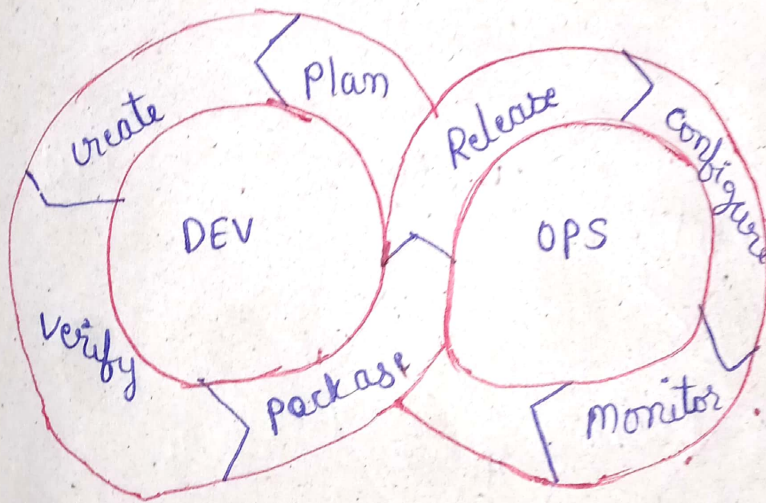
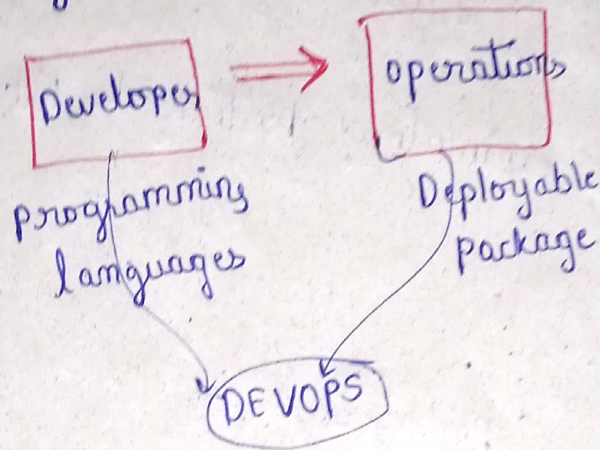


22/02/24

## DevOps

\* DevOps is the union of people, process and products to enable continuous delivery of value to your end users

\* DevOps is used to convert code written by developer (programming languages) is converted into Deployable package



## Introducing Azure DevOps

### 1) Azure Boards

\* Plan, track and discuss work across teams, deliver value to your users faster.



## 2) Azure Repos

- \* Unlimited cloud-hosted private Git repos
- \* Collaborative pull requests
- \* Advanced File management

## 3) Azure Pipelines → Continuous Integration & Continuous Delivery

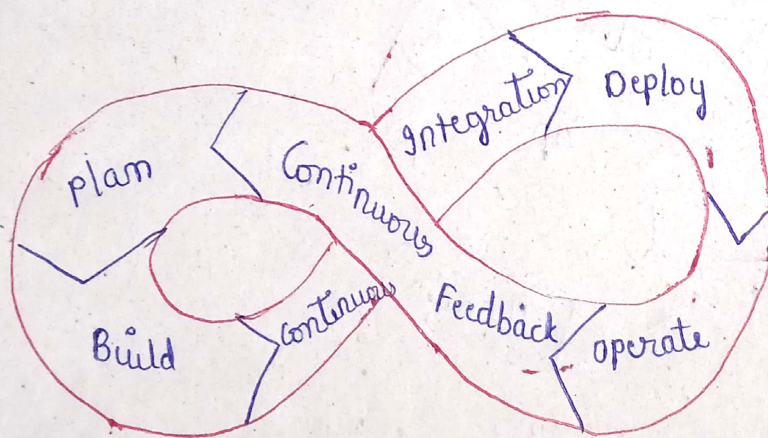
- \* CI/CD that works with any language, cloud & platform
- \* Connect to Git Hub or any Git provider and deploy continuously to any cloud

