Lab#3 – Cloud Web App

Due Date: Midnight of Oct 29, 2021 (Friday)

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

- Become familiar with Elastic Beanstalk, RDS, DynamoDB, S3, IAM, etc.
- Become familiar with ASP.NET Core MVC

Instructions: Be sure to read the following general instructions carefully:
This lab can be completed **in group of two** or **individually**. You need to create video to demonstrate your solution. If you treat it as group lab, only one group member needs to submit the solution and video on behalf of the group **through the dropbox**. Your submission must be named following the pattern of **studentID(yourlastname)_LABnumber.zip**. e.g., 300123456(**smith&Lee)_Lab#3**.zip

Rubric

Functionality	Marks
GUI	2

Upload and store movie in the cloud
  1. Movie (i.e., video) itself should be stored in S3
  2. Movie metadata (e.g., title, actors/actresses, etc.) can be stored in DynamoDB (2 marks)
  3. Add new movie (2 marks)
  4. Delete existing movie (2 marks)
  5. Modify existing movie (2 marks)
  6. Download movie (the video) (1 mark)
  7. List those movies based on ratings, e.g., all movies with rating>9 (1 mark)
	10

Manage the comments and ratings using DynamoDB
  1. Comments and ratings should be stored in DynamoDB table
  2. DynamoDB table design (2 marks)
  3. Add comments and/or ratings to DynamoDB table (2 marks)
  4. List comments about a specific movie (1 mark)
  5. Modify comments within 24 hours (2 marks)
  6. Create a proper secondly index to facilitate searching movies based on movie rating, for example, list all movies with rating>9 (2 marks)
	9

User registration/user login
  1. User registration information is stored in RDS
  2. Registration (1 marks)
  3. Login (1 marks)
	2

Use parameter store to store credentials
  1. Store credentials in parameter store (2 marks)
  2. Update the code correspondingly (1 marks)
	3

Publish application to elastic Beanstalk	2
Non-functional requirements (e.g., readability, maintainability, performance, etc..)	2

Question [30 marks]

A start-up wants to compete with Netflix (https://www.netflix.com/). It allows registered users to upload/download movie, write comments, rate the movie, etc. Users can view all comments and ratings, but can only modify his/her own comments and ratings if the comments and ratings are written within 24 hours.

You are asked to implement a Web application by using ASP.NET Core MVC template and host the app in AWS Elastic Beanstalk.