



# Az COMMUNITY

Conference 2022

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#AzConfDev



# My Journey into Azure DevOps



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# Agenda

>>> My Background

>>> How I got introduced to Azure DevOps

>>> What is Azure DevOps

>>> Azure features

>>> Things to know before starting your DevOps Career

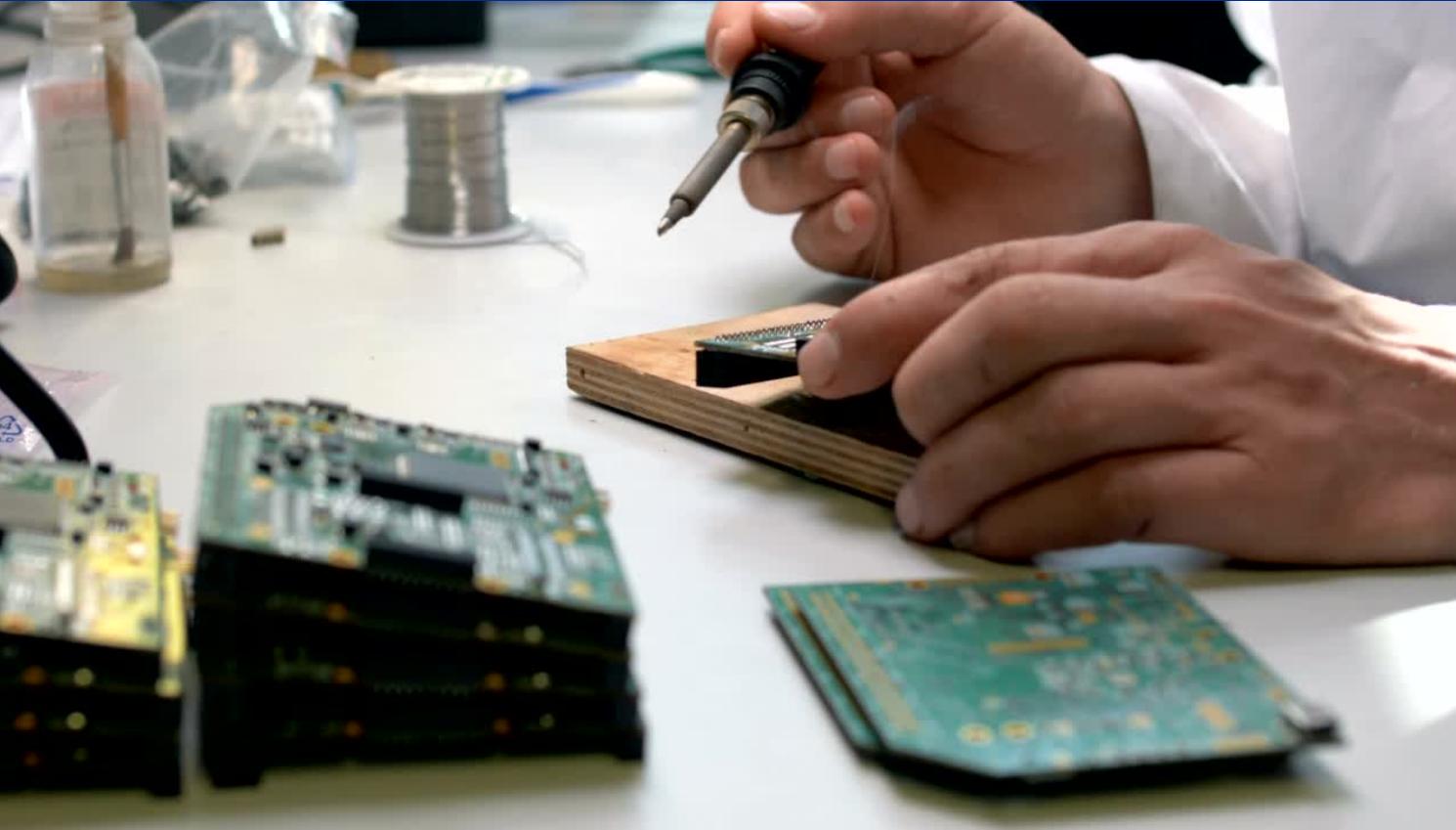
>>> Azure Marketplace Extension Creation

