CI/CD: Cloud Computing

To launch the AWS EC2 instance:

- Open the AWS EC2 console at https://console.aws.amazon.com/ec2/ and enter the required login credentials.
- To create Instance, Choose **Launch Instance**.

Step 1: Give a name to Instance ***"Website".***

- **Choose an Amazon Machine Image (AMI)**, let's say ***"Microsoft Windows Server 2019 Base"*** and choose **Select**.

Step 2: Choose an **Instance Type** ***"t2.micro".***

Step 3: In **Key Pair (Login),** Create new key pair like ***"Avengers".*** A private key file format will be created ***"Avengers.pem".***

Step 4: Let the **Storage and Network Settings** be Default.

Step 5: In Summary Details, provide the following information:

- Leave **Number of instances** at one.
- Then review the selected AMI, Instance Type, Firewall, Storage.
- Click on ***Launch Instance***. Wait Until you get ***Success Initiated launch of instance*** Message.

Step 6: Click on **Instances** and find your created instance **"Website".**

- Wait until your Instance is initialized and Status Check ***"2/2 check passed"***
- Click on your Instance and Select the ***"Connect"*** button. As we want the Instance to access the ssh over Internet.
- In **Connect to Instance**, select **RDP Client** and Click on "**Get Password**".
- You will **Get Windows Password** screen, Now upload your **Private Key** in the button given below and then **"Decrypt Password".**
- Now in **RDP Client**, **Download remote desktop file** and open it**.**
- Save the **Password** from below. On **Remote Desktop Connection** popup, select **"Connect"** and enter that Password and click on **"OK".**

Step 7: Now you are connected to **Remote Desktop Connection** on Cloud using the ssh over the Internet.

- To show a python-based project. We need to download the software.
- Go to any browser and search ***"python.org"*** and download the latest software.
- After successful installation of python software. Open and copy your project code.
- Go to **Start** and open the software and paste the code**.** Run the project and wait for **Output** to generate.
- Here we have created **Galactic Beautiful Flower** using python.
  Code for project is given below.

Essentials of AWS EC2:

- Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud. It is designed to make webscale cloud computing easier for developers.
- Amazon EC2's simple web service interface allows you to obtain and configure capacity with minimal friction.
- Amazon EC2 presents a true virtual computing environment, allowing you to use web service interfaces to launch instances with a variety of operating systems, load them with your custom application environment, manage your network's access permissions, and run your image using as many or few systems as you desire.
- Amazon EC2 bare metal instances provide your applications with direct access to the processor and memory of the underlying server. These instances are ideal for workloads that require access to hardware feature sets, or for applications that need to run in non-virtualized environments for licensing or support requirements.
- Optimize Compute Performance and Cost with Amazon EC2 Fleet.
- You can hibernate your Amazon EC2 instances backed by Amazon EBS, and resume them from this state at a later time.
- Customers requiring massive floating point processing power will benefit from the next-generation of general-purpose GPU compute instances from AWS, Amazon EC2 P3 instances with up to 8 NVIDIA® V100 Tensor Core GPUs.
- Paying for What You Use You will be charged at the end of each month for your EC2 resources actually consumed.
- Amazon Machine Images (AMIs) are preconfigured with an ever-growing list of operating systems.

Python Code:

```
import turtle
window = turtle.Screen()
window.bgcolor('black')
window.title("Galactic Flower made By Roshan Parida")

galatic = turtle.Turtle()
galatic.speed(20)
galatic.color('white')
rotate=int(180)

def Circles(t,size):
    for i in range(10):
        t.circle(size)
        size=size-4

def drawCircles(t,size,repeat):
  for i in range (repeat):
    Circles(t,size)
    t.right(360/repeat)

drawCircles(galatic,150,10)
t1 = turtle.Turtle()
t1.speed(20)
t1.color('yellow')
rotate=int(90)

def Circles(t,size):
    for i in range(4):
```

```
        t.circle(size)
        size=size-10
def drawCircles(t,size,repeat):
    for i in range (repeat):
        Circles(t,size)
        t.right(360/repeat)
drawCircles(t1,130,10)
t2= turtle.Turtle()
t2.speed(20)
t2.color('blue')
rotate=int(80)

def Circles(t,size):
    for i in range(4):
        t.circle(size)
        size=size-5
def drawCircles(t,size,repeat):
    for i in range (repeat):
        Circles(t,size)
        t.right(360/repeat)
drawCircles(t2,110,10)
t3 = turtle.Turtle()
t3.speed(20)
t3.color('red')
rotate=int(90)
def Circles(t,size):
    for i in range(4):
        t.circle(size)
        size=size-19
```

```
def drawCircles(t,size,repeat):
    for i in range (repeat):
        Circles(t,size)
        t.right(360/repeat)
drawCircles(t3,80,10)
t4= turtle.Turtle()
t4.speed(20)
t4.color('green')
rotate=int(90)
def Circles(t,size):
    for i in range(4):
        t.circle(size)
        size=size-20
def drawCircles(t,size,repeat):
    for i in range (repeat):
        Circles(t,size)
        t.right(360/repeat)

drawCircles(t4,40,10)
turtle.done()
```

Name: Roshan Parida

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Role: Web Development Intern