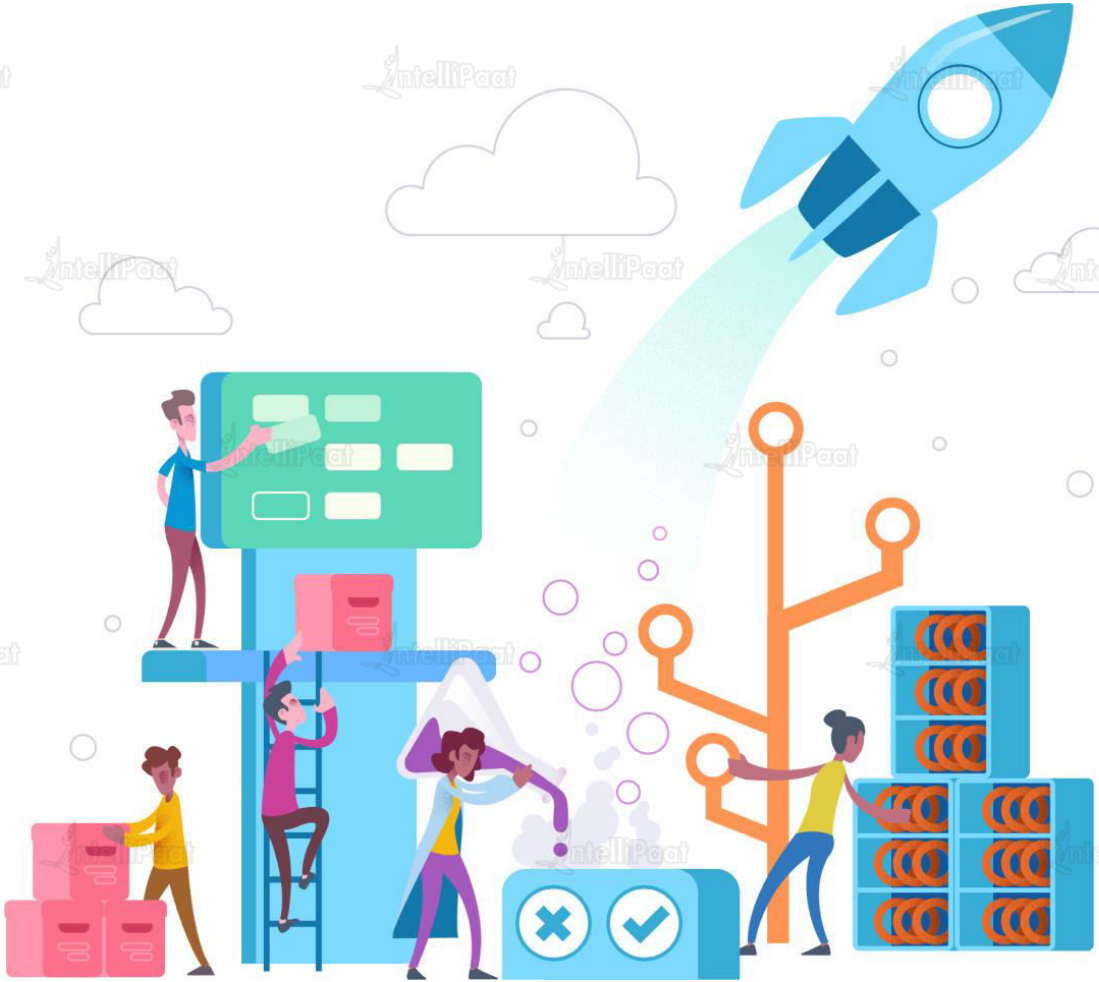
IntelliPaat

Azure DevOps



Agenda

01 What is Azure?

02 What is DevOps?

03 Introduction to Azure DevOps

04 Azure DevOps Services

05 Managing a DevOps project using Azure DevOps

06 Summary

What is Azure?

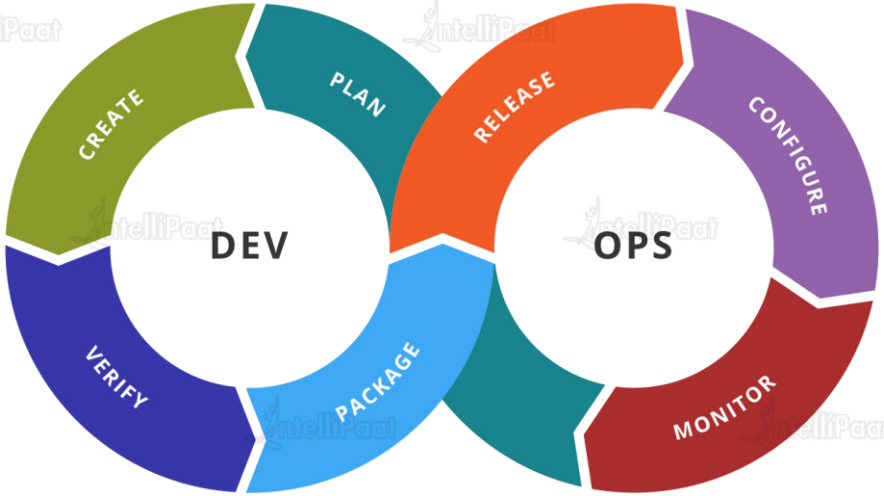
What is Azure?

