**Devops for Java Devlopers**

**What is a microservice?**

Microservice is a small and focused that is also autonomous, that is it can be built and deployed on its own without impacting other services. Each microservices communicates with each other with API network calls.

**What are advantages using microservices ?**

1. **Heterogenous** : Each of our microservice can be written in a different programming language and they can run on different platform or operating system and they communicate with APIs they expose.
2. **Robustness** : When one microservice is down its wont effect the whole application.
3. **Scalability** : If huge load is coming for one or two microservice we need to just deploy an another for that two services only, but in case of monolith application whole application must be deployed.
4. **Reusability and Replaceable** : One microservice can be used by another microservices and if we want to replace an microservice with third party vendor it will be easy.

**What is cloud computing?**

Cloud computing is the on-demand availability of computer system resources, especially data storage and computing power, without direct active management by the user. Large clouds often have functions distributed over multiple locations, each location being a data center.

In the simplest terms, cloud computing means storing and accessing data and programs over the internet instead of your computer's hard drive. ... When you store data on or run programs from the hard drive, that's called local storage and computing.

Types of Cloud :

* public : AWS, GCP, AZURE
* private : DELL, 3M, Siemens
* Hybrid: public + private

CLOUD PROVIDERS: Cloud providers are like AWS, GCP, AZURE and they provide cloud computing platform.

**Service Models** : A service model is the way that a firm offers intangible value to customers.

Cloud computing is offered in three different service models which each satisfy a unique set of business requirements. These three models are known as Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS).

Graphical user interface, application

Description automatically generated

**IaaS** : When you use IaaS you need take care from O/S to Application, , and rest i.e from Networking to Virtualization will be taken care by cloud provider.

**PaaS** : When you use PaaS, you need to take care Application and data, and rest i.e from Networking to runtime will be taken care by cloud provider.

**Saas** : When you use Saas we need concentrate only on Application and rest everything will be taken care by cloud provider.