot responds with "Oh..How can I help?". The user asks "Who do we have tomorrow?". The bot lists three available dentists: 1. Tony Stark (Paediatric Dentistry), 2. Bruce Banner (Orthodontics), and 3. Peter Parker (Oral Surgery). The user then asks "Can you show me information about Tony?". The bot provides details for Doctor Tony Stark: Location - 10880 Malibu Point, specialization - Paediatric Dentistry. At the bottom, there is a white input field, a "Log out" button on the left, and a "Send" button on the right.

Pretty good!

Oh..How can I help?

Who do we have tomorrow?

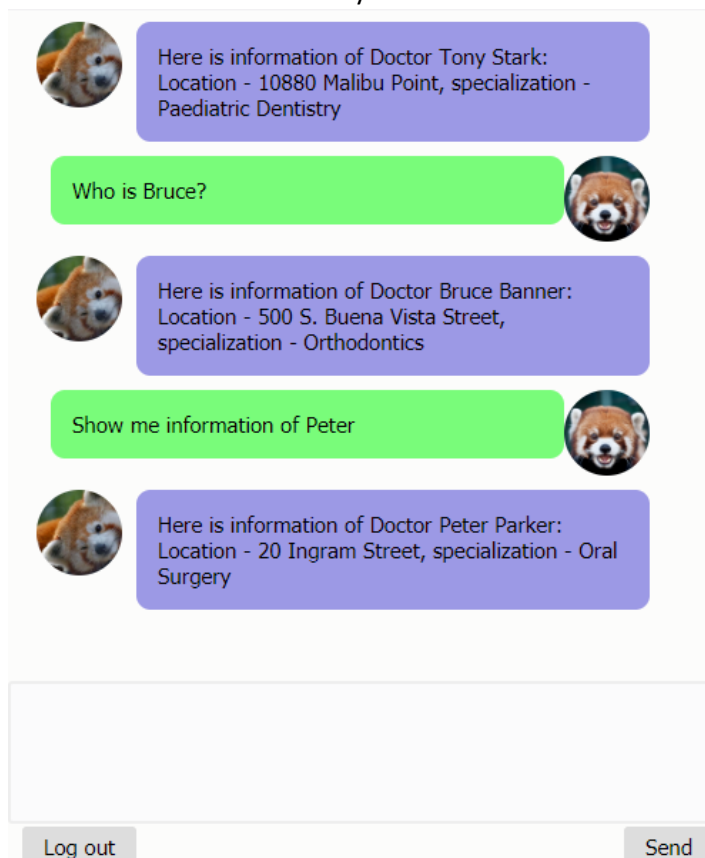
Available Dentists: 1. Tony Stark (Paediatric Dentistry) 2. Bruce Banner (Orthodontics) 3. Peter Parker (Oral Surgery)

Can you show me information about Tony?

Here is information of Doctor Tony Stark:
Location - 10880 Malibu Point, specialization - Paediatric Dentistry

Log out Send

You can tell chatbot to show you information about a dentist by name



A screenshot of a chatbot interface. The chat area has a light gray background. User messages are in green bubbles on the left, and bot responses are in purple bubbles on the right. Each bubble is preceded by a circular profile picture of a red panda. The conversation starts with the bot providing information for Doctor Tony Stark: Location - 10880 Malibu Point, specialization - Paediatric Dentistry. The user asks "Who is Bruce?". The bot provides information for Doctor Bruce Banner: Location - 500 S. Buena Vista Street, specialization - Orthodontics. The user asks "Show me information of Peter". The bot provides information for Doctor Peter Parker: Location - 20 Ingram Street, specialization - Oral Surgery. At the bottom, there is a white input field, a "Log out" button on the left, and a "Send" button on the right.

Here is information of Doctor Tony Stark:
Location - 10880 Malibu Point, specialization - Paediatric Dentistry

Who is Bruce?

