**Qu. 4**    DNS is a collection of rules and records which helps the client understand how to reach the server through URL's.

**Hosting a Static website**

1. Create an S3 bucket with a name that is same as your domain name

2. Create another S3 bucket with subdomain

3. Configure S3 main domain bucket to redirect to www subdomain.

4. Upload website contents to www subdomain bucket

5. Configure www bucket for website hosting

6. Add a Bucket policy to make bucket contents public

7. Create AWS route 53 hosted zone with the same name as the domain name

8. Update Domain provider (Hostinger, Godaddy Freenom etc.) Name server with AWS provided Name server

9. In AWS Route 53 create a recordset for main domain and select to point it to S3 main bucket

10. In Aws Route53 create recordset for www Subdomain and point to S3 www bucket

11. Access website using domain name.

So Hosting a Static website requires a bucket to follow DNS restrictions. AWS S3 buckets follow DNS rules so that we can use same website endpoints..

eg: bucket name " nikhilthings" in region AP-south-1 & eu-west-3. (Pacific)

→ URL's to request a file index.html in bucket

https:// nikhilthings.s3-website-ap-south-1.amazonaws.com/
https:// nikhilthings.s3-website-eu-west-3.amazonaws.com/

6. Any DDOS (Distributed denail of sesvice) attacks are sometimes used by malicious Users in an attempt to flood a network, system, or application with more traffic, connections, or requests that it can handle. This DDOS attack could be classified as a federal criminal offense under computer Fraud and Abuse Act. This attack is very bad because if no. of machines in network that reciere and respond to these packets is very large, victim's computer will be flooded with traffic. This overloads victim computer and can even make it unusable during such attack.

→ Elastic load Balancing (ELB) helps to achieve greater fault tolerance by automatically routing inbound traffic across multiple Amazon EC2 instances. it also allows to reduce your attack surface by recieving requests on Behalf of your web application and automatically scaling to handle Capacity demands

→ we can use AWS, shield, a DDoS protection service that AWS provides automatically to all customers at no additional charge.

→ equiping our network, applications with multilevel protection statergies. This may include prevention management systems that combine firewalls, VPN, anti - spam, content filtering and other security layers to monitor activities and identify traffic inconsistencies that may be symptoms of DDoS attacks

2. We can run Add. Java code in AWS Lambda. Lambda provides runtimes for Java that run code to process events.

→ To create execution role first (IAM Role) - lambda-role

→ To open lambda console and create a function eg: my-func runtime - Java 11, Role- Choose an existing role (lambda-role)

o deceleratorfunction, choose Create function-. To configure test event, choose Test. (let event name be test) to invoke func Choose Test

→ Create API using AWS API gateway., create resource and create POST method on resource

→ set lambda function as destination for the POST method.

This is the method AWS API Gateway invokes when you make an HTTP request for POST method endpoint.

→ ~~Deploy~~ Deploy the API

→ Grant invoke permission to API

→ Trigger function with an HTTP request.


## 5. Various modes of accessing the AWS cloud are:

- AWS CLI (Command line interface)
- AWS console
- AWS SDK


## AWS CLI

AWS command line interface (CLI) is unified tool to manage your AWS services. With just one tool to download and configure, you can control multiple AWS services from command line and automate them through scripts. We need to install AWS CLI on laptop. Using commands we can configure the AWS resources

## AWS SDK (Software development kit)

Aws has a tool for developing and managing applications on AWS. AWS supports these programming languages at time of writing C++, Go, Java, Node.js etc. AWS SDK for browser based development allows developers to access AWS from JavaScript code running directly on browser.

AWS SDK Simplifies use of AWS services by providing, set of libraries that are consistent and familiar for Java developers. it provides support for API lifecycle consideration.

## Aws console

This is easiest way to manage resources on Aws. AWS management console is web application that comprises and refers to a broad collection of services consoles for managing AWS.

Q. when you terminate an EC2 instance, the instance
Ans will be shutdown and virtual machine that was provisioned will be permanently taken away and you will no longer be charged for instance usage. Any data on stored on that instance will be lost. And if EC2 instance is stopped that state indicates that an instance is shut down and cannot be used. Basically it is a temporary shutdown for when you are not using an instance, but you will need it later,

8. **AnS** when you use EC2 confing or EC2 launch to reset a lost password, you must use its key pair to retrieve the administrator password. if you've lost the key pair, you can create an AMI of existing instance, and then launch a new instance. You can then select a new key pair by following the instance launch wizard.

And even, AWS systems Manager AWS support - Reset Access Automation documents. can be used.

also, AWS SSM agent can be used. and using it we can enable audit logging and recover.

1.

Ans

```
import os

def lambda_handler (event, context):
a = input (" enter the username:")

a = " username1"        d = " username3"
b = " username2"

c = input (" use enter username":)
if ( c = a )
{
    k = 1
    for i in range 1 to 10

    k = k + i

    return k ;
}

else if ( c = d )

{
        return print (" welcome)

    return d
}

else

    return error.
```

**3.**

a) Amazon Cloudwatch service allows users to create logs (cloudwatch logs) which will display metrics as per user monitoring needs.

b) it also creates Alarms, and takes actions based on the thresholds. Notification for same can be triggered which can send emails to the user mailbox.