Microsoft Azure is a cloud service provider whose services can be used on a business to solve the challenges and provide architectural solutions

What is DevOps?

What is DevOps?

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



Introduction to Azure DevOps

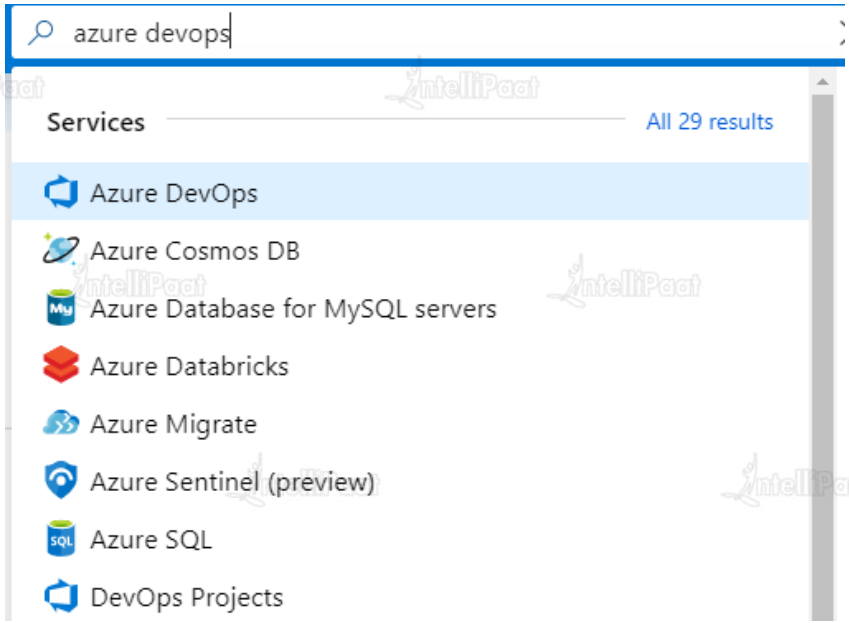
Introduction to Azure DevOps

Azure DevOps is a tool provided by Microsoft Azure which can be used to implement a DevOps lifecycle in a business

Visual Studio Team Services (VSTS) has been upgraded and rebranded to Azure DevOps

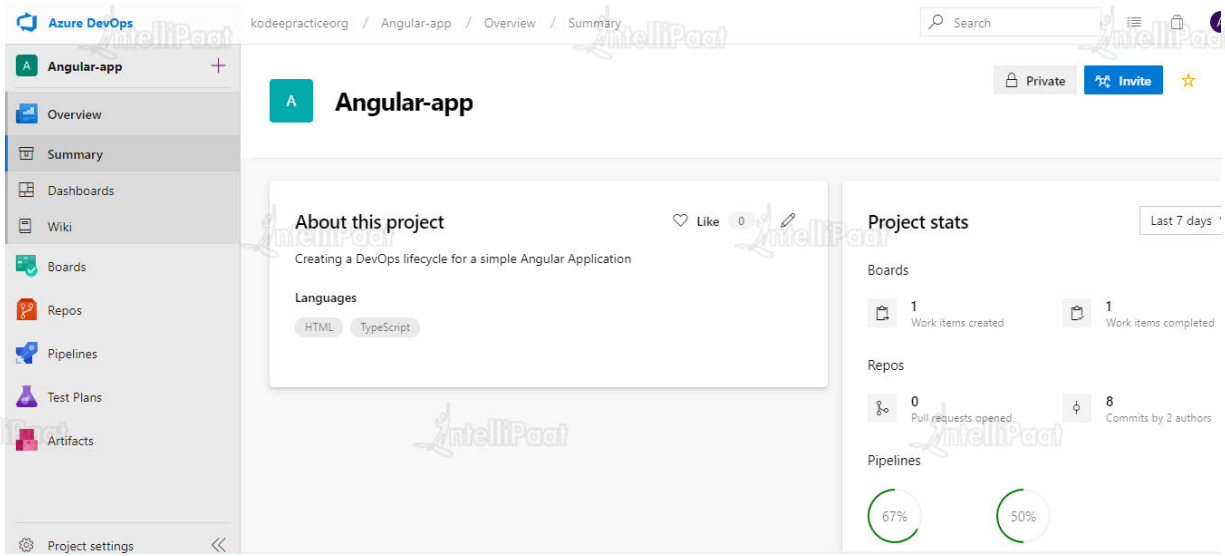
Launching Azure DevOps

Open **portal.azure.com** and search for Azure DevOps or directly open **dev.azure.com**

