University of Washington Bothell

CSS 436: Cloud Computing

Program 3: Backup/Restore

Purpose

This exercise will introduce the student to using cloud storage programmable APIS.

Problem Statement

Create an application which recursively traverses the files of a directory and makes a backup to the cloud. The program should also be able to restore from the cloud as well. You will use the cloud storage APIs to do this.

Problem Statement Details

- **Examples:**

% backup *directory-name bucket-name::directory-name*

This will make a backup to the cloud of the specified directory to the specified "bucket" in either Azure of AWS. The directory structure of the files should be respected and visible in the cloud. If the bucket does not exist please create it.

% restore *bucket-name::directory-name directory-name*

This will restore from the specified bucket-name in the cloud to the specified directory. The directory structure of the files should be respected.

NOTES

- You can use Java or Python (Python is easier)
- The grader will test using their own Azure or AWS account.
- For aws the grader will use their own credentials and region. This will be set up already in the .aws folder and your code should be able to work with different regions / credentials.
- Do not query the user for credentials
- If you use Java you should make sure your code works in the Linux lab
- NOTE: If a directory or file already exists on the cloud and it has not been modified locally since it was backed up, then your backup program should not move the data needlessly.
- When backup/restore are running please print out to the console the files which are being backed-up and restored.

Turn In

A .**zip file** including:

- VERY CLEAR INSTRUCTIONS on how to
  - Build and execute **backup**
  - Build and execute **restore**
  - Simplicity and clarity of instructions will be part of the grade
- A short document which describes the arch and design of program
- The document must contain Screenshots of the program running