CONTINOUS INTEGRATION/CONTINOUS DEPLOYMENT (CI/CD) BUSINESS PROPOSAL

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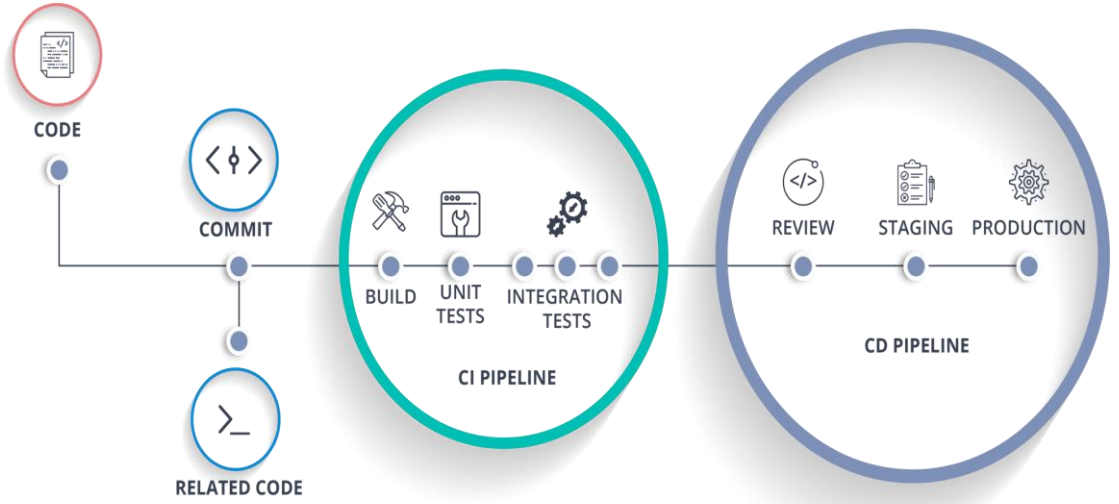
PREPARED FOR:
FOR UDAPEOPLE LIMITED



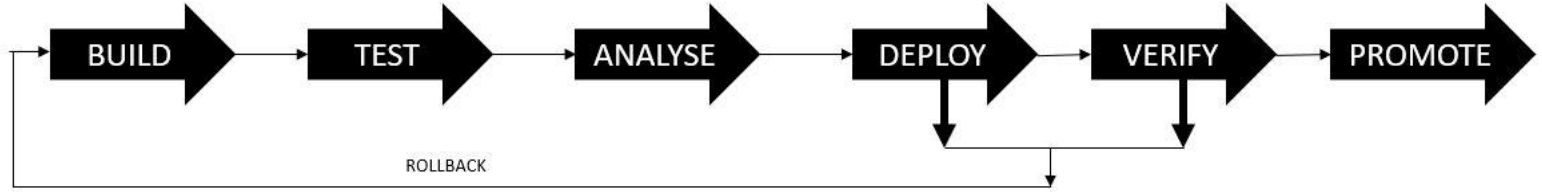
CONTINOUS INTEGRATION/CONTINOUS DEPLOYMENT FUNDAMENTALS.

CONTINUOUS INTEGRATION :THIS IS THE PRACTICE OF MERGING ALL DEVELOPERS' WORKING COPIES TO A SHARED MAINLINE SEVERAL TIMES A DAY. MERGING AS A TEAM OPENS DOOR FOR MANY OPPORTUNITIES SUCH AS TRIGGERING AUTOMATIC PIPE SEQUENCES, TEST RUNNING AND STATIC ANALYSIS OF CODE.

CONTINOUS DEPLOYMENT: THIS IS SOFTWARE ENGINEERING APPROACH IN WHICH THE VALUE IS DELIVERED FREQUENTLY THROUGH AUTOMATED DEPLOYMENTS. CONTINUOUS DEPLOYMENT ELIMINATES THE HUMAN SAFEGUARDS AGAINST UNPROVEN CODE IN LIVE SOFTWARE AS THESE CODES PASSES THROUGH AUTOMATED TESTING PROCESS BEFORE RELEASE. .ACTIVITIES INCLUDE PROVISIONING OF SERVERS AND INFRASTRUCTURES,ROLLBACK TEST E.T.C

CONTINOUS DELIVERY: IS AN ENGINEERING PRACTICE/THINKING/MINDSET WHEREBY TEAMS PRODUCE AND RELEASE VALUE IN SHORT CYCLES.

CONTINOUS INTEGRATION/CONTINOUS DEPLOYMENT (CI/CD) PIPELINE



-The function of a pipeline is to deliver goods/material from one place to another. In this case, CI/CD PIPELINE's function is to transform material from one state to another.

-It starts with BUILD which produces artefacts. Artefacts is something that can be deployed without any modification.it is created at the beginning and used at the end of the pipeline.

-The TEST AND ANALYSE stage makes sure that the code that produced the artefacts is of right level of quality.

-Next, After the code is validated, the code is deployed. Part of deployment process might include provisioning of infrastructure and server using code. This is called Infrastructure As A Code(IAC).

-Next, the code is verified and if there is an error , the code is rolled back for the development team to resolve.

-Finally, if there is no issue found after verification, the code is promoted/deployed to production. Then the cycle continues when there is modification on the code.

BENEFITS OF CONTINOUS INTEGRATION/CONTINOUS DEPLOYMENT(CI/CD)

CI/CD TECHNICAL ACTIVITIES HAS NUMEROUS BENEFITS WHICH MIGHT INCREASE REVENUE,PROTECT REVENUE,REDUCE COST OR EVEN AVOID COST. SOME OF THE BUSINESS BENEFITS ARE:

CI/CD TECHNICAL FEATURES	BUSINESS BENEFIT AND IMPLICATION
CATCH UNIT TEST FAILURES	This helps to **avoid cost** because less bugs in production leads to less time in testing
AUTOMATE INFRASTRUCTURE CREATION	This helps to **avoid cost**, because it reduces human error and makes deployment faster
CATCH COMPILE ERROR	This helps to **reduce cost** because less time would be spent by developer on issues from new developer's code
Detect Security Vulnerabilities	This helps to avoid cost because it will prevent costly security loopholes
Automate Infrastructure Cleanup	This feature of ci/cd helps to reduce cost because we would have low cost from unused resources
Faster and more frequent deployment production	This feature will definitely increase revenue because we have new value adding feature released immediately.

BENEFITS OF CONTINOUS INTEGRATION/CONTINOUS DEPLOYMENT(CI/CD)

CI/CD TECHNICAL ACTIVITIES	BUSINESS BENEFIT AND IMPLICATION
AUTOMATE SMOKE TEST	This will protect revenue because the developer would have reduced downtime from a deploy related issue/bug.
AUTOMATE ROLLBACK TRIGGERED BY JOB FAILURE	This will protect revenue because there will be swift undo to return production to working state
DEPLOY TO PRODUCTION WITHOUT MANUAL CHECKS.	This will increase revenue because the feature will take minimum time to get to market

CONCLUSION

In conclusion, CI/CD features will definitely improve **UdaPeople** app and increase their revenue.