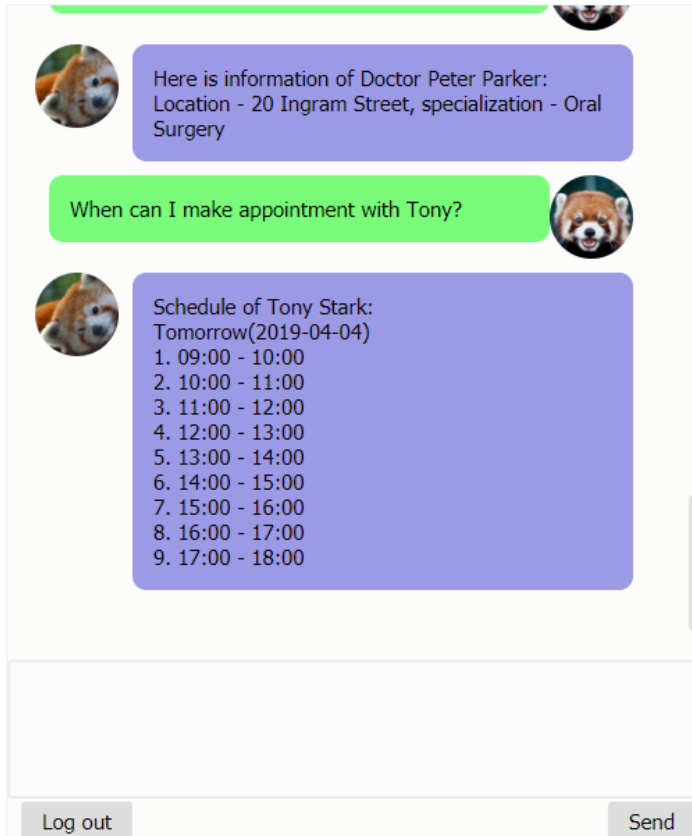
Here is information of Doctor Bruce Banner:
Location - 500 S. Buena Vista Street, specialization - Orthodontics

Show me information of Peter

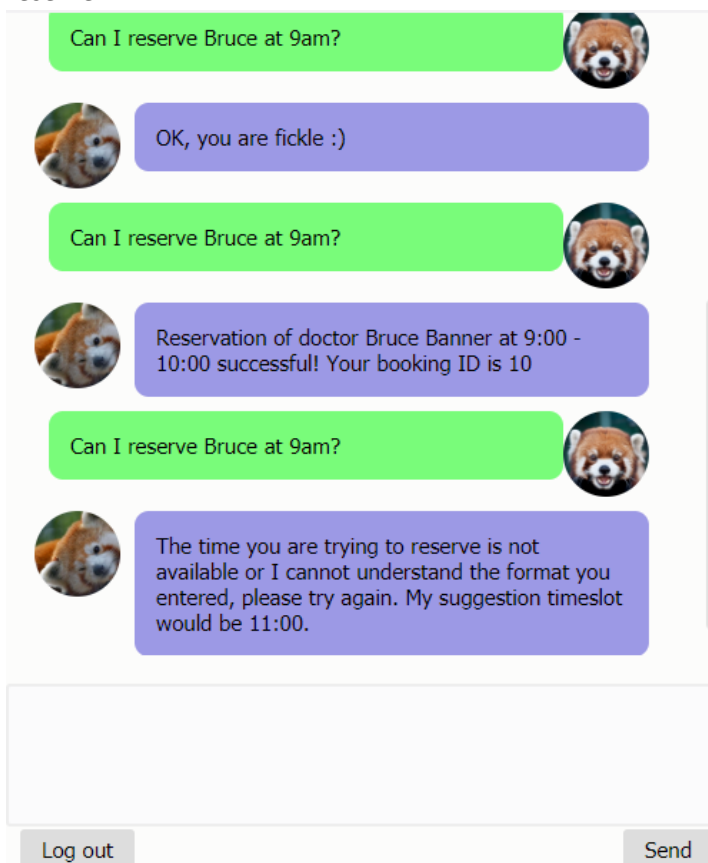
Here is information of Doctor Peter Parker:
Location - 20 Ingram Street, specialization - Oral Surgery

