Fundamentals and Benefits of CI/CD

WHY CI/CD

AN INTEGRAL PART OF DEVOPS IS ADOPTING THE CULTURE OF
CONTINUOUS INTEGRATION AND
CONTINUOUS DELIVERY/DEPLOYMENT (CI/CD), WHERE A COMMIT OR
CHANGE TO CODE PASSES
THROUGH VARIOUS AUTOMATED STAGE GATES, ALL THE WAY FROM
BUILDING AND TESTING TO DEPLOYING
.APPLICATIONS, FROM DEVELOPMENT TO PRODUCTION ENVIRONMENTS

What is CI

CONTINUOUS INTEGRATION (CI) IS A SOFTWARE DEVELOPMENT STRATEGY
THAT INCREASES THE SPEED OF DEVELOPMENT
WHILE ENSURING THE QUALITY OF THE CODE THAT TEAMS DEPLOY.
DEVELOPERS CONTINUALLY COMMIT CODE IN SMALL INCREMENTS
(AT LEAST DAILY, OR EVEN SEVERAL TIMES A DAY),
WHICH IS THEN AUTOMATICALLY BUILT AND TESTED
BEFORE IT IS MERGED WITH THE SHARED REPOSITORY.

What is CD

CONTINUOUS DEPLOYMENT(CD) REFERS TO AUTOMATICALLY RELEASING A DEVELOPER'S
CHANGES FROM THE REPOSITORY TO PRODUCTION,
WHERE IT IS USABLE BY CUSTOMERS.
IT ADDRESSES THE PROBLEM OF OVERLOADING OPERATIONS TEAMS
WITH MANUAL PROCESSES THAT SLOW DOWN APP DELIVERY.
IT BUILDS ON THE BENEFITS OF CONTINUOUS DELIVERY
BY AUTOMATING THE NEXT STAGE IN THE PIPELINE.

BENEFITS OF CI/CD TO OUR BUSINESS

- IT IS MUCH EASIER FOR MORE THAN ONE TEAM MEMBER TO WORK ON THE SAME FEATURE.

- THE COST OF MERGING SMALL CHANGES IS MUCH LOWER THAN LARGE CHANGES.

- TEAM MEMBERS CAN EVALUATE THEIR PEER'S CHANGES IN A SYSTEM THAT HAS PASSED, AUTOMATED TESTING RATHER THAN THE MOVING TARGET OF A FEATURE BRANCH.