

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
Dhruvi	100000	999	911	dhruvi.jpg	Dhruvi is very smart
Sai Theja	99999	420		sai.jpg	Jason 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”):

```
Dhruvi,100000,999,911,dhruvi.jpg, Dhruvi is very smart  
Sai,99099,420, sai.jpg,Sai Theja is too
```

...

First Assignment

- Part 2:

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

- + Search for Sai (Name) and show his 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 Dhruvi'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 Sai, maybe Dhruvi)
- 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