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**Batch: 2**

**Week 4:**

**Explain what keystone, CLI programming, and instance creation are in open stack**

KEYSTONE:

It is a component of OpenStack that is responsible for identity and authentication management for the other services of It makes sure that only authorized users can access the resource they are allowed to and keeps a record of who is doing the cloud. It supports multiple authentication mechanisms such as username/password, token-based authentication.

Keystone is highly scalable and can support thousands of users and services. It is also highly configurable, allowing administrators to customize authentication and authorization policies to meet their specific requirements.

Overall, Keystone plays a critical role in managing identity and access in OpenStack environments and provides a flexible and scalable solution for managing authentication and authorization in the cloud.

CLI Programming:

CLI (Command Line Interface) programming in OpenStack refers to the creation of software programs that interact with OpenStack services through a text-based interface. OpenStack provides a comprehensive set of APIs that allow developers to access and manage resources such as compute instances, storage volumes, and networks. However, interacting with these APIs can be complex, and CLI programming provides a simpler and more efficient way to perform common tasks.

CLI programming in OpenStack typically involves writing scripts in languages such as Python, Bash, or Ruby that use the OpenStack Client to perform tasks such as provisioning and managing virtual machines, creating and configuring networks, and managing storage volumes.

Instance creation steps in OpenStack:  
STEP1:  
Log in to the OpenStack Dashboard (Horizon)  
STEP2:  
Select the project in which you want to create an instance.

STEP3:  
In the compute section of dashboard run cli.  
STEP4:  
Click Launch Instance  
STEP5:  
Choose instance source (e.g. Snapshot of an existing instance).

STEP6:  
Select the project in which you want to create an instance.

STEP7:  
Choose security groups  
STEP8:  
Review all the details you have selected till now. STEP9:  
Wait until instance gets ready.

After all these steps the instance will look like:

