#Personal Information

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#Project Description

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- **Name**:Dockerize all IHR components
- **Mentor**: @romain,romain@iij.ad.jp
- **About it**:
- **What is it?**: The Internet Health Report monitors the conditions of networks that compose the Internet. The effort aims to provide network operators, policymakers, and other stakeholders, with a better understanding of the Internet's infrastructure and its evolution.
- **Goal**: The goal of this project is to create docker images for all these components so that each component can be easily moved on the servers.

#About me

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My major programming language was C++ until I started procrastinating on which one is the best? Switched to python then for a change and realised language is just a medium and what I was fearing was the uncomfortness of doing things and implementing them.

I do *not have open source experience, as of now*. But I do want to contribute to open source and GSOC felt great! About contributing to open source, so *I have started contributing now in form of solving queries* of others like [here-1],[here-2],[here-3],[here-4]--(another repository),I know this was a very small comment which could not even be called a contribution, but just in case it helps someone else,means a lot to that person. Also various other comments and trying out to push some valuable code like [IHR 1], [IHR 2], [IHR 3], I know these are just trying to figure out bits and pieces here and there, but these sure are a way to start!

#Homework

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- Cloned the repository on my local machine and have performed various actions and things to either reproduce errors or run it functionally! Links to all mentioned below.

- Getting familiar with the code-base and finding out topics which intrigue me.

- Getting familiar with docker and github hosting systems. including AWS, azure and google cloud platforms, installing and creating various docker images and testing them out.

#Plan

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- **How does it help?**
- **Steps**

1. **Consistent and reproducible environments**: Docker images encapsulate all the dependencies required to run an application.This makes it easier to set up and maintain consistent and reproducible environments for development, testing, and production.

2. **Portability**: Docker images can be deployed to any system that supports Docker, regardless of the underlying operating system or hardware architecture. This makes it easier to move applications between different environments, including local development machines, staging environments, and production servers.

3. **Isolation and security**: Docker containers provide isolation between applications and the host system, reducing the risk of conflicts and security vulnerabilities. Docker images can also be scanned for vulnerabilities and kept up-to-date with security patches.

4. **Scaling**: Docker images can be used to scale applications horizontally by running multiple instances of the same container. This makes it easier to handle increased traffic and ensure high availability.

5. **Collaboration**: Docker images can be shared and distributed among team members, making it easier to collaborate on development projects. This also helps to ensure that everyone is working with the same set of dependencies and configurations.

Overall, adding a Docker image to a codebase can simplify application deployment, increase portability, and improve collaboration and security.

#Steps

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- Containerize the application
- Create a Dockerfile
- Build the Docker image
- Test the Docker image
- Push the Docker image to a registry
- Deploy the Docker image

More on these in detail below in ******Detailed Steps*****.

#Timeline

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Official Overview

- **May 4**: Accepted GSoC contributor projects announced;
- **May 4 - May 28**: Community Bonding Period | GSoC contributors get to know mentors, read documentation, get up to speed to begin working on their projects;
- **May 29**: coding officially begins;
- **July 10 - August 28**: Work Period | GSoC contributors work on their project with guidance from Mentors;
- **September 5--**: Final Week.

Detailed Steps

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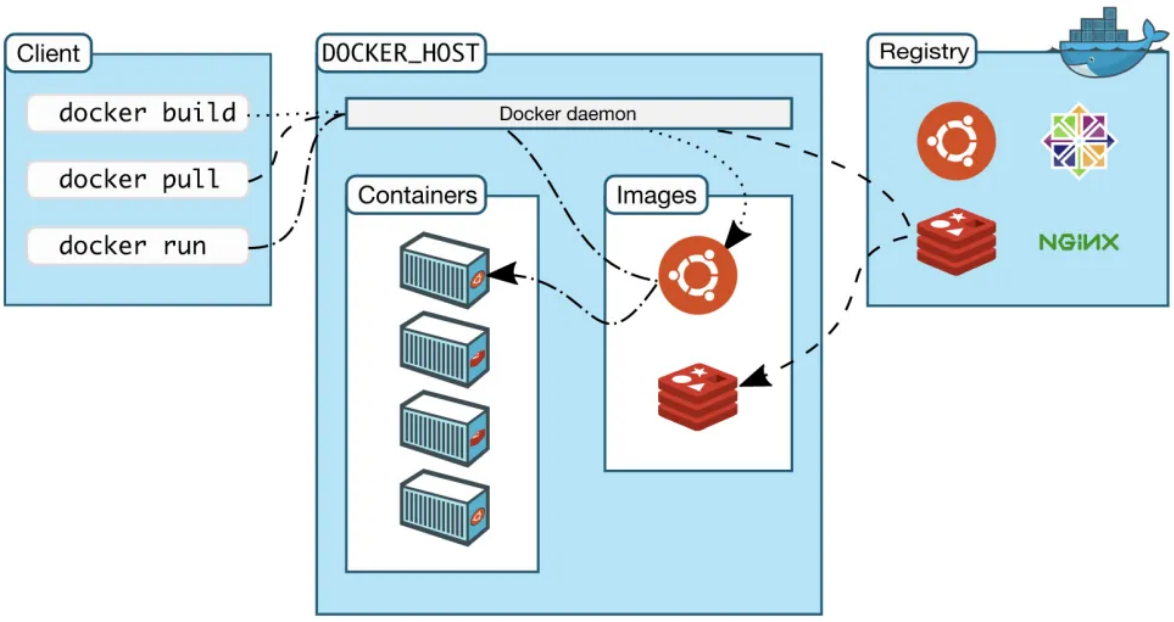
- **Till May 28**
  - communicate with a mentor to understand and details the goal of project.
  - get familiar with the codebase and docker components, make a demo, to be published on my github.
  - get to know more about the community

