CSE 6331 Cloud Computing
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Programming Assignment 1
Introduction to Cloud Storage and Google Cloud
Due: June 15, 02:00 CST (2:00 AM)

Description:
One of the most common uses of "Clouds", is shared or backup storage.
A number of services provide free (limited) storage, and several provide an easy to use, comfortable interface, such as a folder (subdirectory) on your desktop where you may drop file to be automatically backed up (to the cloud service and retrieved – or even shared between users), or web-based interface.
Several of these services: Dropbox, Sugarsync, Skydrive, Googledrive, and iCloud offer free storage.

Your assignment is to provide a utility that runs on your local device that allows files in your local file system to be dropped into Google cloud storage, for added safety those files should be encrypted, and after moving the encrypted file to Google cloud it should be deleted from the local device. Of course, you should be able to retrieve a file and decrypt it.
You should use a (validated) single key encryption, such as AES, and each file may have it's own key (password) so your program should prompt for that key/password.
You should also (in your program) be able to list and remove files from your cloud storage.

You may use the provided python prototype to start implementation.

You may work alone, or in groups of two, but you must individually be able to understand and use your program code.

Please, Email ONLY to the class account. All work must be your own.
You must e-mail this lab, working (or partially) by the due date. The e-mail subject should clearly state the lab number.
You may (optionally) demonstrate this lab, working (or partially) to the GTA before the due date.
Your program should be well commented and documented, make sure the first few lines of your program contain your name, this course number, and the lab number.
Your comments should reflect your design and issues in your implementation.
Your design and implementation should address error conditions.

Please, Email ONLY to the class account (CloudAtUTA@gmail.com).
All work must be your own, you may reference web sites, books, or my code but You MUST site the references.