How To… Reminders

This document contains a list of reminders of how to do some of the basic things like connect to your newnumyspace account. It is designed for use with KF5002 Web Programming.

How To Create A Project

The software we are using for creating and editing our code is **PhpStorm**. In the labs you need to click on the windows icon at the left-hand end of your taskbar, and then in the long alphabetical list scroll down to "Web Developer Tools". Inside that there is an item "phpStorm". Click on this. NOTE: The item called "JetBrains PhpStorm does not work, you need to scroll further down to the one that JUST says "phpStorm".

You may have some dialogs pop up, if you do, make sensible choices, and continue.

You will get a dialog in which you can choose to make a new project. You can also continue previous projects from here. If phpStorm is already up and running and you want a new project, you can do this by choosing "file->new project" on the menu.

Choose somewhere appropriate for your project to be. By default it will try to do this on the C: drive of the machine you are using. **This is not a great place to create a project**, as it is local to the machine you are on. It is much better to create your files either on your U: drive which will follow you to every machine you use in the university, or on a data stick. To add to the problems, if you create the files in the default place on the C: drive, you cannot get access to them through file explorer, or through FileZilla to upload them to your web space.

How To Create A New File In A Project

In the left-hand pane of phpStorm you will see a view of the files you have. If you right-click on the project name, or any other project file in this tree and choose "new >" there is an option to create a new PHP file. If that option does not appear, you probably have something else highlighted in that left-hand pane. For example, if you have "External Libraries" highlighted, you will get different options.

How To Change the Look of the PhpStorm Interface

You need to open the options window by selecting "file->options" on the menu. Inside this you want "Appearance and Behaviour>Appearance". In the options on the right there is a drop-down box labelled "theme". Your choices are IntelliJ (white background) or Darclua (black background). Most people have a preference, however it's worth pointing out that if you are spending a lot of time looking at screens, dark backgrounds are better for the eyes.

The rest of the options on the right allow you to do more fine-tuning of the way it looks. Feel free to play.

How To Save A File in PhpStorm

The fastest way is to make sure that the editing window is the active window (you can do that by clicking anywhere in it) and pressing crtl->s.

I know this is really simple, but making sure your file is saved is really important. I have lost count of how many times this has caught me out.

How To Get Access To Your Live web pages

Your life web pages are stored on a server (somewhere) using the service called "**newnumyspace**". You have to use FTP to upload your files to the server, and for this we use the Filezilla app. The next few topics are all about connecting to this account and uploading your files.

What If I Don't Have A newnumyspace Account?

If you were here last year, and did the first web module, you should have. It's possible that you have forgotten. If you were not here for some reason (maybe you are a year 2 direct entrant) then you will need an account setting up. Talk to Garry Elvin the module tutor for KF5002 Web Programming to get a new account.

How To Get Your Password Reset for newnumyspace

It's more likely that with it being a while since you used it, you have forgotten your password. If this is the case go to http://newnumyspace.co.uk/ and on the front page you get to, there is a place you can reset your password. Please note – it can take 5 minutes or so for the password reset to send you an email, so don't assume if it not immediate, that it is not happening.

Note: you need to use your university email address for this, as that is the email address registered with your account.

How To View Your Live Web Pages

Every account at newnumyspace has their own URL to allow you to view the live files. The format is based on your UNN student number. The format is:

http://unn-<your id>.newnumyspace.co.uk/

My id (staff id) is cgdh2 so my files can be found at

http://unn-cgdh2.newnumyspace.co.uk/

Please note that between the "unn" and your id is a hyphen, not an underscore.

After this URL you will need to type the address of any particular file you wish to display. If you don't specify a file, it will look for a file called "index.html" inside the "public_html" folder. If it finds one, it will display this. If not it will display the contents of your public_html folder.

If you want files to be accessible to the outside world (i.e. through a web browser) they need to be inside your public_html folder. You can have sub-folders within your public_html folder and files in

the sub-folders will be accessible, but the name of the sub-folder will be needed in the URL. For example:

http://unn-cgdh2.newnumyspace.co.uk/week02/movieQuery.php

I have a trick: I keep an "index.html" file in the root public_html folder which contains a link to the files I am currently working on, usually in a sub-directory. This gets me started viewing the right files quickly.

