Fundamentals and Benefits of CI/CD to Achieve, Build, and Deploy Automation for Products.

## continuous integration and continuous delivery/deployment

 Adopting the culture of continuous integration and continuous delivery/deployment (CI/CD), where a commit or modification to code travels through several stages, is a crucial component of DevOps.

• a number of automated stage gates, from creating and testing apps to deploying them, from development to production settings.

## Continuous integration

 Continuous integration is always referred to as "CI" in CI/CD, and it is a method that automates development. A successful CI involves routinely building, testing, and merging new code changes to an app into a shared repository. It provides a fix for the issue of an app having too many branches under development at once that could conflict with one another.

## Continuous deployment

 Continuous deployment is the process of automatically pushing a developer's changes from the repository to the live environment so that users may access them. It deals with the issue of operations teams being overburdened with manual tasks that impede app delivery. By automating the following pipeline stage, it expands on the advantages of continuous delivery.

## advantages of CI/CD for our company

- 1. Faster Mean Time To Resolution this metric allows you to keep track of how long it takes to bounce back after a failure
- 2. More rapid release rate of applications
- 3. consumer contentment
- 4.Reduce Costs; Automation in the CI/CD pipeline lowers the potential for errors in the numerous recurring CI and CD phases. Additionally, by catching the problem as soon as possible, there are less code changes that will need to be made in the future, freeing up developer time that may be used for product development.
- 5. lack of fault