***HOMOMORPHIC ENCRYPTION PROJECT PSEUDOCODE***

**ENROLLMENT MACHINE:**

**input – folder of fingerprint images;**

**output – vector or dictionary of encrypted fps -> cloud;**

1. Read folder of images to .csv file
2. Encrypt data
3. Send to **CLOUD SERVER**

**CLOUD SERVER:**

**input – dictionary of fps;**

**input 2 – single fp;**

**output – encrypted Euclidean result**

1. Wait for input of stored data from **ENROLLMENT MACHINE**
2. Wait for verification request from **CLIENT DEVICE**
3. Compare desired data, send encrypted result back to **CLIENT DEVICE**

**CLIENT DEVICE**

**input – folder of single fingerprint image**

**output – single dictionary entry encrypted fp**

**input 2 – encrypted Euclidean distance**

**output 2 – approve/deny**

1. Read single image to .csv (or list/tuple)
2. Encrypt data
3. Send request to **CLOUD SERVER**
4. Wait for response
5. Decrypt result. If in threshold, confirm identity. Else deny.