# My Background



➤ ECE - Electronics and Communication

➤ Worked for 3 years in Electronics Domain





# How I got Introduced to Azure DevOps!

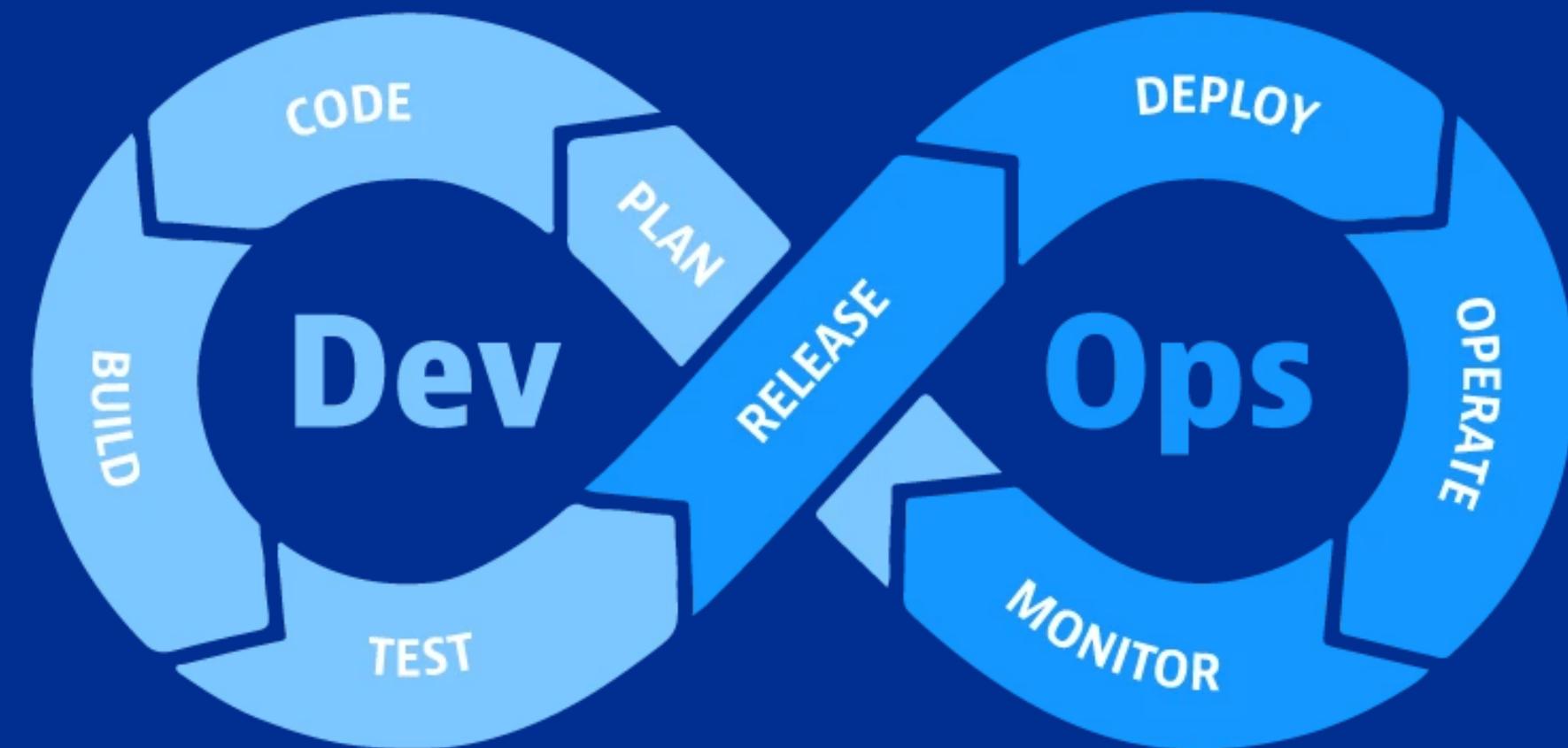
- » Took an online course for DevOps certification
- » That's how I got introduced to Azure DevOps





# What is DevOps!

- >> DevOps is a never ending process of continual improvement.
- >> DevOps is a state of mind and culture.
- >> Making software development lifecycle as efficient as possible by automating it