## 4) Azure Test Plans

- \* Test management & exploratory testing toolkit lets u build confidence

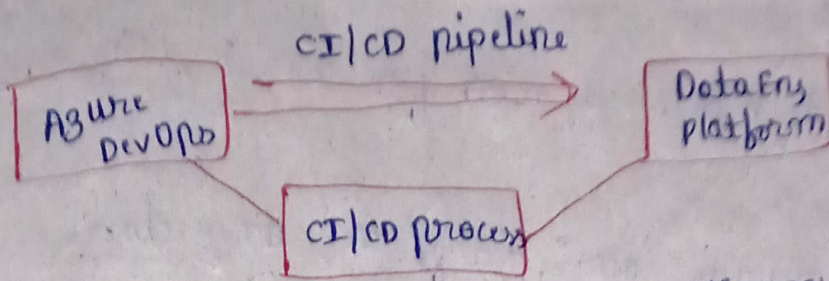
## 5) Azure Artifacts

- \* Create, host and share packages
- \* Easy add artifacts to CI/CD pipelines



- \* DevOps is a process to build CI/CD pipeline in Data Engineering





CI/CD  $\Rightarrow$  Continuous Integration, Continuous Delivery

### Azure Boards :-

- i) Track work with Kanban boards, backlogs, team dashboards & custom reporting.
- (ii) Connected from idea to release  
Track all ur ideas & keep team aligned with code changes
- (iii) Scrum ready  
Use built-in scrum boards & planning tools to help teams abt stand-ups meetings
- (iii) Project Insights  
Gain new insights

### Azure Repos :-

- 1) Works with your Git client
- 2) Securely connect with and push code into Git repos using any IDE, editor or Git client
- 2) Web hooks & API integration  
Add validations & extensions from marketplace
- 3) Semantic code search  
Find what u r looking for with code-aware search



## Azure pipelines

cloud-hosted pipelines with for linux, windows, macos

1) Any language, any platform, any cloud

Node.js, python, java,  
PHP, Ruby, c/c++, .NET

linux, windows,  
Macos

Azure  
AWS  
GCP

2) Extensible

explore & build, test & deployment tasks along  
with hundreds of extensions from slack to Sonar  
support for YAML.

3) Containers & Kubernetes

easily build & push images to container registries  
like Azure Container Registry. Deploy containers to  
individual hosts & Kubernetes.

4) Best-in-class for open source

Ensure fast CI/CD pipelines for every open source  
project.

## Azure Testplans

- \* Get end-to-end traceability. Run tests and log defects from your browser.
- \* Track and address quality throughout testing life cycle.

1) capture rich data :-

- \* capture rich scenario data as you execute



tests to ~~make~~ put discovered defects into action

- \* Explore user stories without test cases or test steps

- \* We can create test cases directly

## 2) Test across web and desktop

- \* Test your application where it lives

- \* Test on-premises app from the cloud and vice-versa.

## 3) Get end-to-end traceability

- \* pay as you go use

- \* Pay for the tools only when you need them.

## Azure Artifacts

- \* fully integrated into CI/CD pipelines

### 1) manage all package types

### 2) Add packages to any pipeline

share packages, and use built-in CI/CD, versioning, and testing

### 3) Share code efficiently.

Easily share code across small teams & large enterprises

## Technologies to support DevOps:-

- \* Using DevOps we can deliver slw faster and more reliably.

- \* " " " " provide continuous value to our users.

## CI (Continuous Integration)

- \* Improve s/w development, quality & speed
- \* If we commit code by using Azure pipelines to build apps in cloud, it's automatically ~~built~~ built and tested & bugs are detected faster.

## CD (Continuous Deployment)

- \* With CD, we <sup>can</sup> automate entire process from code commit to production if CI/CD tests are successful.

## Continuous Learning & Monitoring

- \* We can know how our applications are performing and test whether recent deployment has made things better or worse
- \* Using monitoring tools, we'll be able to safely deliver features to customers