Continuous Integration and Continuous Deployment

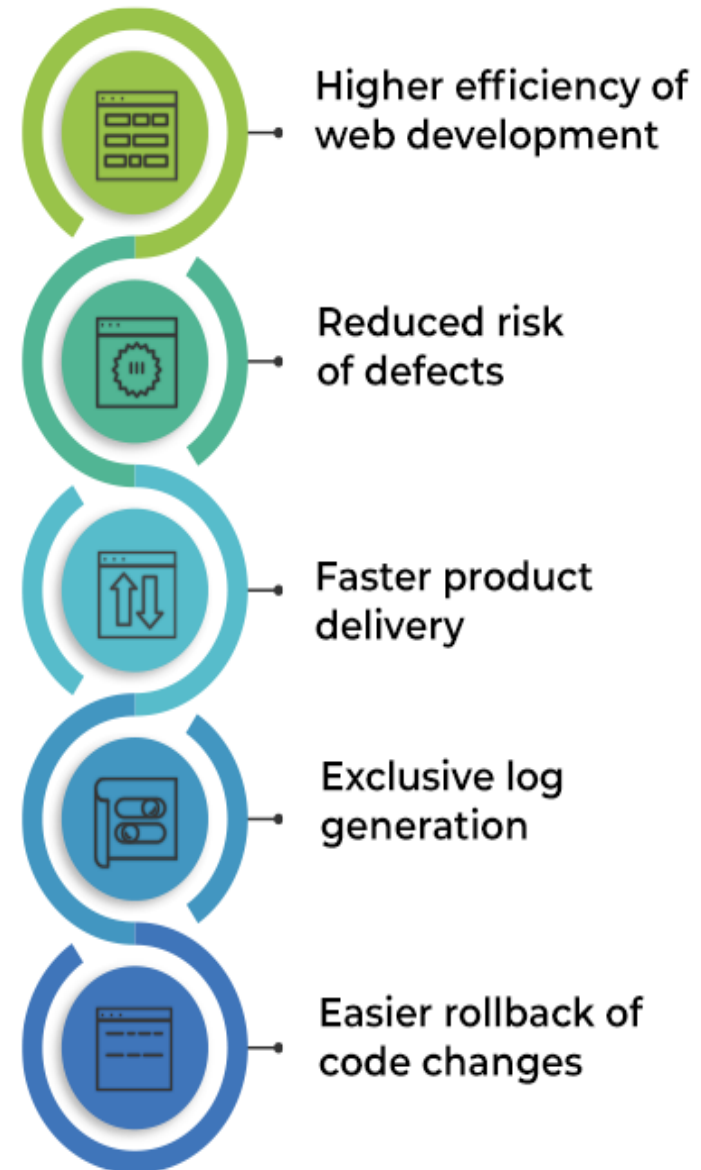Benefit of CI/CD and how to achieve it

What is CI/CD ?

- 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.

- Continuous integration (CI) validates all the stages of the development process while optimizing the code release cycles through automation capabilities

- Continuous deployment (CD) focuses on setting up a bundled artifact into a production environment in the fastest way possible. It automates the whole distribution process, including deployment

CI/CD Pipeline

Benefit of CI/CD

- **Higher efficiency**

- **Reduced risk of defects**

- **Faster product delivery**

- **Quick rollback if required**

- **Better planning**

- **Efficient testing & monitoring**

- **Cost-effectiveness**

- **Protect the revenue – value – generating features release more quickly**

- **Avoid cost – less bugs in production and less time in testing**

Higher efficiency of web development

Reduced risk of defects

Faster product delivery

Exclusive log generation

Easier rollback of code changes

How to achieve it ?

- Merge code daily

- Push to master every day

- Automate the maximum number of tests possible

- Run multiple tests simultaneously

- Manage a clean testing environment

- Follow version management

- Simplify the code migration process

- Go for the right tooling

Thank You