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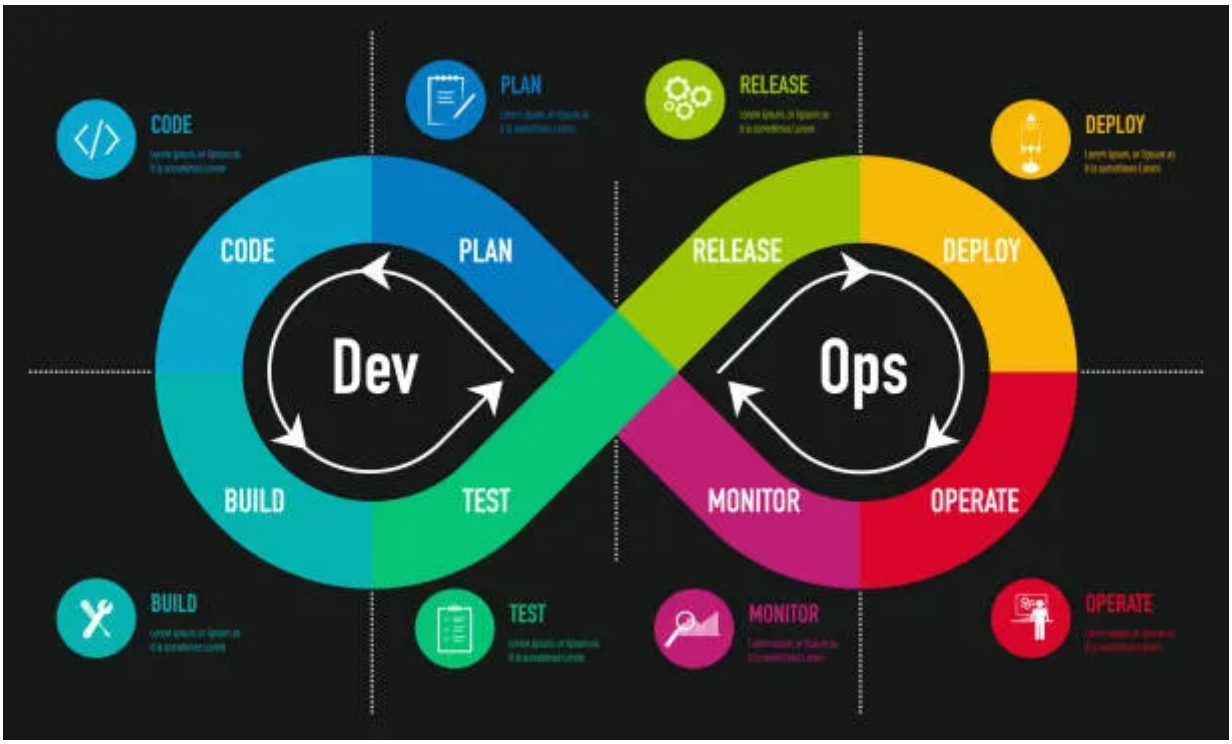
Day1 TASK

- Fork this Repo.
- Start with a DevOps Roadmap[https://youtu.be/iOE9NTAG35g]
- Write a LinkedIn post or a small article about your understanding of DevOps
- What is DevOps
- What is Automation, Scaling, Infrastructure
- Why DevOps is Important, etc

## What is DevOps ?

DevOps is a methodology , its bridge the gap between developers and operation team.It includes Open source tools ,softwares ,processes , cloud services, different OS in order to facilitate the application to deployment stage.

DevOps enables coordination and collaboration between roles like development, IT operations, quality engineering, and security.Teams adopt DevOps culture, practices, and tools to increase confidence in the applications they build, respond better to customer needs, and achieve business goals faster. DevOps helps teams continually provide value to customers by producing better, more reliable products.




## What is automation ?

Automation is the addition of technology that performs tasks with reduced human assistance to processes that facilitate feedback loops between operations and development teams so that iterative updates can be deployed faster to applications in production.

The goal of automation is to increase efficiency and productivity by reducing the need for human labor.

Examples of automation in DevOps include: **Infrastructure-as-Code tools can automatically configure software environments based on configuration management files created beforehand.**

## What is Scaling ?

Scaling refers to the process of increasing the capacity or capabilities of a system to meet the demands of a growing user base or workload.Cloud scalability in cloud computing refers to increasing or decreasing IT resources as needed to meet changing demand.

There are two basic types of scalability in cloud computing: vertical and horizontal scaling.

1. vertical scaling (“scaling up” or “scaling down,” ): add or subtract power to an existing cloud server upgrading memory (RAM), storage or processing power (CPU).

2. Horizontal Scaling(“scaling in or out”): add more resources like servers to your system to spread out the workload across machines, which in turn increases performance and storage capacity. Horizontal scaling is especially important for businesses with high availability services requiring minimal downtime.

## What is infrastructure ?

**Infrastructure** is the collection of hardware and software elements needed to enable cloud computing. It includes computing power, networking, and storage, as well as an interface for users to access their virtualized resources. The virtual resources mirror a physical infrastructure, with components like servers, network switches, memory and storage clusters.

## Why DevOps is Important ?

DevOps combines development (Dev) and operations (Ops) to unite people, process, and technology in application planning, development, delivery, and operations.

Why DevOps is needed:

- Continuous delivery of software
- Better collaboration between teams
- Easy deployment
- Better efficiency and scalability
- Errors are fixed at the initial stage
- More security
- Less manual intervention (which means fewer chances of error)

**_ Thank you**

**_ Sanjana ✌🏽**

Devops Fundamentals