

# CodeIgniter Intro

## lab #lab02

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## Lab Goals

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The purpose of this lab is to introduce you to CodeIgniter and the workflow for working with webapps.

This lab is *\*not\** indicative of the process you want to use when in "full development" mode ... it has you share a single repository, with both members of a team having write access - a recipe for disaster! I set the lab up this way to break you in gently to good collaboration practices - if you mess things up now, it is relatively easy to recover :)

Suggestion: you may want to skim the slideshow first, before working your way through it.

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## Lab Submission

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Your lab will be completed in a github repository.

Submit a readme to the lab dropbox, with a link to your github repository.

Due: three days after your lab, eg. Thursday lab period will have theirs due Sunday, Jan 17, 17:30 PST

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This is a pair lab, sharing a single repository, but each using their own github account and computer.

If you insist on working on your own, you will need to setup a second github account, and use two machines, to get the full benefit (and marks) of the lab.

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## Lab Preparation

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There are a few things to sort out before diving into the CodeIgniter lab itself - "process":

- your D2L group
- get github setup
- clone your repo
- configure your AMP setup
- make a CodeIgniter starter

I originally referenced some devops tutorials for these, but that proved confusing. I will walk you through it, instead.

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## Lab Prep - D2L Group

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This lab is for group submission, and I have set up groups for each set, with up to two members, self-enrolled.

Choose a partner for this lab. One of you should enrol in a group, to claim it, and the other should join that group.

If you inadvertently end up paired with the wrong teammate, let me know during lab and I can fix that.

The groups are for this lab only, and do not have to be maintained for the assignments. You will be setting up assignment teams next week.

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## Lab Prep - Github

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If you are a team of one, you will need to create a second github account for yourself, and plan to use a different machine for each account. We want to replicate a collaborative environment, with two developers sharing a common repository.

One of you should fork the starter repository for the lab, and they should then add their teammate as a collaborator, with write permission. You should both be able to push code to the repo!

You are welcome to change the repo name, in its Github settings, if that makes more sense to you. It will still show as a fork of the starter.

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## Lab Prep - Cloning

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Each of you will want to clone the shared repository to your development system, be it your laptop or one of the lab machines.

Clone it into the `*htdocs*` (or equivalent) folder within your AMP stack.

The foldername can be anything meaningful to you, for instance "comp4711lab02", or you can stick with "example-gallery" all the way through.

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## Lab Prep - Post-Cloning

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After cloning, you should be able to see the starter's image gallery using the URL "localhost/comp4711lab02/public". This is only to make sure it is in the proper place, and not what you will use for development.

You do NOT want to have to use a URL like "localhost/comp4711/labs/lab02/public" - that is too many folders deep!!

I trust you remembered to inject the port number you assigned during AMP setup, if other than 80 ... for instance, "localhost:4711/comp4711lab02/public"

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## Lab Prep - Local Domain

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We want to use domain based hosting, so that media references work properly in spite of apparent folder names in an URL. The apparent folder names can confuse your browser if you use sub-controller methods.

For instance, "/product/buy/shoes/1" looks to the browser like it is inside the website folder "product/buy/shoes", but there is no such folder. Relative image references, such as "../assets/images/blah" will not work properly.

Add one or more local domain names to your `hosts` file. This could be names that you remap each week as needed, for instance "comp4711.local", or you could add a new domain each week, eg. "4711lab02.local", "4711lab03.local", etc.

Do this by adding a line to the end of your `hosts` file, like  
`127.0.0.1 comp4711.local project.local 4711lab25.local`

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## Lab Prep - Virtual Hosting

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Configure your Apache virtual hosting, found in `httpd-vhosts.conf` inside the `extra` folder of your Apache configuration folder.

Your AMP comes with a couple of `VirtualHost` definitions, that are to be used as examples only - they are not real, and can be deleted or commented out once done.

You want to end up with several `VirtualHosts` - one for the `*default*`, and one for each local domain.

Each `VirtualHost` definition needs a `ServerName`, eg `comp4711.local`, and then the `DocumentRoot` that domain should be mapped to (with no trailing slash), for instance `/opt/lampstack-5.5.30-1/apache2/htdocs/comp4711lab02`.

The first `VirtualHost` defined in the config file is special - it is the AMP base installation, eg. the Bitnami start page.

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## Lab Prep - CodeIgniter Setup

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Download CodeIgniter, the current release from <https://github.com/bcit-ci/CodeIgniter/archive/3.0.4.zip>

Extract this inside your downloads folder - you should end up with a `CodeIgniter-3.0.4` folder, containing `application`, `system` and `user_guide` folders, as well as an `index.php` and some other files.

Move the `system` folder inside your `htdocs`, and rename it to `system3`.

If you want to keep the user guide handy for local reference, move the `user_guide` folder somewhere you can easily find it, for instance your desktop, and possibly renamed suitably. If you prefer to read the user guide online, then just delete the `user_guide` folder.

The stuff remaining in your `CodeIgniter-3.0.4` folder will be your "CodeIgniter starter" folder, for new projects. You might want to rename it appropriately.

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## Lab Prep - Prepared

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Now you are ready to begin the lab proper.

You should have your `htdocs` folder ready to roll, with the CodeIgniter `system3` framework folder inside it, as well as your lab's project folder.

You will have a local domain defined and virtual hosting setup in your Apache.

You may have the CodeIgniter user guide in a folder on your desktop for convenience.

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## Lab Work

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There are three tutorials to complete for this lab, for marks...

- Tutorial [basic01](#): trivial CI site
- Tutorial [basic02](#): basic CodeIgniter webapp
- Tutorial [basic02](#): good CodeIgniter webapp

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## Lab Process

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Here comes the fun part...

- One of you will fork the starter repo, and add the other team member as a collaborator.
- Each of you will clone your shared repo to their respective machines.
- Complete the first tutorial with one of you "driving" and the other "navigating". When done, make sure you (the driver) commit and push your changes to your shared repo.
- Before starting the second tutorial, switch roles and computers. The new driver will need to synchronize their repo with the shared one, and then work through the tutorial. Remember to commit and push when done.
- Before completing the third tutorial, switch roles and machines again. Synchronize, complete the tutorial, and push/commit your changes.

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## Lab Marking Guideline

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This lab will be marked out of 10, as follows:

- Tutorial basic01: trivial CI site (3)
- Tutorial basic02: basic CodeIgniter webapp (3)
- Tutorial basic02: good CodeIgniter webapp (2)
- Process - proper commit history (2)

Your github repository will be in a state consistent with the end of one of the above, and you do not need three repos!

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## Disclaimer

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We will not necessarily be following "best practices" throughout this lab.

Our focus is on "baby steps", that will lead to best practices over the next few labs.

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## Congratulations!

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You have completed lab #lab02: CodeIgniter Intro

If you would take a minute to [provide some feedback](#), we would appreciate it!

The next activity in sequence is: There is nothing further in this course

You can use your browser's back button to return to the page you were on before starting this activity, or you can jump directly to the course [homepage](#), [organizer](#), or [reference](#) page.