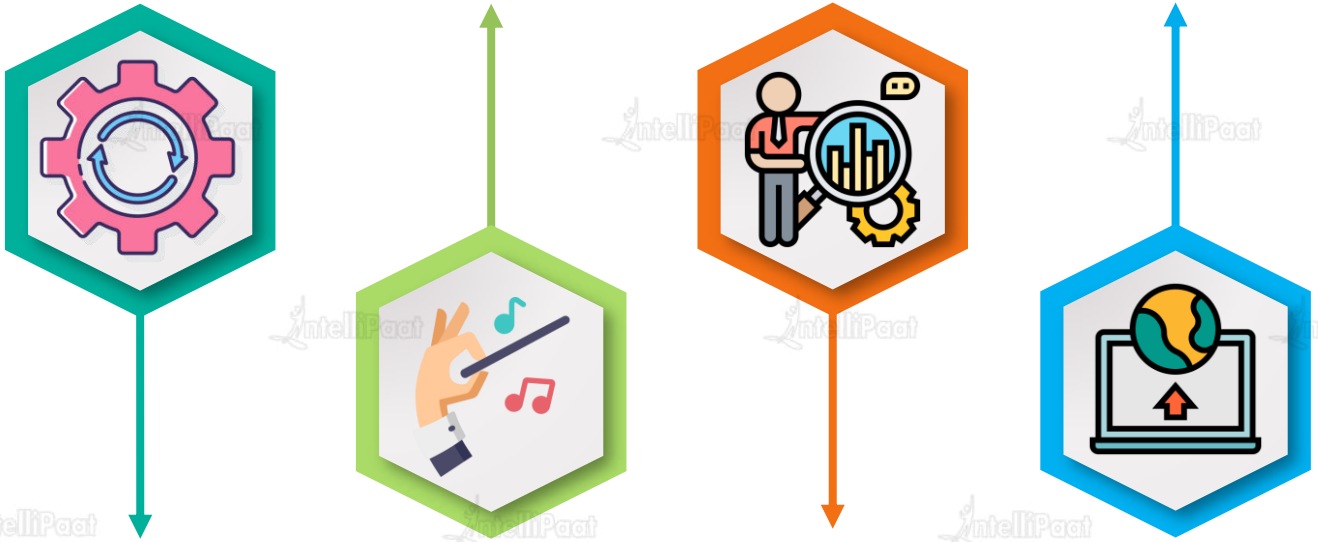


Introduction to Azure DevOps

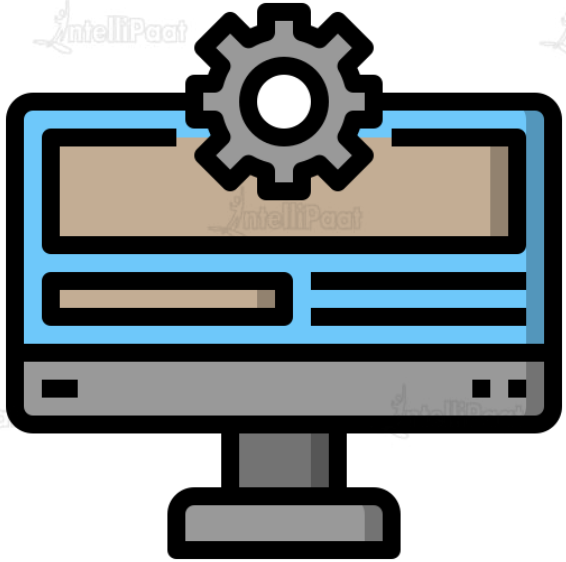
A sample Azure DevOps project summary view



