Lab#1 – AWS S3 & AWS IAM Service

Due Date: Midnight of Week#3 Friday (September 22)

Purpose: The purpose of this assignment is to help you:

- Understand AWS S3
- Become familiar with IAM
- Be able to implement C# applications to access AWS S3 programmatically

Instructions: Be sure to read the following general instructions carefully:

1. This lab should be completed individually by all students. Submit your solution (C# code) **through the dropbox**, name your submission as **studentID(yourlastname)_Labnumber.zip**. e.g., 300123456(**smith)_Lab#1**.zip
2. Demonstrate your solution.
3. **Or** submit a quality demonstration video. Please make sure that your video lasts less than 5 minutes. Turn on your camera when you create the video.

Rubric

Functionality	Marks
1. GUI 1.1 Main window (0.5 mark) 1.2 Window to facilitate bucket level creation (0.5 mark) 1.3 Window to facilitate object level operation (0.5 mark) 1.4 Switch from one window to another properly (0.5 mark)	0.5 *4
2. Bucket level operations 2.1 Get all buckets within your AWS account (1 marks) 2.2 Display the result of 2.1 in Datagrid (1 mark) 2.3 Create bucket successfully (2 marks) 2.4 The newly created bucket should be displayed in Datagrid (1 mark) 2.5 Delete the selected bucket (2 marks) 2.6 The deleted bucket should be removed from the Datagrid (1 mark)	1+1+2+1+2+1
3. Object Level Operation 3.1 All buckets are listed in comboBox (1 mark) 3.2 Get all objects existing in the selected bucket (2 marks) 3.3 Display the result of 3.2 in the Datagrid (1 mark) 3.4 Upload selected object(s) (2 marks) 3.5 The newly upload object(s) should be displayed in DataGrid (1 mark)	1+2+1+2+1
4. Overall (i.e., readability, maintability, etc.)	1

Question [18 marks]

Implement a **WPF app** to facilitate user to consume AWS S3 service. More specifically, after your application has been launched, the user should see a GUI similar to the one below.

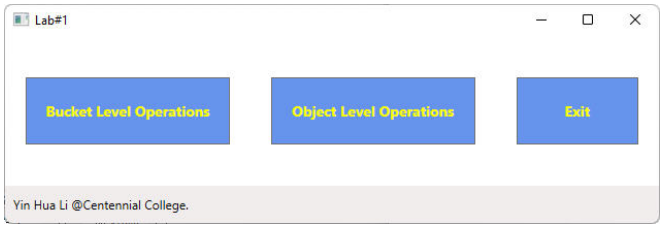

Figure 1

When user click on “Bucket Level Operations” button, the window shown in Figure 2 should be displayed. Please note that all existing buckets within your AWS account (e.g., bucket name and created date) should to be listed in a DataGrid

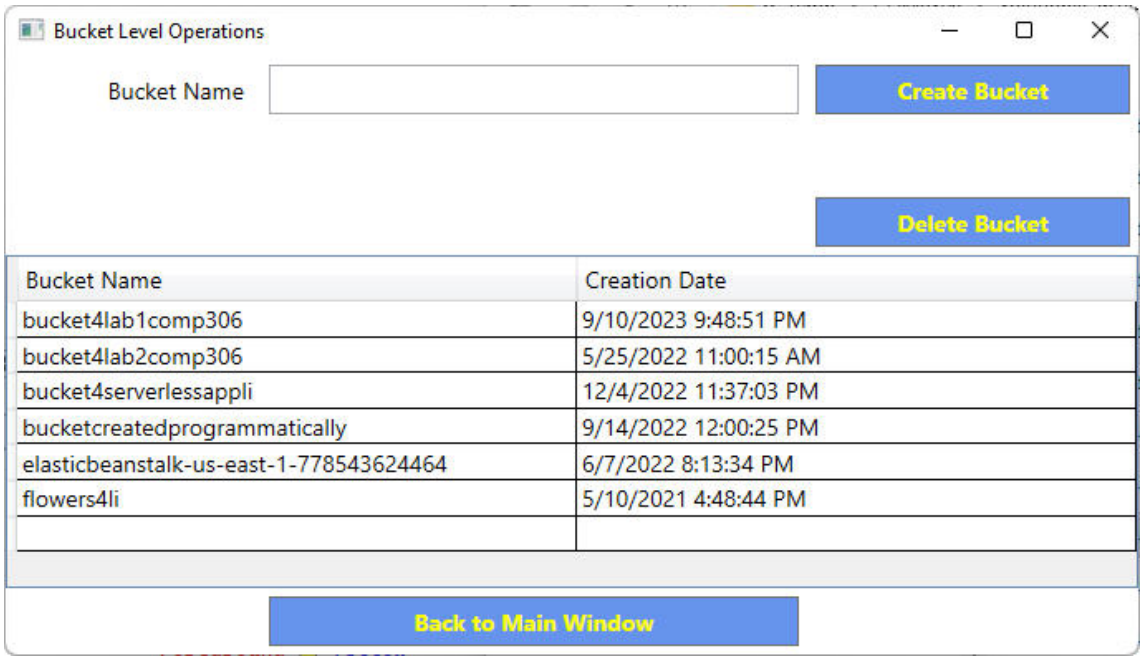

Figure 2

This window facilitates bucket level operations. To create a bucket, the user needs to input bucket name. The user can also delete the selected bucket.

User clicks on “Object Level Operations” button from the main window, the window shown in Figure 3 should be displayed with all existing buckets’ name listed in the comboBox.

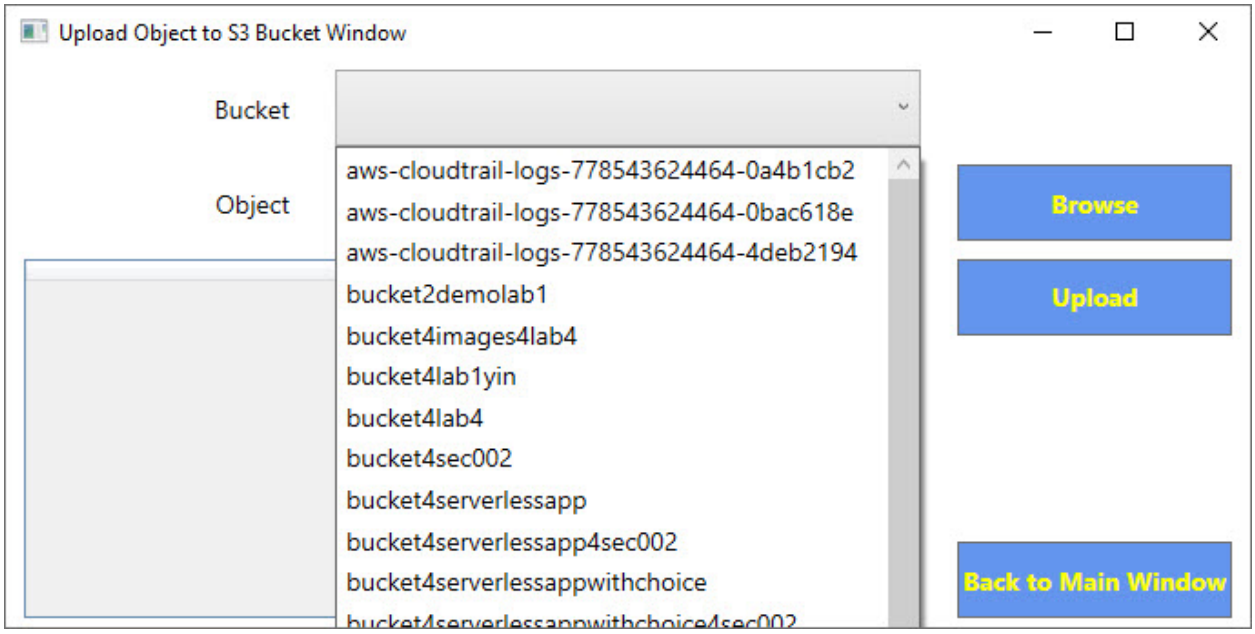

Figure 3

After the user selects a bucket from the comboBox, all objects (e.g., object name and the object size) existing in this selected bucket should be listed in the dataGrid (shown in Figure 4)

