**write in hundred words about the Eureka server,zuul gateway 4. write in 50 words i.discovery client ii.discovery server**

## Eureka server

The Eureka server is nothing but a service discovery pattern implementation, where every microservice is registered and a client microservice looks up the Eureka server to get a dependent microservice to get the job done. The Eureka Server is a Netflix OSS product, and Spring Cloud offers a declarative way to register and invoke services by Java annotation.To understand why the Eureka server is needed in microservice architecture, let's understand how one service calls another service REST endpoint for communication.Say we need to call the employee payroll service to get payroll information for an employee. The payroll service is deployed on the localhost 8080 port

### Zuul Gateway

Zuul Server is a gateway application that handles all the requests and does the dynamic routing of microservice applications. The Zuul Server is also known as Edge Server. For Example, /api/user is mapped to the user service and /api/products is mapped to the product service and Zuul Server dynamically routes the requests to the respective backend application.In this chapter, we are going to see in detail how to create Zuul Server application in Spring Boot. The Zuul Server is bundled with Spring Cloud dependency. You can download the Spring Boot project from Spring Initializer page https://start.spring.io/ and choose the Zuul Server dependency.

### Discovery Server

The Discovery Server is the key to the decentralized architecture of The Things Network. This is where routers, brokers and handlers announce themselves and where you can look them up.Services typically need to call one another. In a monolithic application, services invoke one another through language-level method or procedure calls. In a traditional distributed system deployment, services run at fixed, well known locations (hosts and ports) and so can easily call one another using HTTP/REST or some RPC mechanism.

### Discovery Client

Server-side service **discovery** allows **clients** applications to find services through a router or a load balancer. **Client**-side service **discovery** allows **clients** applications to find services by looking through or querying a service registry, in which service instances and endpoints are all within the service registry.