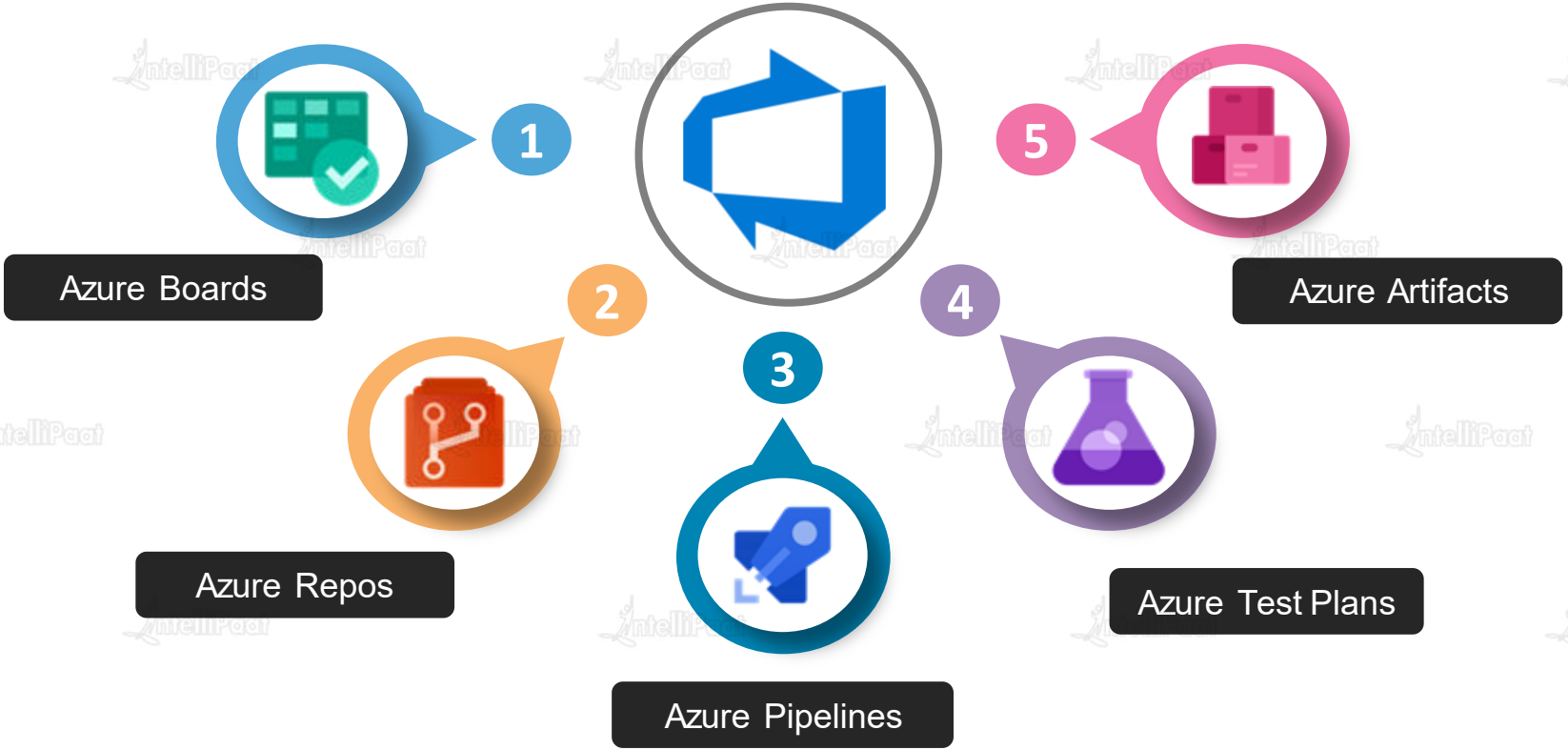
Benefits of DevOps on Azure



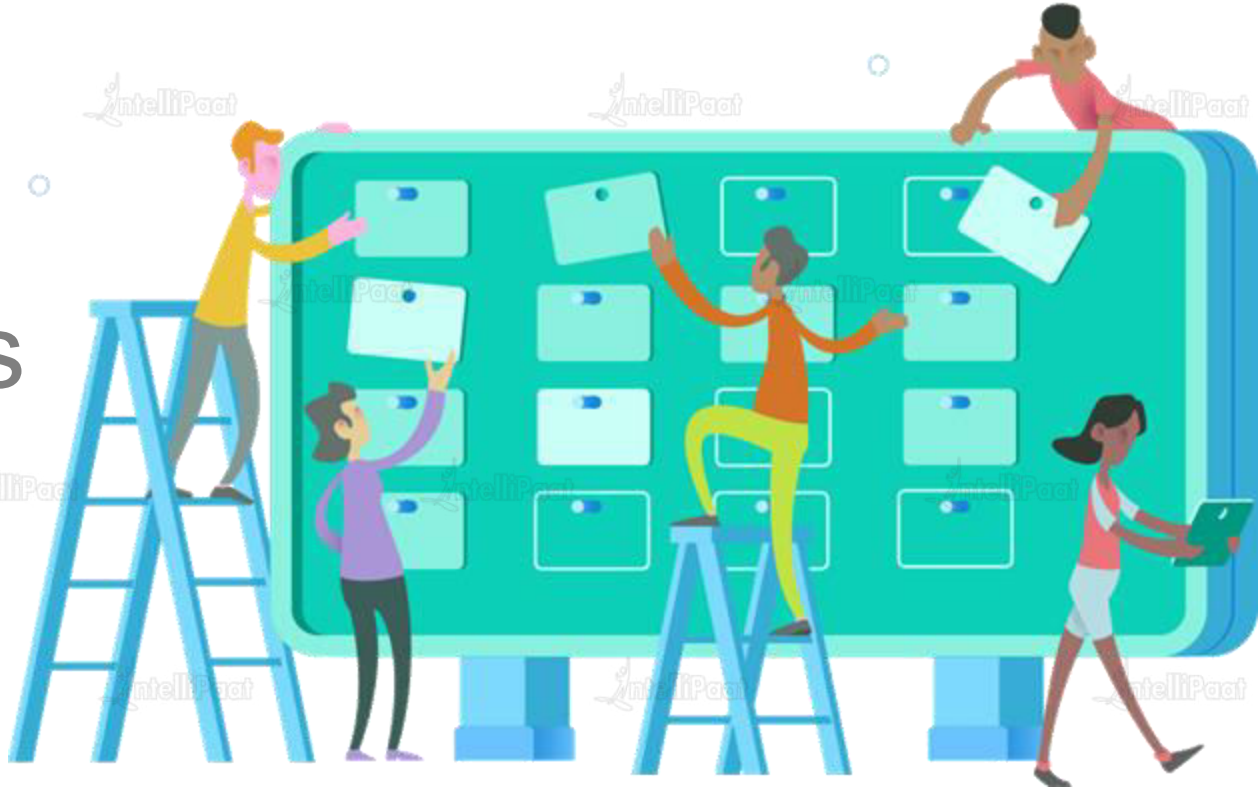
Azure DevOps Services



Tools provided by Azure DevOps

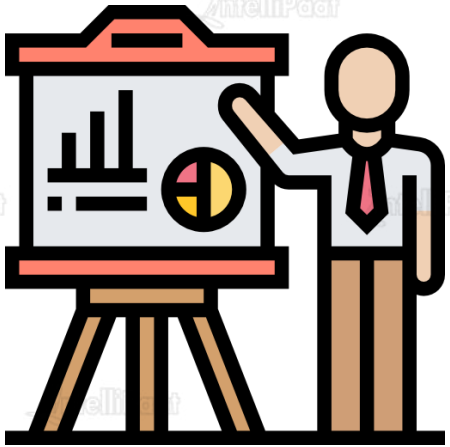


Azure Boards



Why Azure Boards

Tool for tracking work using Kanban boards, backlogs, sprints, team dashboards and custom reporting



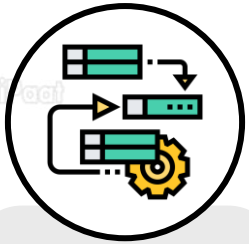
Azure Boards Concepts

Work Items

Use work items to track anything you want to track. For instance, a bug in the website

Boards

Implement Kanban practices by creating and visualizing a work flow for the team



Backlogs

Plan and prioritize the work for a team within one or multiple products

Sprints

Plan a work for a team which has to be completed in a specified period of time

Queries

Filter criteria to list work items for sharing or performing bulk updates

Azure Repos

Why Azure Repos

Get a free unlimited private repository for hosting software development version control. Also, GitHub connectivity is available if you do not want Azure Repos.

Connect your favorite development environment to Azure Repos to access your repos and manage your work.