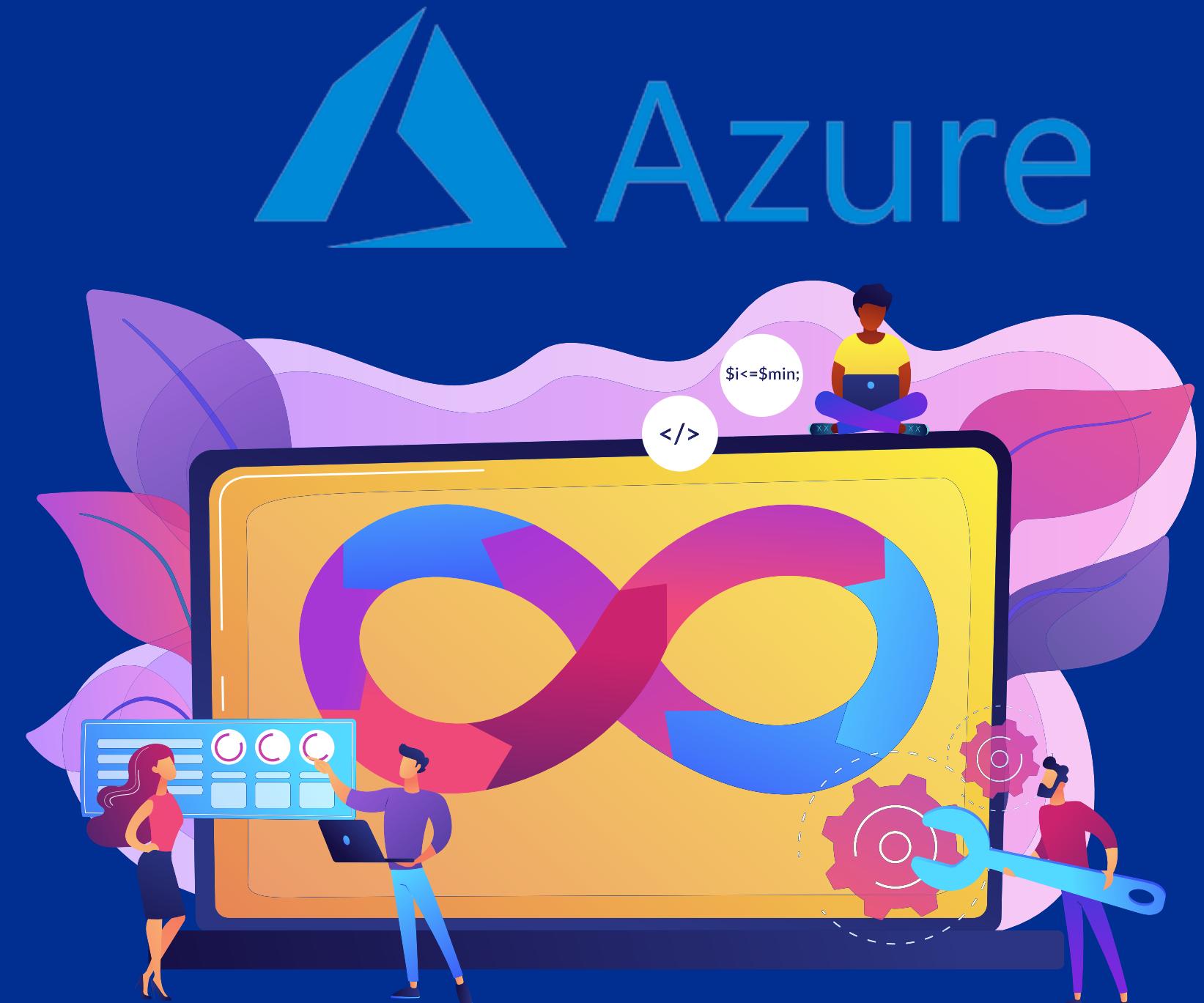




# What is Azure DevOps!

One of the popular platform for DevOps is Azure DevOps

Platform to implement all your DevOps processes.



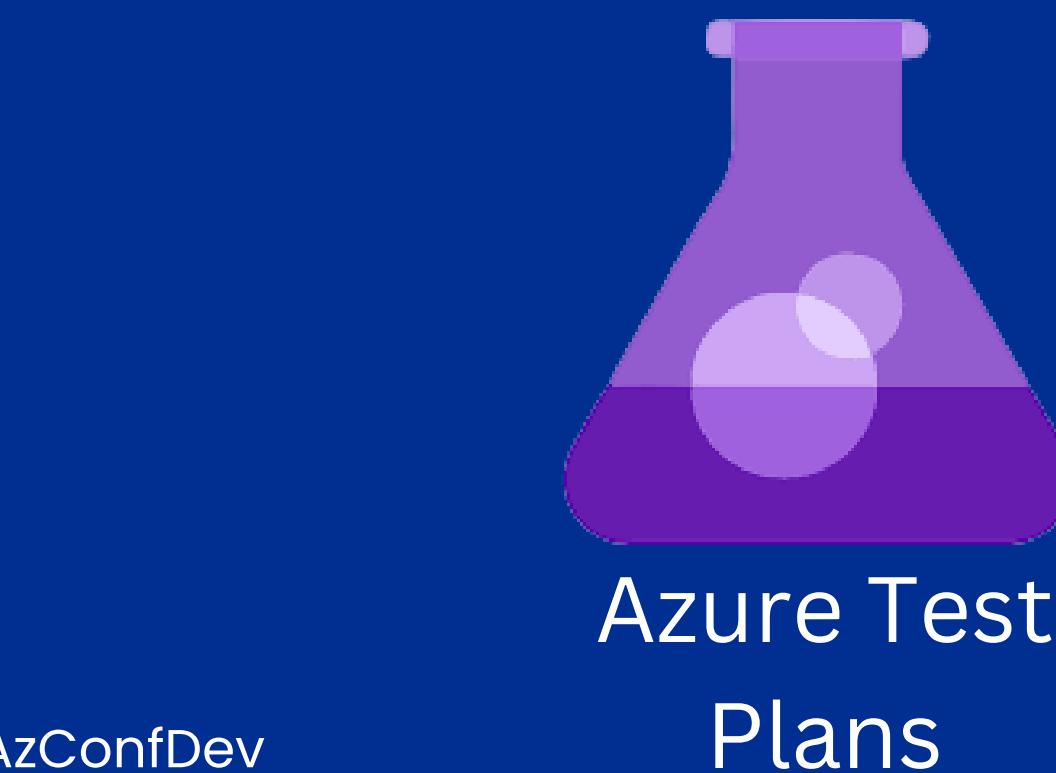
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# Azure Features

