# What is Continous Integration

CI is the practice of automating the integration of code changes from multiple contributors into a single software project. It's a DevOps practice, allowing developers to frequently merge code changes into a central repository where builds and tests then run.

- COMPILE
- UNIT TEST
- STATIC ANALYSIS
- DEPENDENCY VULNERABILITY TESTING
- STORE ARTIFACT

# What is Continous Deployment

CD is a software release paradigm that uses automated testing to validate if changes to a codebase are correct and stable for immediate autonomous deployment to a production environment.

- CREATING INFRASTRUCTURE
- PROVISIONING SERVERS
- COPYING FILES
- PROMOTING TO PRODUCTION
- SMOKE TESTING
- ROLLBACKS

# SOME BENEFITS OF CI/CD ADOPTION

**1**

## INCREASE REVENUE

Less time to market, since features are delivered quicker due to automation

**2**

## REDUCE RISK

A CI/CD pipeline tests code frequently hence bugs are found and fixed before they are depoyed.

**3**

## FASTER DELIVERY

Teams can test and deploy changes automatically with no human intervention

**4**

## AUTOMATED ROLLBACKS

If new changes break the application, it can be immediately rolled back to its previous stable state

*A PHASED APPROACH TO CONTINUOUS DELIVERY IS NOT ONLY PREFERABLE, IT'S INFINITELY MORE MANAGEABLE."*

- Maurice Kherlakian