Command-line


Visual Studio Code


Visual Studio


Xcode

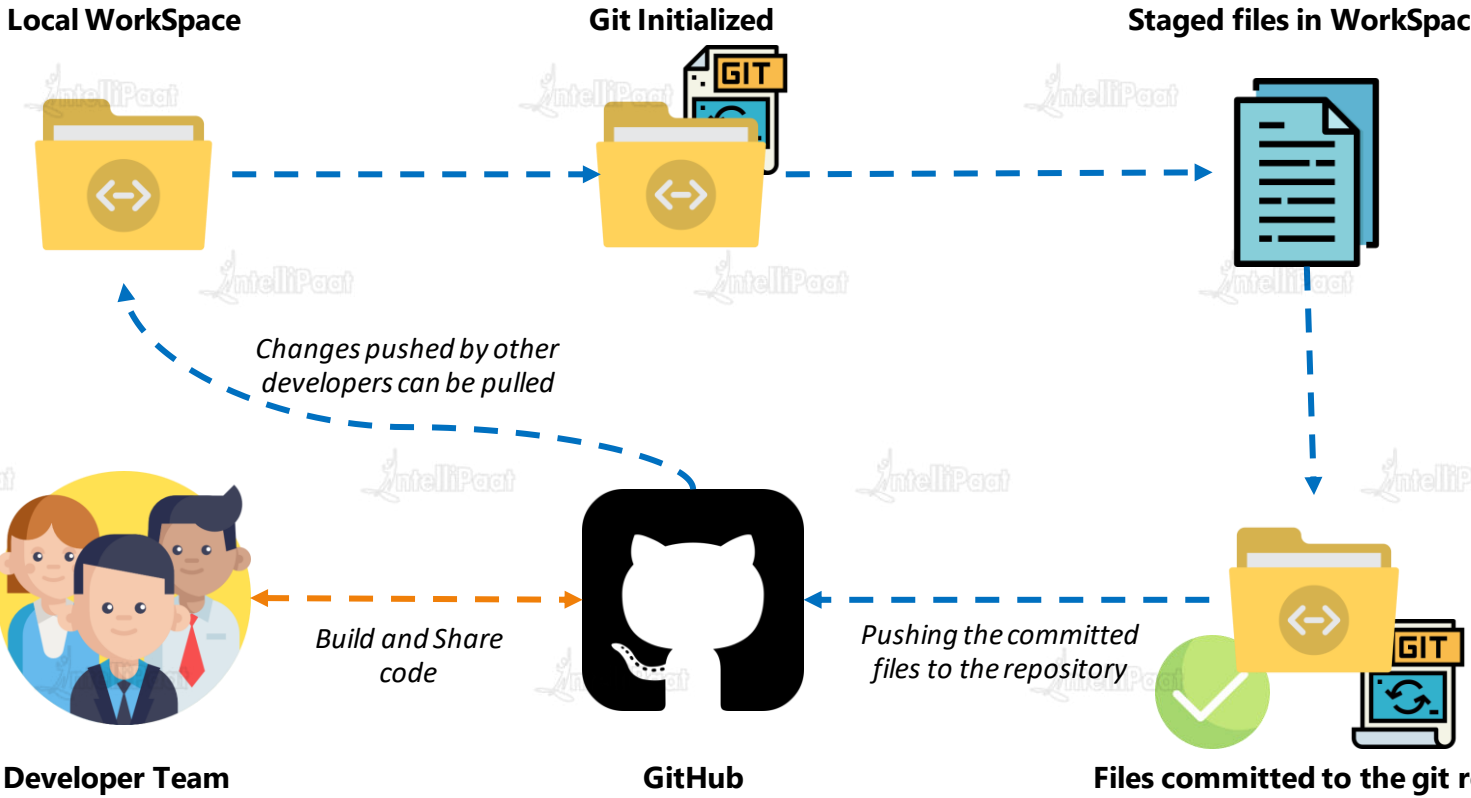

Eclipse

IntelliJ

What is GitHub?

A version control tool for software development. Discover, share and build better software either open source or private projects. Currently GitHub is owned by Microsoft.

Git Lifecycle



Common GitHub commands

$ git init

$ git status

$ git add

$ git commit –m “message”

Common GitHub commands

$ git remote add origin <Repo URL>

$ git push

$ git clone

$ git pull

Common GitHub commands

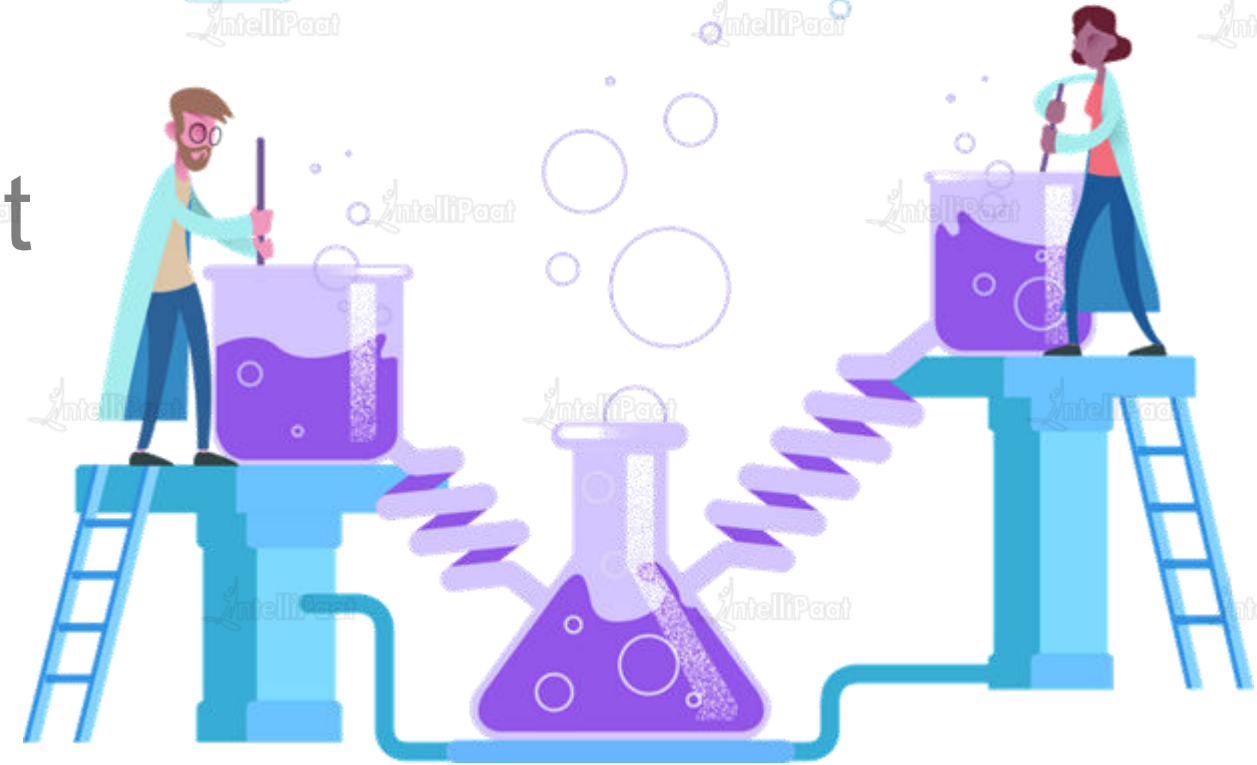
$ git branch <branch-name>

$ git checkout <branch-name>

$ git log

$ git revert <commit-id>

Azure Test Plans

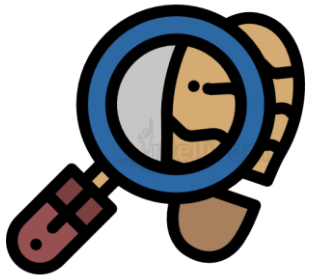


Why Azure Test Plans

Use Azure Test Plans to improve the quality of your code by using planned and exploratory tests