How To Upload Files To newnumyspace

When you are developing files to be hosted, you will edit them on your local machine and then upload them to your newnumyspace account. This is done using an FTP client (FTP stands for "File Transfer Protocol"). We use **FileZilla**, and the next topic tells you how to connect.

How To Connect Using FileZilla

Filezilla can be launched from the windows menu, it's down in "Web Developer Tools". Once you have launched it, you will need to connect to your account at newnumyspace.

Near the top there is a bar with boxes in which you can type your connection details. These are the details you need:

Host: newnumyspace.co.uk

Username: unn_<your username>

Password: Your password

Port: 22

You need to substitute your student id in where I have put <your username>. For example, my staff id is cgdh2 and so my username is unn_cgdh2. Note: this is an underscore between the two, not a hyphen.

The password you need is your password for your newnumyspace account, which is not necessarily the same as your university account password.

How To Use Filezilla

The main part of Filezilla has four boxes in the middle. On the left there is a tree view of your local files, and under that is a file explorer style view of the files. On the right is a similar pair of boxes, but they are the files on the server. Most of the time what you want to do is upload files from the left (local) to the right (server).

You need to remember to not only be in the right place in your file structure on the left, but also to be where you want in the file structure on the right. For files to be available to a web browser, they need to be within the public_html folder (or sub-folders within it). When you have found the file or files you want to upload, and your right hand view is in the folder you want to upload to, you can either drag-and-drop the files on the left or double-click them. I drag-and-drop if I want to do multiple files, and double-click when I want up upload or update only one.

If the file you are copying already exists it will overwrite the earlier copy. It will not warn you.

If you create a new file in your local storage, it does not automatically appear in the explorer view of FileZilla for local files. When you change folders it refreshes, but if you want to refresh the current folder, press the f5 key on the keyboard.

You can also do the same from right-to-left. It is not unreasonable to keep your files on the server between sessions and download them to your local machine for editing in a class session. You cannot edit live files in the server web space.

At the top of each explorer view in Filezilla is what looks like a folder called "..". If you double-click on it, it will take you up a folder in your folder structure. This makes navigation easier. This icon is not actually a folder and cannot be drag-and-dropped to the other side.

How To Create A New Folder On The Server Through Filezilla

To create a folder in the server storage, you don't have to create it on the local machine and then upload it. You can right-click in the server-side (right hand side) explorer view and choose "create directory".

How To Delete Content Through Filezilla

Highlight what you want to delete and either press the "delete" button on the keyboard or right-click and choose "delete". There is no wastebasket for server files, so be careful what you delete. You should always have copies somewhere else (data stick?) anyway.

At the start of the year you might want to clear out files from previous study. If you are really tidy you might want to clear out after every teaching session.

However, it is also possible, instead of deleting your files, to archive them. You can create a specific folder (called something like "archive") and move files no longer being used to that folder. If you want them to be inaccessible through your web-space, then create that folder outside of your public_html folder.

How To Get Access To Your Live Database

Quite a bit of the stuff we will be doing will be using database back-ends for web pages. As well as file space, your newnumyspace account gives you database storage, and tools to use on the databases. This is controlled through a web interface called "**phpMyAdmin**" that you can get to through the URL

http://phpmyadmin.newnumyspace.co.uk/

In that page, your username is unn_<your student id>. For example, my staff id is cgdh2 so my phpMyAdmin username is unn_cgdh2. Note, this has an underscore rather than a hyphen. This username is the same as your newnumyspace account username (because it is part of the newnumyspace account)

The password required is also your newnumyspace password. This may not be the same as your university lab password.

Once you are in, there is a tree view on the left, and lots of different stuff on the right. In the tree view, you don't need to worry about "new" or "information_schema". The other node you should be able to see has your newnumyspace account username, and your tables are within this node.

