# Ac50002 Lab 2 D3

The purpose of this lab is to get familiarised with D3. We will need to us a few bits of syntax you haven’t encountered yet, but it’s nothing too complicated. Login to a lab machine and locate the text editor called notepad++. You can’t use word or even wordpad (and notepad isn’t that good either) because they are just not designed for programming.

## Installing D3

Normally D3 runs on a webserver, however We are going to install it locally (if allowed)

In a web browser:

* Visit <http://d3js.org>
* Download the latest version (5.7.0) D3.zip
* Unzip and put it in a folder (perhaps on your U: drive)
* Look at the contents

## Sample Code

Visit

<https://github.com/acobley/circles/releases/tag/v1.0>

Download the Source.zip and uzip the file, put this into a directory on the U: drive. Take a look at the contents, look under the directory Circles/webContent.

Double click on Ex1.html . This should open in Chrome or Firefox. What does it do ? Open the file in a text editor such as Notepad++ and try adding other elements such as a header H1 or other paragraphs.

## Drawing a Graph

Double click on Ex6.html and see what it does. Look in the scripts directory and you should see Ex6.js. Open this with notepad++.

Note that this code adds a class attribute to a div and sets the background colour. The background and height are bound to the dataset.

**Things to try**

* Change the dataset, add more data
* Scale the graph (I.E make the bars twice as high)
* Create different grey scales (hint #rrggbb is a colour in hex)

## Play with the circles

Look at Ex8.js and examine how it seems to work.

* Can you make each a circle different color ? (think about the bars graph)
* Try the following attributes
  + Fill
  + Stroke
  + Stroke-width
* Instead of circles try rect to create rectangles
  + Attributes will be x,y,height,width
  + Use the bound data to make each a different height

## Play with the Scatter Plot

Look at Ex10.js which produces the scatter plot.

Try the following:

* Try adding a 3rd bit of data, which will control the radius

## Playing with the online data.

Look at Ex11.js. Notice this points to an old address for the circle generator:  
  
<http://ac32007.cloudapp.net:8080/Circles/Circles/10>  
  
In the text editor change this URL to use IP address 35.211.124.163

This should now allow EX11.html to work and draw graphs.

Try playing with Ex13.js and EX14.js, for instance try changing the transition times and styles.