COMP9322 Assignment1 Document

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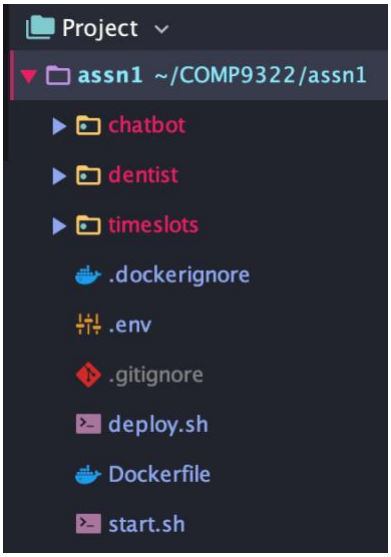
Project structure

Backend



- chatbot

  contains the source code and docker file for the Chatfuel chatbot webhook server

- dentist

  contains the source code and docker file for the **dentist** microservice

- timeslots

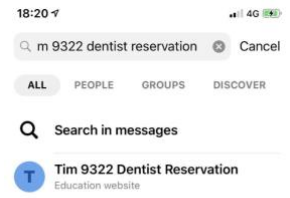
  contains the source code and docker file for the **timeslot** microservice

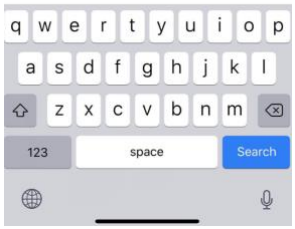
Under each sub-folder, I also wrote a deploy script to help me deploying my app.

In addition, as I have all my services deployed on *Heroku*, a docker image containers *Heroku-cli* is also provided. You can run *start.sh* to build and run the image, which will automatically deploy all the three services to *Heroku*.

Frontend

I used Chatfuel to build a chatbot which is accessible on Facebook Messenger. You can search “Tim 9322 Dentist Reservation” to start chatting with the bot.





API Documentation

API documentation and tests are available with *swagger.* You can test these APIs through:

- timeslot microservice

  https://tim-9322-timeslot.herokuapp.com/v1/help

- dentist

  https://tim-9322-dentist.herokuapp.com/v1/help

Deployment

All the services are deployed to *Heroku.* A start script *“start.sh”* is provided to build and run a *Heroku-cli* enabled docker image (which also contains an API key to access my Heroku

apps), to deploy all the three apps to *Heroku.* If you want to deploy the services, just run "$ ./start.sh" in the project root.

Bonus

As considering how to identify users, I found that Chatfuel provides a *"chatfuel user id"* which can help me identify each user. After that, I added a jwt-encryption to my webhook server, which encrypts the current user_id into a JWT, and send it to the **timeslot** microservice.

These two endpoints requires a JWT authorization in **timeslot**:

/timeslots/{id}/reserve

After a successful API call, the user JWT will be stored in the database.

/timeslots/{id}/cancel

If someone called this API to cancel a reservation, it will require a user JWT and check against the one stored in the database, to ensure only the creator of the booking has the right to cancel it.

Thank you!