How To Clear Out Your Databases in phpMyAdmin

When you first get into your database, you will probably have old tables in there from last year. I advise you to clear those out, and when tables are finished with as you work, to clear them out too.

In the tree view on the left, highlight the node that is named after your username ("unn_xxxxxxxx").

On the right there will be a list of your tables. To the left of each table name is a checkbox. Check the boxes of the tables you want to delete (or there is a "check all" option below the table list).

Also beneath the list of tables is a drop-down select box. This box has a list of actions that can be performed on the selected tables. Choose "drop" and you will be asked to confirm. Click "yes" and the tables will be deleted.

How To Run An SQL File in phpMyAdmin

Often, in the sessions, we give you a setup sql file which saves you going to all the trouble of creating your own databases and data.

In the tree view on the left, highlight your username node. In the right-hand panel there is now a set of tabs. One of these is "import" and this is the one you want.

On the panel that appears, click the "choose file" button and navigate to the sql file you want to run. Once it is chosen, you shouldn't need to alter any of the other settings. Click on the "run" button and the script will be run. It will probably create tables and fill them with data.

The scripts we give you usually delete tables of the same name before re-creating them. This means if you have been working on a database and want to reset it back to its original state and data, you just need to run the script again.

How To View Data in phpMyAdmin

If you highlight a table node in the tree view on the left, you have various options of what you can view on the right. The two most useful are "browse" which will show you the data in the table, and "structure" which lists the fields (columns) in the table.

How To Use phpMyAdmin To Check SQL Statements

When you are working with PHP to connect to a database and extract, enter or update data, you will be creating SQL statements to do so. Sometimes you will get SQL errors, but the reporting of these errors can be pretty minimal, and therefore make it hard to find the problem. There is a trick that I have found useful. Say your query is being held in the variable $sqlQuery. First of all, get the php script to write this out to the browser:

echo $sqlQuery;

It is good to do it this way, especially if you are constructing the query with interpolated values of some kind. You may be able to spot the error at this stage. If not, continue…

Highlight the displayed SQL and copy it to the "clipboard" (ctrl-c)

Go to phpMyAdmin and click on the "SQL" tab in the right-pane.

Delete any SQl that appears in the edit box, and past in your own code.

Almost always, when I do this I spot the error without running the SQL because the colour-coding and highlighting is really helpful. If not, click the "run" button in the blue-ish box below. The error messages you get from phpMyAdmin are much better than the ones you get through the browser.

How To Connect To Your Database Through PDO

In PHP you will be using a package called "**PDO**" to connect to your database. The line looks something like this:

$connection = new PDO("mysql:host=localhost;dbname=<username>", "<username>", "<password>");

<username> is your newnumyspace account username, which is unn_<your id>, where <your id> is your university student number. My staff id is cgdh2 so my newnumyspace account username is unn_cgdh2. Please note, it has an underscore not a hyphen.

So my connection looks like this:

$connection = new PDO("mysql:host=localhost;dbname=unn_cgdh2", "unn_cgdh2", "xxxxxxxxxx");

PDO scripts require you to write your password in them, in plain text, so for the sake of security, I STRONGLY recommend that you don't use the same password as your university account.

As you do your tutorial material you will be prompted to create a connection function which will sit in a separate PHP file. You should follow this process as it means you will only have to deal with this conncetion issue once, and then will be able to reuse that same function over and over and over and ….

Typical Workflow In PHP

You will get used to this process pretty quickly, but when getting started it is easy to miss steps.

1. Create or edit PHP or HTML files
2. Save them
3. Upload through Filezilla
4. Access them through a browser by typing in your newnumyspace web space address.

It is easy to forget one of step 2 and step 3 – I do it all the time. If you don't access your files from the web space, in other words by loading them locally into a browser, any PHP you have will not be run.

However, when we are doing Javascript topics, there is no need to host these live, as it is the browser, not the server which runs Javascript scripts.

Also, later in the semester, when we do Ajax, you will be needing to upload html files and javascript files (.js) to the server for deployment.