**Homework 5**

1. From the Alexa top 1000 sites (take top 1K from 1M sites [1]) select **randomly** 200 domains.
   a. Show the selected domains (sorted in the lexicographic order).
   b. For each domain check whether it supports SPF, Sender ID, DKIM, DMARC, HSTS, HPKP, and CT. Report the obtained results and attach logs demonstrating used commands and obtained responses.

   [1] http://s3.amazonaws.com/alexa-static/top-1m.csv.zip

2. Analyze the following policies. In particular, specify the strongest threat models that the policies protect from. Be as precise and complete as possible.
   a. SPF policy of `gmail.com`
   b. SPF policy of `yahoo.com`
      Which SPF policy is more secure/conservative?
   c. HPKP policy of `web.de` (in your analysis consider the certificate used)

3. Propose and motivate HPKP and HSTS policies for www.sutd.edu.sg.

Resources (references may be helpful too):
https://arxiv.org/pdf/1702.05311.pdf
http://jbonneau.com/doc/KB14-hsts_pinning_survey_working_draft.pdf
https://www.certificate-transparency.org/