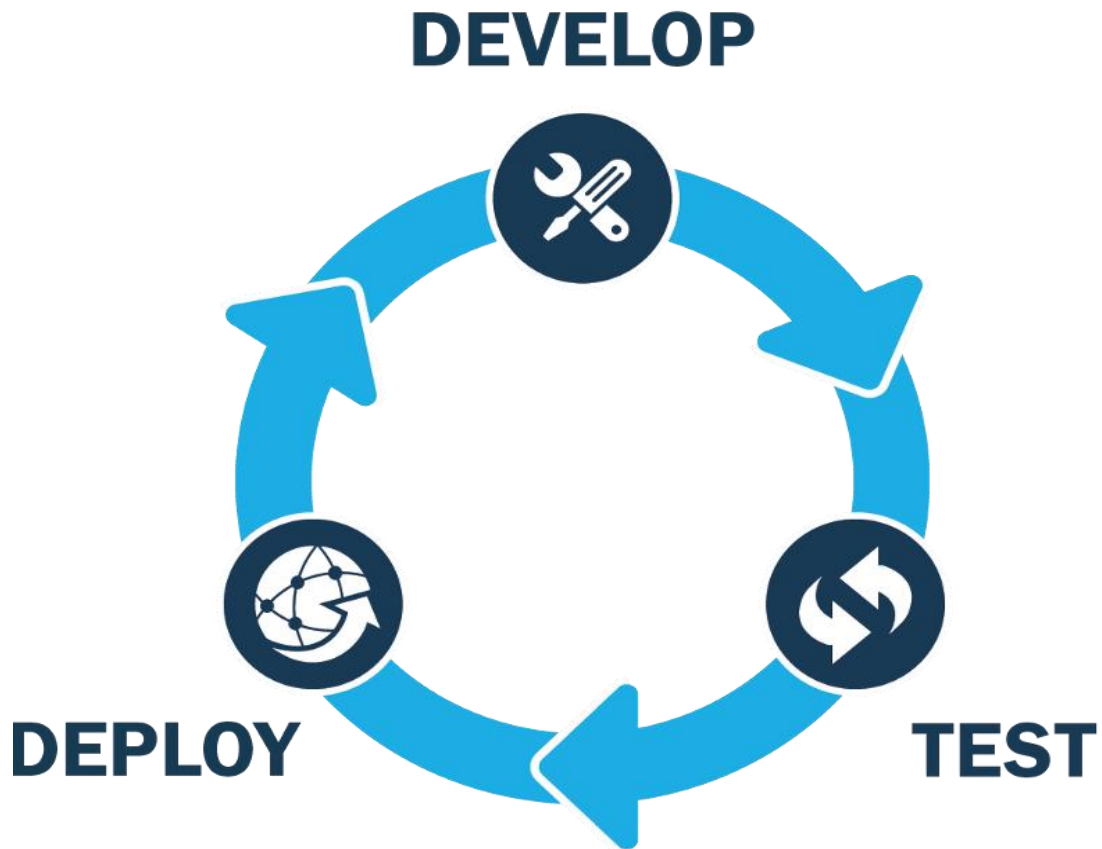


UDAPEOPLE APP



FUNDAMENTALS AND BENEFITS OF CONTINUOUS INTEGRATION AND
CONTINUOUS DEPLOYMENT TO ACHIEVE, BUILD, AND DEPLOY
AUTOMATION FOR UDAPEOPLE APP

OKWESIRIEZE AMADI



OVERVIEW

This is to introduce the CI/CD concept for the Udapeople App and how it will not only help our team to be effectively and efficiently more productive, but also create revenue, protect revenue, reduce costs and also lead to customers receiving the products early leading to satisfaction.

BUSINESS CASE


How integrating the concept of CI/CD into products for the company will generate increased revenue, brand awareness through customer satisfaction, sales and reduced costs.

FUNDAMENTALS OF CI/CD

CI/CD is basically a method to frequently deliver apps to customers by introducing automation into the stages of app development.

Continuous Integration

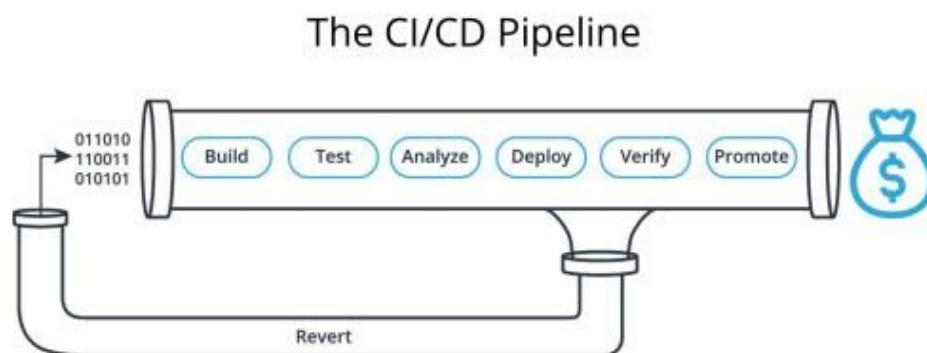
This is where the code for a software is continuously being written, tested to ensure there are not bugs, errors detected and corrected and then passed on to the other stages. This used to be done manually which leads to reduced time to market, human errors, late detection of bugs which prolongs time to fix and prolongs the time to market of the product, thereby incurring costs. With modern trend which is the use of automation, my team will be able to eliminate these problems with the delivery of the Udapeople App.



Continuous Deployment


Here, the infrastructure needed to deploy the integrated code to production is provisioned. The code undergoes test before it is been deployed to production and if there is an error detected, it will quickly roll back and any infrastructure created will be destroyed thereby reducing costs.

The whole process is illustrated below



BENEFITS OF CI/CD

Technical Language	Value	Translation
Catch Compile Errors After Merge	Reduce Cost	Less developer time on issues from new developer code
Catch Unit Test Failures	Avoid Cost	Less bugs in production and less time in testing
Detect Security Vulnerabilities	Avoid Cost	Prevent embarrassing or costly security holes
Automate Infrastructure Creation	Avoid Cost	Less human error, Faster deployments



Automate Infrastructure Cleanup	Reduce Cost	Less infrastructure costs from unused resources
Faster and More Frequent Production Deployments	Increase Revenue	New value-generating features released more quickly
Deploy to Production Without Manual Checks	Increase Revenue	Less time to market
Automated Smoke Tests	Protect Revenue	Reduced downtime from a deploy-related crash or major bug
Automated Rollback Triggered by Job Failure	Protect Revenue	Quick undo to return production to working state

CONCLUSION

Implementing CI/CD for Udapeople product will generate revenue more revenue at approximately 30%, increase brand awareness through customer satisfaction and reduce cost by 15%.

