# CI/CD - Continuous Integration and Continuous Deployment

## 1. Continuous Integration (CI)

Continuous Integration (CI) is the practice of automating the integration of code changes from multiple developers into a shared repository. Instead of developers working independently and merging all changes after weeks or months, CI ensures that the source code is updated frequently, potentially several times a day. This helps in early detection and correction of errors, minimizing issues during code integration, and improving software quality.

## 2. Continuous Delivery and Continuous Deployment (CD)

Continuous Delivery is the next step of CI, where any source code changes after being tested and verified through CI, are prepared to be released into the production environment. The goal is to minimize the time from when a feature, fix, or update is merged into the source repository to when it is available for actual use.

Continuous Deployment is an extension of Continuous Delivery. Any changes in the source code are not only ready to be released but are also automatically deployed to the production environment without manual approval. This ensures that the software release process is fast and continuous.

## Conclusion

CI/CD is an essential part of modern software development, enabling organizations to respond quickly to market changes and user demands while maintaining application stability and security.