

Really Getting Started With Cloud Programming

Starting Simple

Getting Started

- You need an account on a public cloud service provider
- To begin, we will start with MicroSoft Azure
- Why?

Getting Started

- You need an account
- To begin, we will start with MicroSoft Azure
- To get free access either:
- Go to myapps.uta.edu then -> Azure for Students
- -Or-
- <https://azure.microsoft.com/en-us/free/>

Getting Started

- You need an account
- MicroSoft Azure
- Either method will give you free (limited use) access to MS Azure
- (They may be the same, I don't know – I couldn't sign up as a student.)

First Assignment

- Part 1:
- After creating an account on Azure, make sure you can get access
- Upload a small text file (or jpeg)
- There are several tutorials on Azure, at different levels (of previous experience) if you wish take one (or several) they are free

First Assignment

- Part 2:

Task: You are will create a cloud-based picture and associated information storage and retrieval system with a (local) web interface (UI)

Description:

One of the most common uses of “Clouds”, is shared or backup storage. SaaS, with a friendly interface.

Your assignment is to provide a local interface to a cloud service that you will implement that will allow a user to upload a meta-information table “people.csv”, a .csv (text) table followed by several individual pictures. Then the user may do queries that select some (or none) pictures, specified in the people table.

First Assignment

- Part 2:

Name	Salary	Room	Telnum	Picture	Keywords
Tuan	100000	999	911	tuan.jpg	Tuan is very smart
Tanzima	99099	420		tanzima.jpg	Tanzima is too
Someone	42000		2021	someone.jpg	Who is this
Dave	1	525	-0		Doesn't seem too nice

First Assignment

- Part 2:

Which will look like (in the “people.csv”):

Tuan,100000,999,911,tuan.jpg, Tuan is very smart

...

First Assignment

- Part 2:

And your cloud-based “service” will allow a user to:

- + Search for Tanzima (Name) and show her picture on a web page.
- + Search for (display) all pictures where the salary is less than 99000.
- + Add a picture for Dave
- + Remove Dave
- + Change Tuan’s keywords to “Not so nice anymore”
- + Change Someone’s salary

And similar...

First Assignment

- Part 2:
- And your cloud-based “service” will allow a user to:
- (Obviously) Enter a name or an amount where needed (may not search for Tuan, maybe Tanzima)
- Or some method (your choice) to execute commands such as remove a person, change a picture, and similar

First Assignment

- Part 3: (Implementation)
- You may use any reasonable (non-hardcoded) implementation of the people table, for example: a hash, a SQL (or no-SQL) table, or even a dictionary or array
- Pictures are binary entities stored on the cloud provider storage, in any manner you wish (files, DB tables, hashes, etc)
- You should handle conditions such as: missing data (fields, attributes), unavailable pictures, attempts to upload the same named picture twice, pictures that are of incorrect type (“dave.txt”), and similar

Last

- End