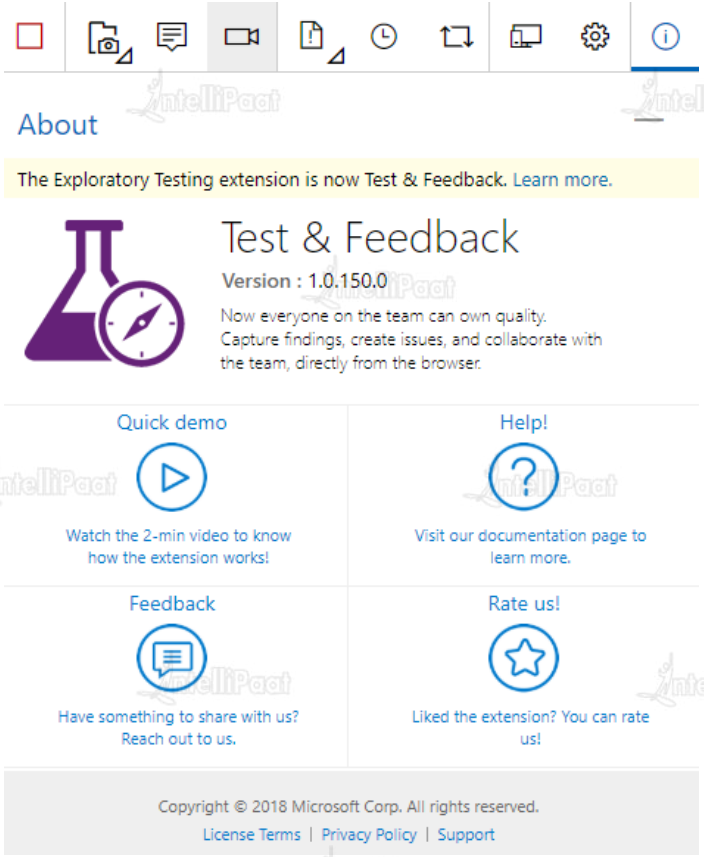
Capture rich data

Test across web and desktop



Get end-to-end traceability

Why Azure Test Plans



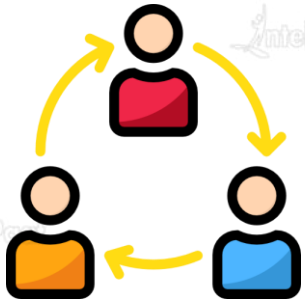
Exploratory test tool – Test and feedback

- Doing a exploratory test on deployed QA site
- Creating a Azure DevOps project
- Integrating GitHub with the DevOps project and Azure boards
- Creating a CI/CD pipeline for a Angular application (Build, staging and production)

Azure Artifacts

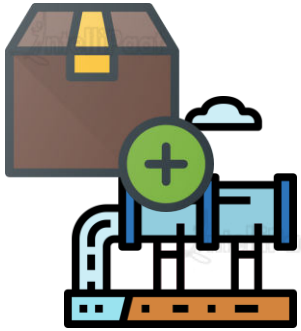
Why Azure Artifacts

From public and private resources, you can create and share Maven, npm, Python and other packages



Share code efficiently

Manage all package types



Add packages to any pipeline

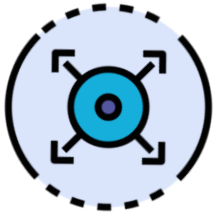
Azure Pipelines

Why Azure Pipelines

Azure cloud-hosted pipelines for Linux, MacOS, and Windows. Build any kind of application on Any Platform using Any Language and deploy it to any Cloud provider or on-premises.

