Assignment 8: Cryptography



16 December 2019

There are two parts to this assignment. Provide the requested answers and information on (or attached to) a GitLab wiki page called A8 in your main CS101 repository.

(1) Monoalphabetic cipher

Below are individualized links pieces of text encoded using a single-substitution (monoalphabetic) cipher. Your task is to **crack the code** and discover the secret poem. You should start by doing a **frequency analysis** of the letters in your text.

When finished, take a picture of your decrypted text, and attach it to your wiki page.

```
AL 9482
          text16.crypt.pdf
AM 6470
          text23.crypt.pdf
AM 9063
          text12.crypt.pdf
AN 2026
          text11.crypt.pdf
AR 8693
          text09.crypt.pdf
AW 1120
          text07.crypt.pdf
BJ 1758
          text10.crypt.pdf
CB 0786
          text04.crvpt.pdf
CD 7177
          text04.crypt.pdf
CF 7260
          text05.crypt.pdf
CO 2217
          text12.crypt.pdf
EV 1014
          text06.crypt.pdf
GA 5341
          text21.crypt.pdf
GR 3209
          text17.crypt.pdf
HT 4995
          text20.crypt.pdf
IP 7121
          text03.crypt.pdf
JC 3866
          text18.crypt.pdf
JV 2547
          text14.crypt.pdf
KB 2597
          text15.crypt.pdf
KG 0351
          text03.crypt.pdf
KH 8171
          text08.crypt.pdf
KR 8920
          text11.crypt.pdf
KV 3181
          text16.crypt.pdf
LC 5362
          text22.crypt.pdf
LF 7631
          text07.crypt.pdf
LJ 2323
          text13.crypt.pdf
LJ 9222
          text15.crypt.pdf
LK 6885
          text02.crypt.pdf
MB 1002
          text05.crypt.pdf
ML 4201
          text19.crypt.pdf
MZ 8853
          text10.crypt.pdf
NP 9205
          text14.crypt.pdf
OS 1559
          text09.crypt.pdf
SA 9088
          text13.crypt.pdf
TR 7435
          text06.crypt.pdf
VB 0068
          text02.crypt.pdf
XW 1354
          text08.crypt.pdf
```

(2) Vigenère cipher

- 1. Choose a password that is 5–8 letters, and write it down.
- 2. Write down a sentence that is about 4–6 times the length of your password.

- 3. Use the polyalphabetic substitution table to encode the sentence using your password.
- 4. Type the encrypted sentence **and the password** directly into your wiki page (does not need to be an attachment).
- 5. You'll get full credit for this portion only if I can make sense of your sentence by decrypting using your password. So you may want to give that a test run with a friend: give them your encrypted sentence and password, and see if they get it right.