IT 451 DL

Mid-Term Project: Launching and Managing a Web Application with AWS CloudFormation.

Objective:

- This hands-on exercise is designed to familiarize you with launching and managing a web application with AWS CloudFormation using Qwiklabs.
- This Assignment has **Seven tasks.**
- **Log in to your Qwiklabs account (@gmu.edu) before accessing the below link.**
- This assignment with detailed instructions can be accessed at https://amazon.qwiklabs.com/catalog_lab/5443

Task 1: Create an Amazon S3 bucket using AWS CloudFormation:

- You will be using a simple AWS CloudFormation Template to create an Amazon S3 bucket for storage with the help of stacks
- Provide the screen shot of your Stack and Amazon S3 bucket.

Task 2: Delete the stack

- You will now delete the stack you created to see how all the resources created by this stack are deleted.
- Provide the screenshot of showing the deletion of the stack and the S3 bucket.

Task 3: Change the Retention Policy:

- You will see how to configure the AWS Cloud Formation template and specify that it should not delete some resources when deleting the stack.
- Provide a screenshot showing that S3 bucket remains even after the stack is deleted.

Task 4: Provision a Web Application:

- The web application is defined within the template you will be uploading while creating the stack.
- Provide a screenshot showing the output url of the web application in a separate browser.

Task 5: Change Resources Properties

- You can change the properties of the existing resourses in the stack.
- This task deals with changing the instance type of an EC2 instance from t2.micro to t2.small to handle any traffic in your website
- Provide a screenshot showing the change of the instance type.

Task 6: Add Resources Properties

- Here you will be adding the EC2 instance properties that were not originally specified in the template.

- You will be adding Tags and also open port 22(SSH)
- Provide a screenshot showing the output url of the web application in a separate browser.

Task 7: Create an Auto-Scaled Application

- You will create an Auto-Scaled application by adding other resources like Load Balancer, Auto Scaling Group, Security groups etc., with the help of the template.
- Single instance application will be converted to highly available, multi-AZ, auto-scaled and load balanced application.
- Copy the websiteurl into the browser and provide the screenshot showing the same

Submission:

- Please create this project according to the lab instructions in Qwiklabs, or else your account can get blocked if you try out things that are not mentioned in the lab instructions.
- To demonstrate your understanding, give a clear explanation in each step or highlight the screen captures.
- Save your results (screen captures) in one Microsoft Word format file.
- Submit your file to Blackboard using Midterm Project links under Assignments Folder.
- Remember to end the lab once done with the assignment.