# Fundamentals And Benefits Of CI/CD To Build, deploy And Automate Udapeople App.

#### Introduction

Continuous Integration(CI) developers integrate code into a shared repository several times a day. Continuous Delivery (CD)- is a software development discipline where software can be released to production at any time.

In Continuous Delivery software can be deployed to production at any time but in Continuous Deployment software is automatically deployed to production all the time.

#### **Benefits of CI/CD**

#### **Reduced Costs**

Developers take less effort and time to resolve issues that emerge from integration of code from new developers and issues come up early and are fixed. Improved mean to time resolution. Less infrastructure cost from unused resources enabled by automated infrastructure cleanup. Less effort is involved in releasing and rework.

### **Avoid Costs.**

Any security vulnerabilities are detected early and dealt with hence avoiding security breach implications later that otherwise could be costly and embarrassing.

Getting code out of the door with the risk of discovering showstoppers like critical bugs found late, infrequent releases, too

#### **Increased Revenues**

Faster delivery means higher time to market. Short integration iterations means more flexibility and ability to change things more and more value generating features are released faster.

#### **Protect revenue**

Reduced down time from recovery from a crash or bug related. All potential bugs can be discovered at the predeployment stage on automating the release pipeline. Customer needs are acted upon quickly as CI/CD as there is flexibility to software changes done faster hence happier customers and employees.

## Conclusion.

To conclude the process is more visible with improved team communication. Teams and individuals can take control of the uncertainties when going into production with a pragmatic and visible CI/CD pipeline. You experience value and business flow by delivering products and solutions with all the features that meet quality and deployment specific needs.