- **May 29 - July 10**
  - Start the process of breaking the application into small steps and containerizing those small steps.
  - Understanding computer architecture and working on enhancing as well including this on the container to make it better.

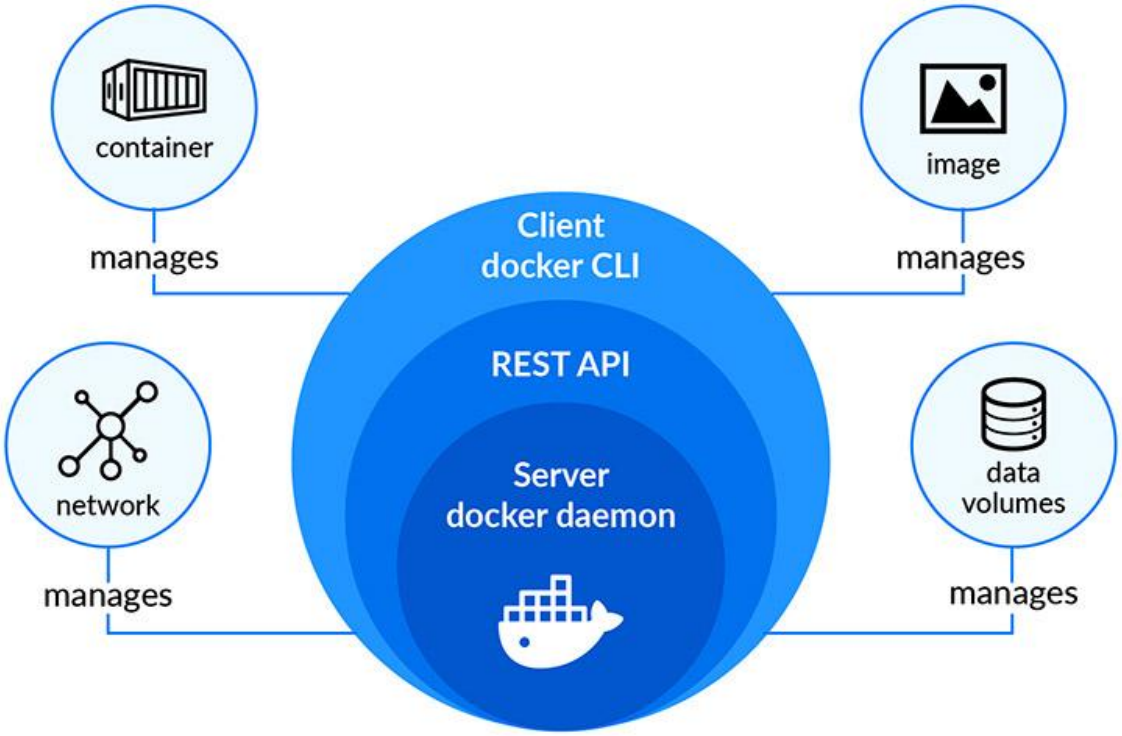
- **July 10- August 10**
  - Implement pushing and pulling capacities to docker containers.
  - Creating a final image for the docker container for IHR components specified.
  - Testing it both on usage-ability and security conditions.

- **August 10 - August 28** - Buffer time for any unpredictable problems,also working on scalability of it if any issues.

- **September--**
  - Prepare for final documentation and readme's.
  - Doing other necessary things required.
  - Most Important-- Maintaining and Looking into the repo there-after.



Images are taken from internet and not made my me



#Why me?

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I like working on various operating systems and just get intrigued by the way things work and have been working, if anything breaks I like that too, joking! But yep they do definitely provide a remembering experience.

I love digging into things and also curious about what makes a thing stand out but at the same time user-scalable i.e speaking to the masses, where these containers and this technology comes into play, the just idea of letting something up there in the cloud while you can rest easy without breaking your machine down!

Coming onto Open-Source, as being just an admirer of how people provide things and help others with the same interests to contribute to the thing is just amazing, a pure soul maybe! Always been an admirer and now want to become a user/contributor to this space as well.

I have created a [Github-Repo] for my this year's submissions, if you want to check out.
Also, try to look for an easter egg question in my [README.MD] and if you answer that try answering on the quantity of it as well! You can reply to me as well about the answer.