Any language, any platform

Deploy to any cloud



Advanced workflows and features

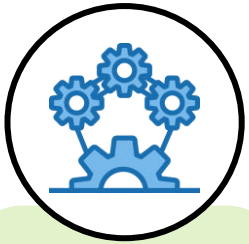
Extensible

Containers and Kubernetes

Azure Pipelines

Continuous delivery

process by which code is built, tested, and deployed to one or more stages

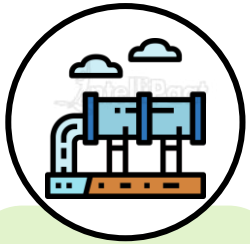


Continuous integration

practice used by development teams to simplify the testing and building of code

Environment

This is a collection of resources, and on which you can launch your application



Pipeline

It defines the multiple stages of CI and CD processes for your application

Run and Stage

Run is one execution of a pipeline and stage is a logical boundary in it

Azure Pipelines

Build on Linux, macOS and Windows with Pipelines

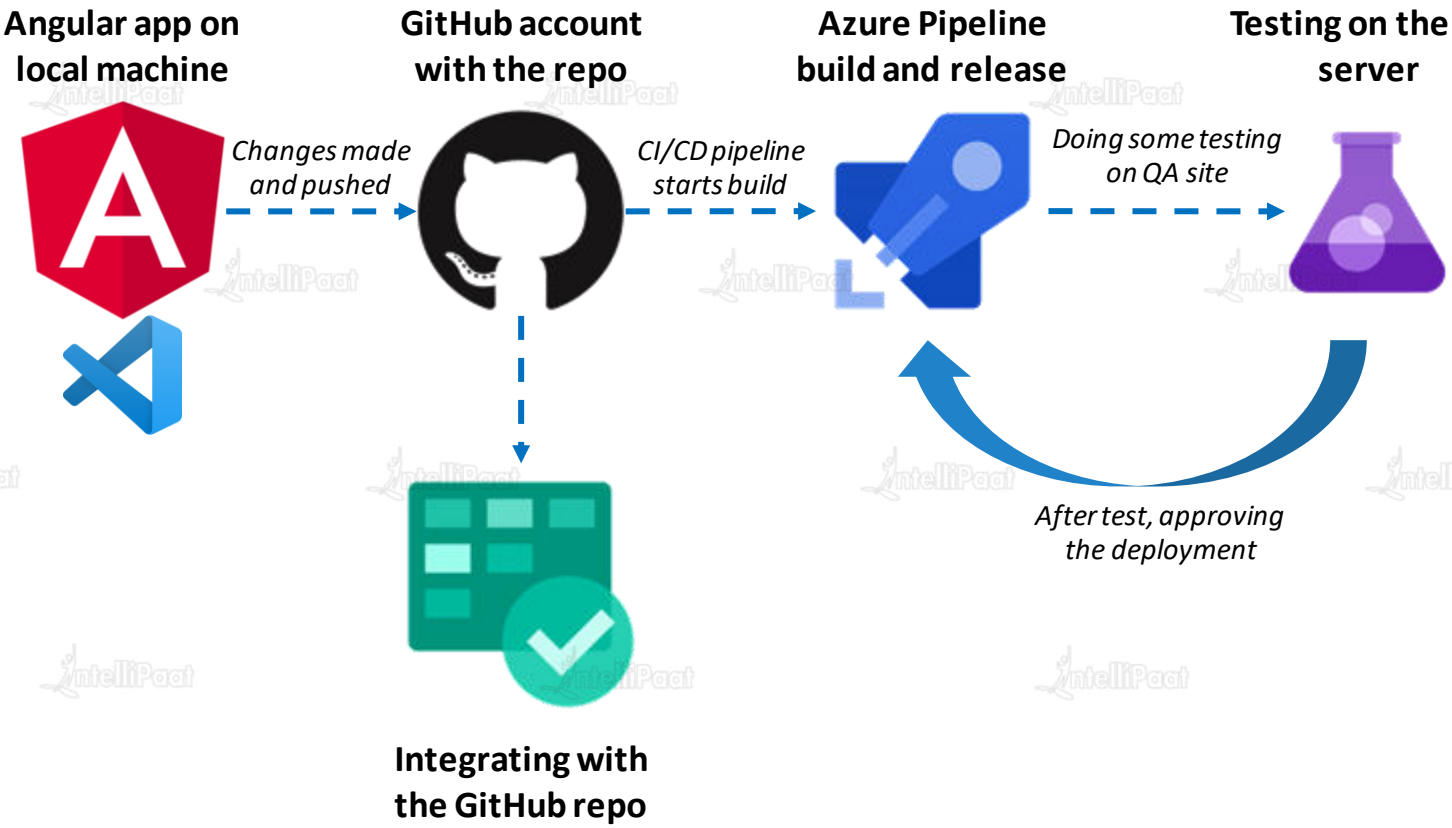
Open source projects	Microsoft-hosted CI/CD	Self-hosted CI/CD
10 Free	1 Free	1 Free
Parallel jobs with unlimited minutes per month	Parallel job with up to 1,800 minutes per month	Parallel job with unlimited minutes per month
	Then ₹2,643.85 per extra parallel job	Then ₹991.444 per extra parallel job
Start free >	Start free >	Start free >

Managing a DevOps project using Azure DevOps

Azure DevOps Demo

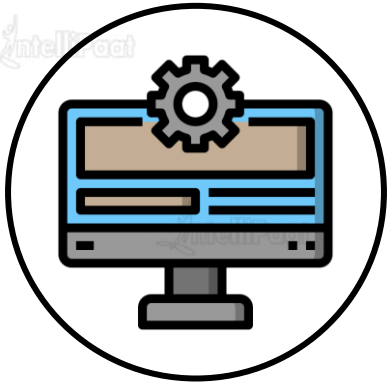
- Creating a Azure DevOps organization
- Creating a Azure DevOps project
- Integrating GitHub with the DevOps project and Azure boards
- Creating a CI/CD pipeline for a Angular application (Build, staging and production)
- Use Azure Test and Feedback tool to identify and create work items and use manual tests to solve them
- Creating a dashboard for an overview of the DevOps project

Azure DevOps Demo Outline



Summary

Summary



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