Log out Send

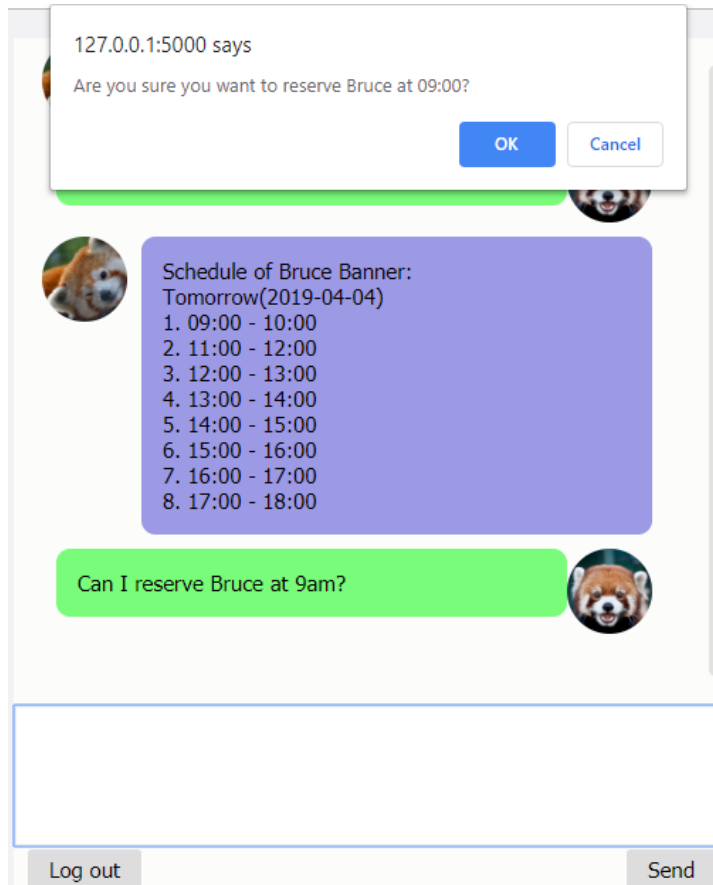
You can see schedule of dentists (only available for time of tomorrow)



Then you can reserve a dentist (You will always need to identify name and time in sharp) and get a booking ID, if you cannot reserve at that time, bot will tell you closet time you can reserve.




Chat bot will ask you for confirmation




127.0.0.1:5000 says

Are you sure you want to reserve Bruce at 09:00?

OK Cancel

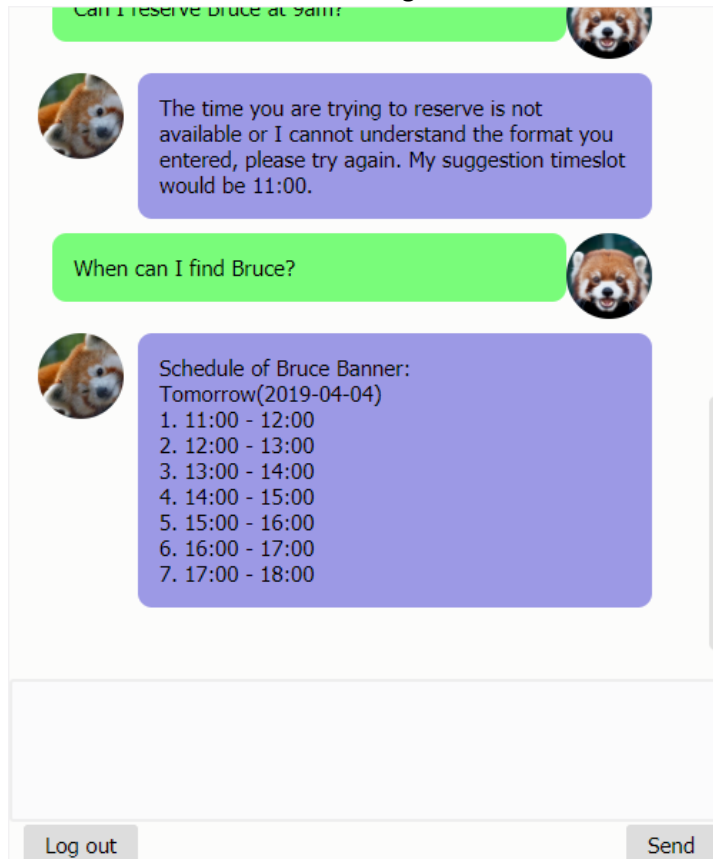
 Schedule of Bruce Banner:
Tomorrow(2019-04-04)


1. 09:00 - 10:00
2. 11:00 - 12:00
3. 12:00 - 13:00
4. 13:00 - 14:00
5. 14:00 - 15:00
6. 15:00 - 16:00
7. 16:00 - 17:00
8. 17:00 - 18:00


 Can I reserve Bruce at 9am?


Log out Send


Booked time cannot be reserve again and not show on schedule.



 Can I reserve Bruce at 9am?

 The time you are trying to reserve is not available or I cannot understand the format you entered, please try again. My suggestion timeslot would be 11:00.

