## Dockerfile

A Dockerfile is a text document that contains all the commands a user could call on the command line to assemble an image. Think of it as a shell script. It gathered multiple commands into a single document to fulfill a single task.

build command is used to create an image from the Dockerfile.

 $ docker build

You can name your image as well.

 $ docker build -t my-image

If your Dockerfile is placed in another path,

 $ docker build -f /path/to/a/Dockerfile .

Let's first look at a Dockerfile and discuss those commands.

**Dockerfile Commands**

* FROM - specifies the base(parent) image. [Alpine version](https://dzone.com/articles/how-to-create-a-software-development-environment-o) is the minimal docker image based on Alpine Linux which is only 5mb in size.
* RUN - runs a Linux command. Used to install packages into container, create folders, etc
* ENV - sets environment variables. We can have multiple variables in a single dockerfile.
* COPY - copies files and directories to the container.
* EXPOSE - expose ports
* ENTRYPOINT - provides command and arguments for an executing container.
* CMD - provides a command and arguments for an executing container. There can be only one CMD.
* VOLUME - create a directory mount point to access and store persistent data.
* WORKDIR - sets the working directory for the instructions that follow.
* LABEL - provides metada like maintainer.
* ADD - Copies files and directories to the container. Can unpack compressed files.
* ARG - Define build-time variable.

**COPY vs. ADD**

Both commands serve a similar purpose, to copy files into the image.

* COPY - let you copy files and directories from the host.
* ADD - does the same. Additionally it lets you use URL location and unzip files into image.

**ENTRYPOINT vs. CMD**

* CMD - allows you to set a default command which will be executed only when you run a container without specifying a command. If a Docker container runs with a command, the default command will be ignored.
* ENTRYPOINT - allows you to configure a container that will run as an executable. ENTRYPOINT command and parameters are not ignored when Docker container runs with command line parameters.

### VOLUME

You declare volume in your Dockerfile to denote where your container will write application data. When you run your container using -v   you can specify its mounting point.