

# 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*

This will make a backup to the cloud of the specified directory to the specified “bucket” in either Azure or AWS. The directory structure of the files should be respected and visible in the cloud.

**% restore** *bucket-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, C# or Python.
- The grader will test using their Azure or AWS account.
- For aws the grader will use their own credentials and region. This will be set up already in their .aws folder and your code should be able to work with different regions / credentials.
- Do not query the user for credentials
- Your backup should work on Linux OR Windows (BE VERY CLEAR ON WHICH PLATFORM IS WORKS ON)
- 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.
- Given the varieties of possibilities a key part of this will be clear instructions given to the grader on how to get the application to work.
  - Assume you are releasing an open-source project that can be used by the grader.

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