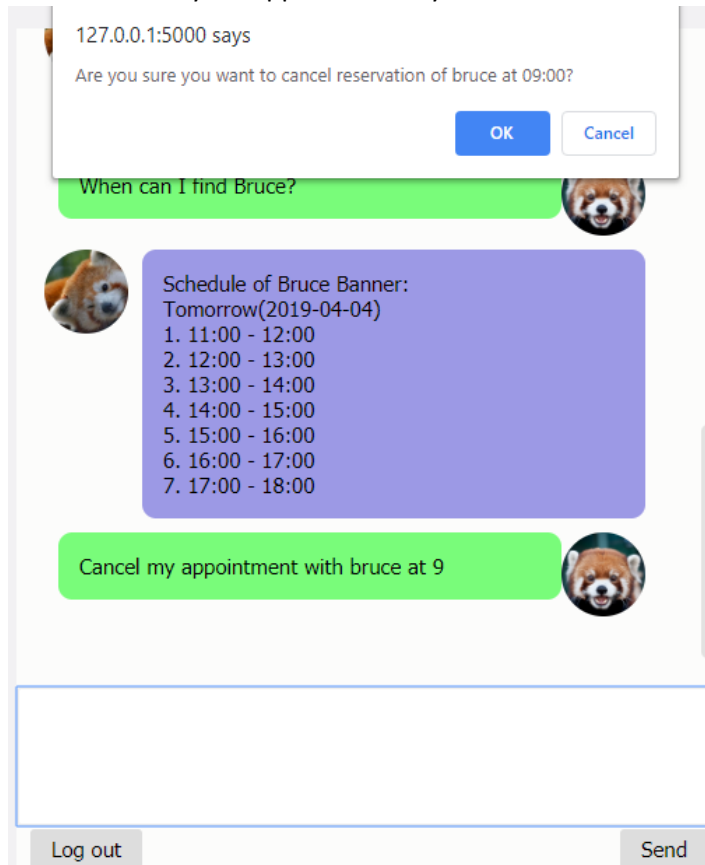
 When can I find Bruce?

 Schedule of Bruce Banner:
Tomorrow(2019-04-04)

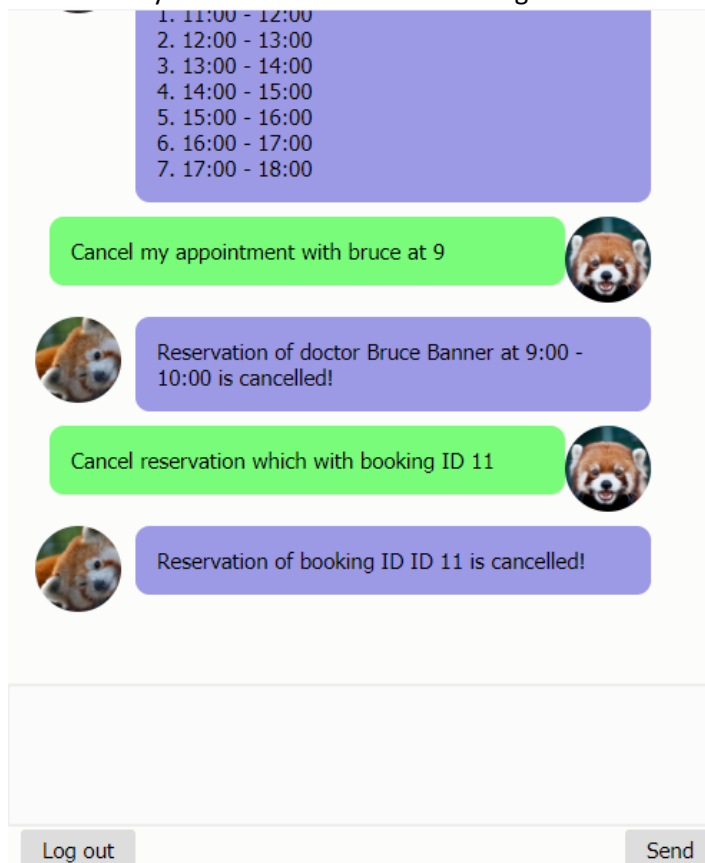
1. 11:00 - 12:00
2. 12:00 - 13:00
3. 13:00 - 14:00
4. 14:00 - 15:00
5. 15:00 - 16:00
6. 16:00 - 17:00
7. 17:00 - 18:00

Log out Send

You can cancel your appointment by state name and time that you reserved



Or you can use your booking ID to cancel the reservation, by say keyword ID will help bot understand you are mention about booking ID not time.



Note: only the user who made reservation can cancel the appointment, you can try to log in as another user to test it.
Finally, HAVE FUN!!!

