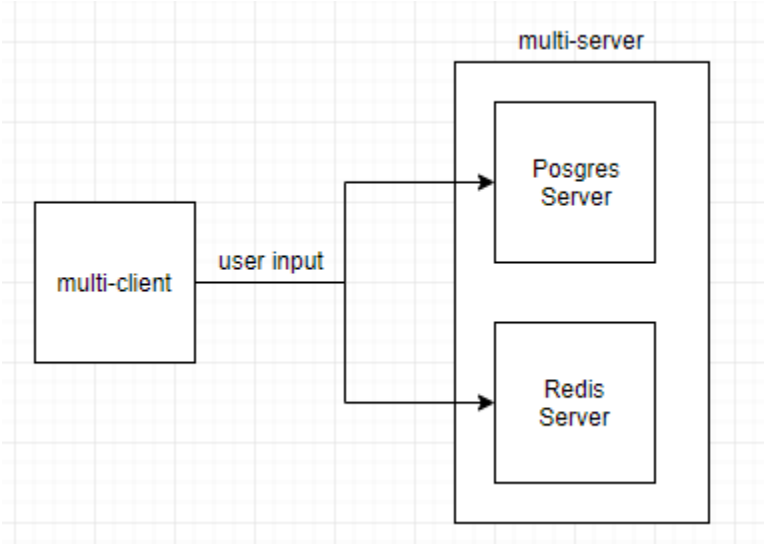
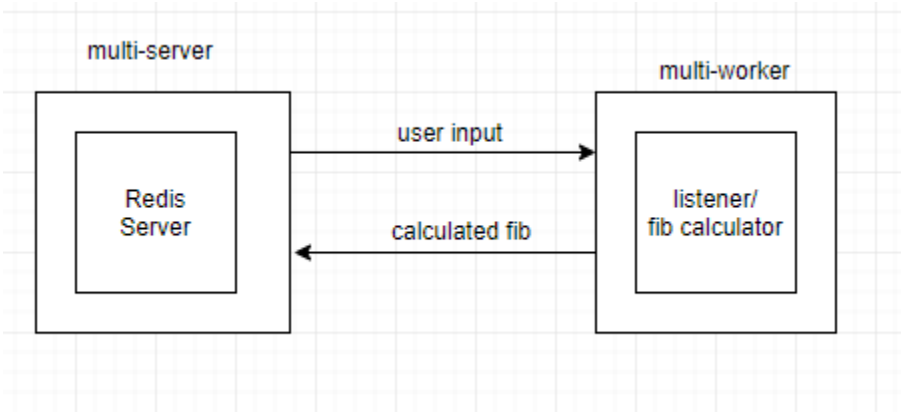
Overview

This application uses a dockerized react front-end to take a user's input and calculate the Fibonacci sequence from their input. The number the user inputs is then saved to the server container's instance of a Postgres server and also sent into the server container's instance of Redis.



A separate docker container, worker, listens to messages sent to the Redis instance and takes care of calculating the Fibonacci value for the user's input. The calculated Fibbonacci sequence is then saved on the Redis server.



Calculated values or thus saved as a sort of cache on Redis and indexes that have already been calculated are saved on the Postgres server as shown below.

Finally, the docker image called multi-nginx takes care of the routing. Any url that includes /api/ will be routed to multi-server whereas everything else will go directly to the react-client (multi-client). I've done this to centralize all my calls to the servers under one path.

Images

All images are available on docker hub under

https://hub.docker.com/u/jreyes4

1. multi-client
2. multi-server
3. multi-nginx
4. multi-worker

Running the Project

Production

The project is currently live on AWS. You may use the following URL to view the project

http://multidocker-env.q3batb3mmb.us-east-2.elasticbeanstalk.com/

Local

Ensure that you have docker installed to run the docker-compose command.

To run the project locally, in terminal navigate to the root folder of the project. Ensure you are inside the project folder and then type the following command into terminal: 'docker-compose up –build'.

Once the terminal shows a successful image, open your browser and navigate to localhost:3050 to see the react-client. If you're using dockertoolbox, use 192.168.99.100:3050.

Next Steps

I'm going to redo the react-client to have a unique design instead of using the default react look. I'll also update the application to be more dynamic so refreshing the page is unnecessary for viewing changes/additions to the databases.