# Building Your First Docker Image With A Dockerfile

## Introduction

In this issue you will learn how to create a new docker image from a Dockerfile.

## What is a Dockerfile

A Dockerfile is a text file that contains all of the required commands to build a Docker image.

## An Example Of A Dockerfile Build

Here's a really basic example of how to create a Dockerfile and add our source code to an image.

## The Basic HTML Page To Put In The Docker Image

We will create a simple Hello world index.html file in my current directory.

In this HTML file put the following content:

<h1>Hello World - Bobby Iliev</h1>

## How the Dockerfile Fits In

The Dockerfile contains instructions to build the Docker Image.

Part of the build will copy our HTML file into the Image.

## The Dockerfile To Define The Image

In the Dockerfile we have the following content:

FROM nginx

MAINTAINER Software Shinobi

COPY . /var/www/html

WORKDIR /var/www/html

EXPOSE 8080

## A Quick Rundown Of The Dockerfile Elements:

## Dockerfile Element: FROM

The base Docker image that we would use as a template.

## Dockerfile Element: MAINTAINER

The person who manages and maintains this Docker image.

## Dockerfile Element: COPY

Operation to copy files from local disk into the image.

## Dockerfile Element: WORKDIR

The directory where you want to run your commands to execute from.

## Dockerfile Element: EXPOSE:

The port that you would like to access the container services through.

## Creating A Docker Image From A Dockerfile

In order to build a new image from our Dockerfile, we need to use the docker build command.

The syntax of the docker build command is the following:

docker build [OPTIONS] PATH | URL | -

## Trigger A Docker Image Build Using A Dockerfile.

The command that we need to run to trigger the image build:

docker build -f Dockerfile -t your-user-name/hello-docker-html .

Note: The period at the end is important.

This period means to do the Docker Build in the current directory.

## Verifying Your Docker Image Build

Use the following command to list the Docker Images on your server:

docker image ls

## Running Your New Docker Image As A Docker Container

Use the following command to run your Docker Image as a running Docker Container:

docker run -d -p 8080:80 your-user-name/hello-docker-html

## Get An In Depth Understanding Of Docker Build

For more information on the docker build make sure to check out the official documentation here:

https://docs.docker.com/engine/reference/commandline/build/

## This Is Just A Taste of Dockerfiles

This is a really basic example of a Dockerfile.

You can obviously go above and beyond with your Dockerfiles to create some very interesting containers.

## Get An In Depth Understanding Of Dockerfiles

You can learn more about Dockerfile from the Official Docker documentation.

The Official Docker documentation lists the various commands and format details for Dockerfiles

Find the official Dockerfile documentation at the page link below:

<https://docs.docker.com/engine/reference/builder/>

## Dockerfile Knowledge Check

test your knowledge with this Dockerfile quiz:

https://quizapi.io/predefined-quizzes/basic-dockerfile-quiz

## Recap: What We Did Today

Today we learned how to write a Dockerfile and how to build a new docker image from a Dockerfile.

## Coming Up Next Time

In the next Docker Newsletter issue we will learn about how to set up and work with multiple containers running in a Docker Swarm configuration.

--

See ya next time.

Namaste,

Software Shinobi