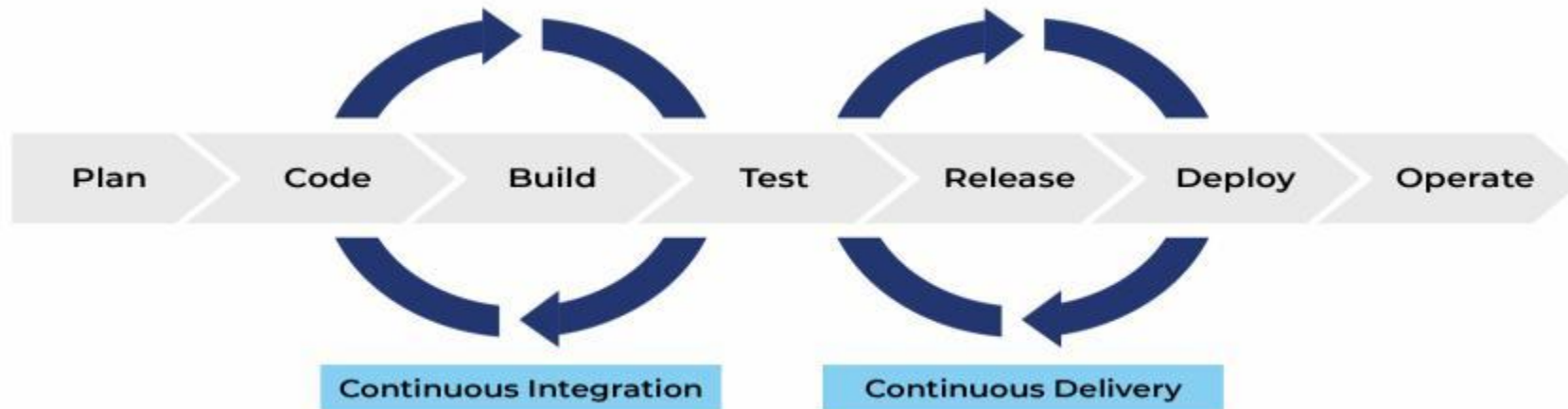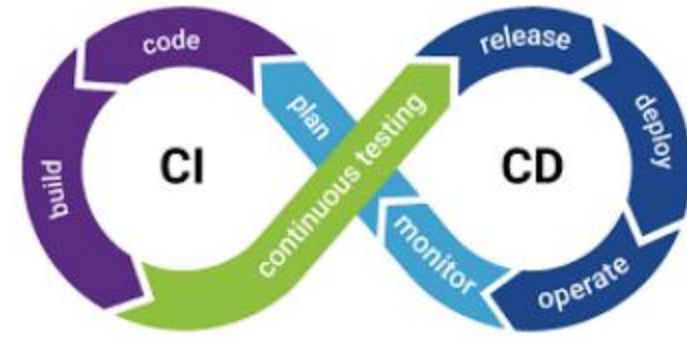# Benefits Of CI/CD

Definition:

Continuous integration and continuous deployment (CI/CD) is a set of ideas, processes, and capabilities that enables software changes to be delivered to users in a timely, repeatable, and secure manner by introducing automation into software development processes.
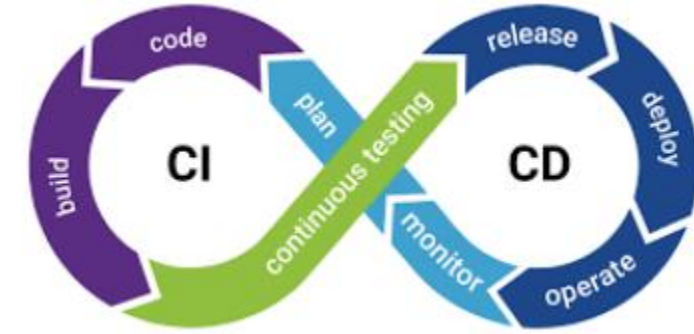
Benefits Of CI/CD

1. Reduced risk of defects

Finding and resolving defects late in the development process is costly and time-consuming. This is particularly true when problems arise with features already released to production.

You can test and deploy code more frequently using a CI/CD pipeline, giving QA engineers the power to identify and fix errorsassoon as they occur. This way, you're effectively mitigating risks in real-time.

2. Faster product delivery

We can automatically build, test, and deliver features with minimal manual intervention. So it become really fast, this can help us deploy features as soon as created which will help increase revenue.

Benefits Of CI/CD

3. Quick rollback

One of the most exclusive benefits of a CI/CD pipeline is that it leads to the quick and easy rollback of code changes if there are any issues in the production environment after a release. Automate the process of rolling back and cleaning any infrastructure left which would help in reducing cost and lower down time.

4. Automate smoke test

Automate smoke test after deployment and automatic rollback in case of failure which will decrease downtime and reduce cost

5. Cost-effectiveness

Automation in the CI/CD pipeline reduces the number of errors that can take place in the many repetitive steps of CI and CD. Doing so also frees up developer time that could be spent on product development as there aren't as many code changes to fix down the road if the error is caught quickly.