

## Getting Started

### ■ Goals

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1. Install git
2. Install Docker
3. git pull the class git repository
4. Build a custom Docker image
5. Run a container

### ■ Installing git

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You have a few options for installing git, one of which is [GitHub Desktop](#) which includes a few cool tools for GitHub as well. If you want to install git without the GitHub tools you can also use:

#### Windows

- [git for windows](#) : Installs git, git BASH, and a GUI. The git command can then be run from PowerShell, CMD, or the BASH shell (which it installs).

#### MacOS

- [git for Mac Installer](#) : Provides an easy installer for git on MacOS.
- [Xcode](#) : Xcode installs a command line git and you may have it installed already.

### ■ Installing Docker

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Follow [these instructions](#) to install Docker Desktop.

### ■ Cloning the Class git Repository

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Everything shown after the \$ prompt is the text you need to run in a terminal. Lines that do not start with a \$ are the output of the commands. Yours should match what is shown but your prompt will probably be different. A prompt will *usually* show you what directory you are in.



In MacOS, you can use the Terminal application, in Windows you can use PowerShell or Windows Terminal to execute these commands.

```
$ git clone https://github.com/rxt1077/it610.git ❶
Cloning into 'IS601'...
remote: Enumerating objects: 43, done.
remote: Counting objects: 100% (43/43), done.
remote: Compressing objects: 100% (35/35), done.
remote: Total 43 (delta 4), reused 43 (delta 4), pack-reused 0
Unpacking objects: 100% (43/43), done.
```

- 1 Make sure you are in a directory where you have write permissions. In Windows you can type `cd ~` to change to your home directory. In MacOS you should start in your home directory, but you can run `cd` just to be sure. `cd` with no directory defaults to home in MacOS / Linux.

## ■ Building a Custom Docker Image

```
$ cd it610/exercises/getting-started ❶
it610/exercises/1 $ docker build -t getting-started . ❷
Sending build context to Docker daemon 5.632kB ❸
Step 1/2 : FROM ubuntu:20.04
20.04: Pulling from library/ubuntu
d51af753c3d3: Pull complete
fc878cd0a91c: Pull complete
6154df8ff988: Pull complete
fee5db0ff82f: Pull complete
Digest: sha256:8bce67040cd0ae39e0beb55bcb976a824d9966d2ac8d2e4bf6119b45505cee64
Status: Downloaded newer image for ubuntu:20.04
--> 1d622ef86b13
Step 2/2 : RUN echo "bXkgb3RoZXIyY2FyIHJ1bnMgTGluZXg=" | base64 -d > /message.txt
--> Running in 4528d351968b
Removing intermediate container 4528d351968b
--> a09d3012fc11
Successfully built a09d3012fc11
Successfully tagged getting-started:latest
```

- 1 Make sure you are in the `it610/exercises/1` directory
- 2 This tells Docker to build an image based on the Dockerfile in *this* (`.`) directory and tag it as `getting-started`
- 3 It may take a moment to pull down the images this image is built from.

## ■ Running a Container

Now that we've built an image, we're create and run a container and then get a BASH shell on it. That can all be done with a single command:

```
$ docker run -it getting-started bash ❶
```

- 1 The `-it` option means that you want to run this container interactively and communicate with it via a tty. You are now *in* a BASH shell running *inside* a container of the custom image for this exercise. From this shell, use your systems administration skills (feel free to Google) to read the contents of `/message.txt` and submit that phrase in the textbox for this assignment.

When you are done in the container type `exit` to exit the shell and stop the container.