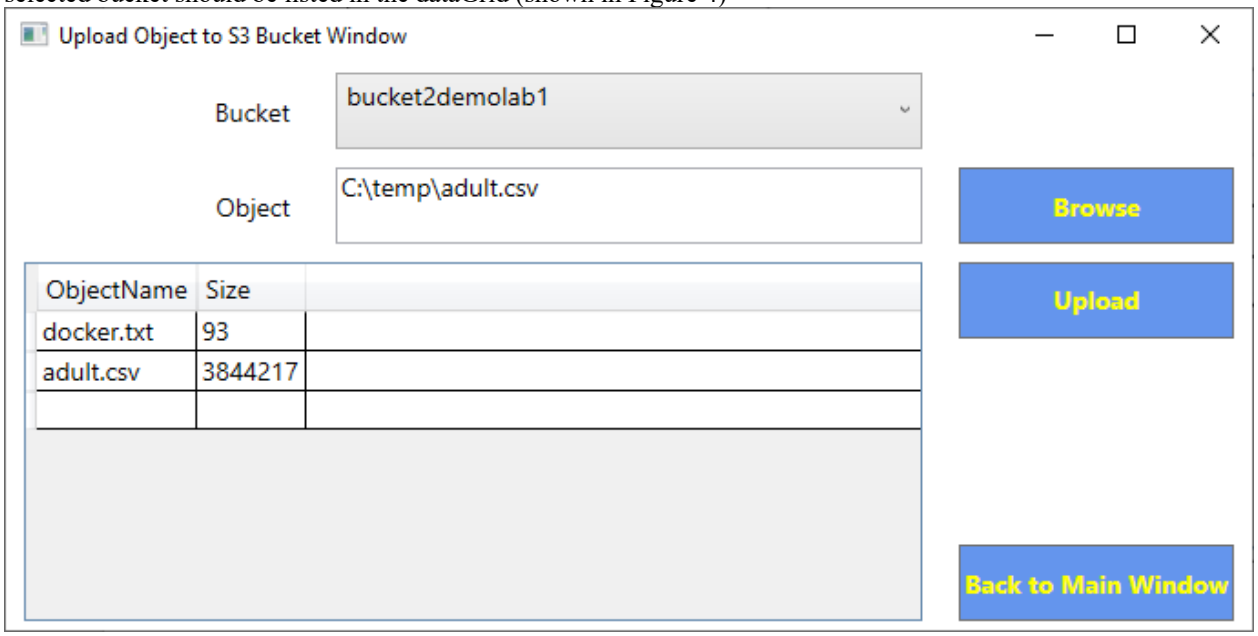

Figure 4

After user choose the object to be uploaded by clicking "Browse" button (Shown Figure 5), user can upload the object by clicking "Upload" button.

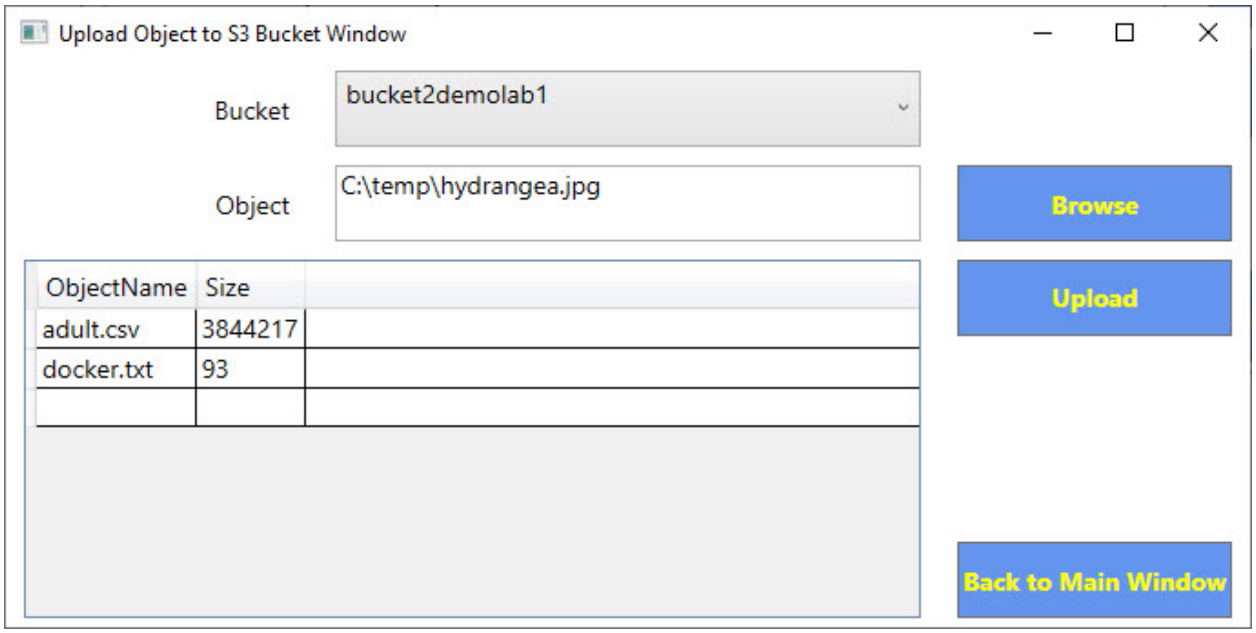

Figure 5

After successful uploading, the newly uploaded object should be listed in the dataGrid