USING CI/CD TO SHIP PRODUCTS TO THE MARKET

BENEFITS OF CI/CD FOR AUTOMATION

WHAT IS CI

- CI which stands for continuous integration a development practice where software developers frequently merge their code changes into a central repository (directory), The main aim is to catch issues early in the development process, and quickly resolve them to avoid larger problems by running automated tests. Basically, CI is like a safety net that helps ensure the quality of the software and speeds up the development process.

- CI-related phases include: Compile, Unit test, Static analysis, Dependency vulnerability testing, Store artifact

WHAT IS CD

- CD stands for Continuous Delivery (or sometimes Continuous Deployment), and it's a development practice where software changes are automatically built, tested, and deployed to production environments. The idea is to streamline the release process and get new features and improvements into the hands of users more quickly and reliably. With CD, there's less risk of human error and delays that can come from manual deployments, and updates can be released with more confidence and frequency.

- CI-related phases include: Creating infrastructure, Provision servers, Copying files, Promoting to production, Smoke testing, and Rollback (in case of failures).

BENEFITS OF CICD

- Some benefits of CICD include:
- Deploy to Production Without Manual Checks: deploying to production manually is time consuming and can be erroneous, using CICD helps save time and increase revenue.

- Catch unit test failures: there are less bugs in production and less time in testing hence avoiding cost.

- Detect security vulnerabilities: avoid cost by preventing expensive security loopholes.

- Faster and more frequent production deployments: revenue is increased by releasing new-value generated features quickly.

- Automated smoke tests: this helps to reduce downtime caused by a bug or deploy-related crashes thereby protecting revenue.