Q1. Department of Mathematics — Web Application [7 marks]

Our mathematicians have discovered that their web pages hardcode their [staff list](https://www.auckland.ac.nz/en/science/about-the-faculty/department-of-mathematics/our-people.html). This they find difficult to maintain. They have therefore asked you to help to dynamically source the staff data from Unidirectory — the central University database that holds staff details. To this end you are asked to develop a prototype web application to help the mathematicians.

Develop a single-page web application that contains two logical sections: a *Home* section that contains some placeholder text such as "Our department is one of the most diverse within the University, with our courses connecting a broad range of disciplines and faculties." and a *Staff* section that lists staff details dynamically sourced from the Unidirectory database: <https://unidirectory.auckland.ac.nz/rest/search?orgFilter=MATHS>. You may show the department logo (as shown below in question 2) in the home section, if you wish. A user should be able to switch between the two sections and viewing a section should only show the information relevant to that section.

Include as much relevant staff details as you can — for example, phone numbers that can be dialled easily, email addresses that can be used instantly, etc. Staff photos can be obtained from [https://unidirectory.auckland.ac.nz/people/imageraw/{upi}/{imageId}/biggest.](https://unidirectory.auckland.ac.nz/people/imageraw/sgal018/10300384/biggest) where {upi} and {imageId} are available in the staff list. Recall that {upi} is of the form sgal018. For the conveniece of mobile users, Unidirectory provides a vCard for each staff. These are available via the URL: [https://unidirectory.auckland.ac.nz/people/vcard/{upi}](https://unidirectory.auckland.ac.nz/people/vcard/sgal018).

You are *not* allowed to use loops for processing collections of items. Instead, you must use the [forEach](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array/forEach) method of JavaScript arrays.

Please note that you are *not* allowed to use any libraries or frameworks. Please keep your style (CSS) and script (JS) external. You will be required to submit these as separate files.

If required, you may use one of the CORS proxies provided at:

1. [https://dividni.com/cors/CorsProxyService.svc/proxy?url={URL}](https://dividni.com/cors/CorsProxyService.svc/help)
2. [https://cws.auckland.ac.nz/cors/CorsProxyService.svc/proxy?url={URL}](https://cws.auckland.ac.nz/cors/CorsProxyService.svc/help)
3. [http://redsox.uoa.auckland.ac.nz/cors/CorsProxyService.svc/proxy?url={URL}](http://redsox.uoa.auckland.ac.nz/cors/CorsProxyService.svc/help)

Note that the URL must be [URL-encoded](https://en.wikipedia.org/wiki/Percent-encoding).

Q2. Department of Mathematics — Logo [3 marks]

The mathematicians have crafted an [SVG logo.](https://www.cs.auckland.ac.nz/courses/compsci335s2c/lectures/mano/qz/MathLogo.svg) for the department. Typical of mathematicians, the logo source contains a series of numbers that we aren't able to decode.



Consequently, you are asked to redo this logo by hand using high-level SVG objects. You are not allowed to use tools such as *Inkscape*.

Your logo should be very close to the original logo crafted by the mathematicians.

We have gathered some potentially useful information to help you with your attempt to help the mathematicians.

1. A [blueprint](https://www.cs.auckland.ac.nz/courses/compsci335s2c/lectures/mano/qz/Math_Blueprint.png) discovered in a recycle bin in the Mathematics department
2. A clever computer science student noted that the top arch of the logo could be drawn using an arc (i.e., A) command of the <path>: "**M** x1 y1 **A** r1 r1 0 1 1 x2 y2" You are allowed to use <path> for the top arc, but for everything else you are not allowed to use <path>.
3. Another computer science student found that the stroke-linecap attribute can help to shape strokes.

Submission

The submission is to the [assignment dropbox](https://adb.auckland.ac.nz/). Please submit on-time. Given the large time window you have for this assessment, we will not entertain any extension or additional time. Please manage your time well. The assignment dropbox allows multiple submissions, and it is the latest submission that is considered for marking. Therefore, it will be safe to submit versions well-before the dropbox closes. We will not be able to consider any other forms of submission than dropbox submissions.

Please submit to the [Assignment Dropbox](https://adb.auckland.ac.nz/) the following items.

1. The HTML file (called *UPI.html* where *UPI* is your UPI).
2. The CSS file (called *UPI.css* where *UPI* is your UPI).
3. The JavaScript file (called *UPI.js* where *UPI* is your UPI).
4. The SVG file (called *UPI.svg* where *UPI* is your UPI).