ASSIGNMENT 1

1. What is AI-ops?

The AIOps definition, according to Gartner who first coined the term, is as follows:

AIOps combines big data and machine learning to automate IT operations processes, including event correlation, anomaly detection, and causality determination.

With a focus on increasing IT operations efficiency, AIOps systems intelligently identify the root causes of IT incidents and provide high-quality diagnostic information that enables tech teams to work towards a resolution.

2. Why do we use Ai-ops?

Many businesses can benefit from implementing AIOps, which in many ways, acts as ITOps with an AI layer. As we are working with multi-tiered environments, AIOps makes it easier to manage requests and monitor systems that run the business. It simplifies the processes that come along with managing and supporting thousands of applications and users. It improves your visibility into IT systems and automates operations processes. This way, we can better manage performance, uncover problems, and solve issues faster.

Improved collaboration: AIOps platforms facilitate collaboration by bringing clarity to workflows with reports and dashboards that outline necessary tasks and requirements. AIOps also streamlines communication by grouping and prioritizing IT alerts.

Increased ROI: AIOps decreases an organization's mean time to recovery (MTTR). This limits costly downtime and increases overall productivity and efficiency.

Successful digital transformation: To stay ahead, especially in today's digital landscape, organizations must always be innovating. AIOps fosters innovation by lifting some weight off your IT team. With AIOps your greatest tech minds will spend less time resolving IT tickets and monitoring usage patterns and more time focusing on large-scale digital transformation and innovation.

3. What is the difference between AI-ops and ML-ops?

AIOps increases the efficiency in IT operations by using machine learning to automate incident management and machine diagnostics.

MLOps is the practice of bringing machine learning models into production. It makes it easier to bridge the gap between data ops and infrastructure teams to get models into production faster. Unlike AIOps, MLOps doesn't directly refer to a machine learning capability.

So, in other words, AIOps automates machines while MLOps standardizes processes.

4. What do you mean by CI-CD?

CI/CD is a method to frequently deliver apps to customers by introducing automation into the stages of app development. The main concepts attributed to CI/CD are continuous integration, continuous delivery, and continuous deployment. CI/CD is a solution to the problems integrating new code can cause for development and operations teams (AKA "integration hell").

Specifically, CI/CD introduces ongoing automation and continuous monitoring throughout the lifecycle of apps, from integration and testing phases to delivery and deployment. Taken together, these connected practices are often referred to as a "CI/CD pipeline" and are supported by development and operations teams working together in an agile way with either a DevOps or site reliability engineering (SRE) approach.

5. What do you mean by Bash?

Bash is a Unix shell and command language written by Brian Fox for the GNU Project as a free software replacement for the Bourne shell.it has been used as the default login shell for most Linux distributions. Bash is a command processor that typically runs in a text window where the user types commands that cause actions. Bash can also read and execute commands from a file, called a shell script.

6. What do you mean by kernels? Explain the functions of kernels?

The kernel is the essential center of a computer operating system (OS). It is the core that provides basic services for all other parts of the OS. It is the main layer between the OS and hardware, and it helps with process and memory management, file systems, device control and networking.

7. What are the essential elements or components of Linux

The components of Linux are,

1. Boot Loader
2. Kernel
3. Init System
4. Daemons
5. Graphical server
6. Desktop env
7. Applications