**Code Challenge**

On the surface everything is simple; but once you peel back the layers there is infinite room for complexity - some needed, some not.

For this challenge, you will develop the back-end API to a new project named linkmir. Linkmir is a new social media platform with one caveat - you can only post http/https links - no comments, no images, just links.

Your solution must achieve the following:

* allow an unauthenticated client to POST a string containing a link a client would link to submit
  + verify the link protocol is allowed or respond with the appropriate status code
  + verify the link is new; e.g it has not previously been submitted
    - if the link is new a shortened link will be generated, e.g. https://www.google.com/ -> https://www.linkmir.com/{unique\_path}
    - if the link has been submitted, respond with the previously generated shorten link
* allow an unauthenticated client to GET a shortened link and unfurl it into its original url in a returned json object; e.g. GET https://www.linkmir.com/{unique\_path} -> {"domain": "https://www.google.com"}
* allow an unauthenticated client to GET the stats on any https://www.linkmir.com/{unique\_path}
* allow an unauthenticated client to GET the stats on any sub-domain, domain or combination thereof;
  + example queries:
    - \* denotes a wildcard
    - sub-domain: “open” & domain: “spotify.com”
    - sub-domain: “try” & domain: “\*”
  + response stats must include:
    - meta counts:
      * how many furled matching links exist in the system
      * total number of times accessed across all matching
      * total number of times submitted across all matching

A few notes:

* The sub-domain/domain www.linkmir.com is just put in for context and flavor, you do not need to spoof that domain.
* You can change the URL paths or verbs for any of the requirements; but you must explain *why* in a project README.md at the root of your codebase
* Your project must build and the *how* to build it, including any setup or system dependencies, must be described in your README.md at the root of your codebase
* Ensure you design, code and test for scale
* Performance matters! Know how your services perform and how it takes as your usage grows.
* You must deploy your service; and we must be able to hit the endpoints
* Add what you believe is an acceptable amount of testing to your project
* We will ask you to extend your code
* Please add the following public github accounts to your repo (the repo can be private)
  + awproksel – Andrew Proksel
* YOU ARE ALLOWED TO ASK QUESTIONS!
  + If you have questions, please create a github issue and assign it to Andrew Proksel (awproksel)