Azure Boards

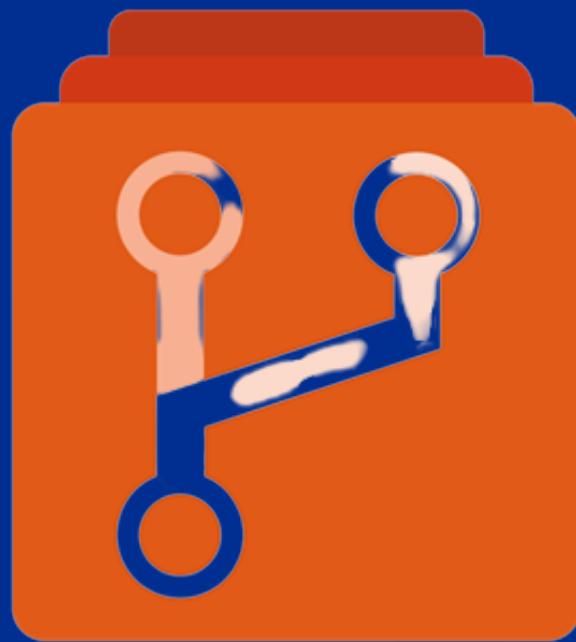


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Azure Pipelines



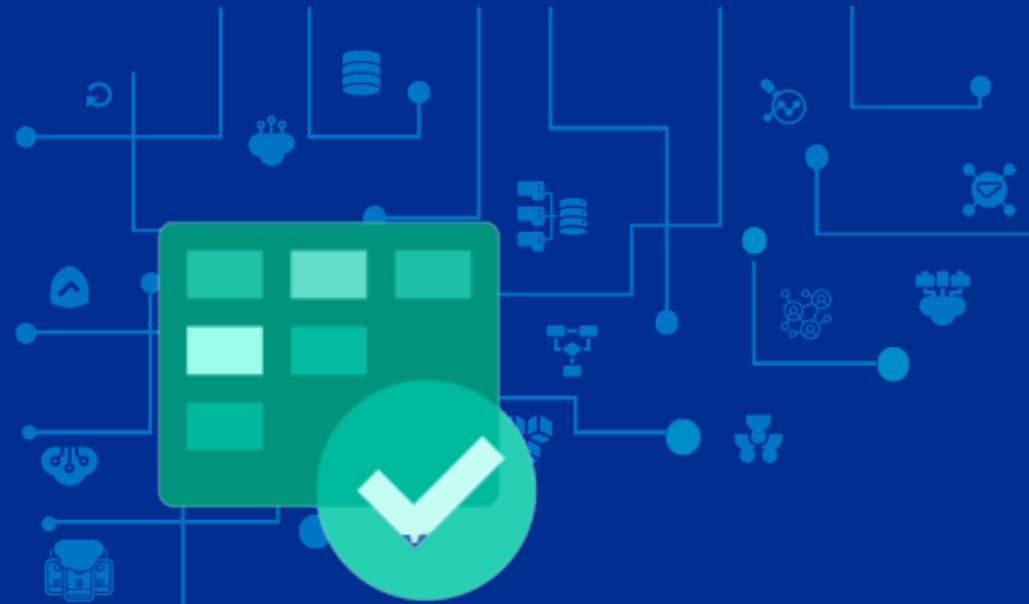
Azure Artifacts



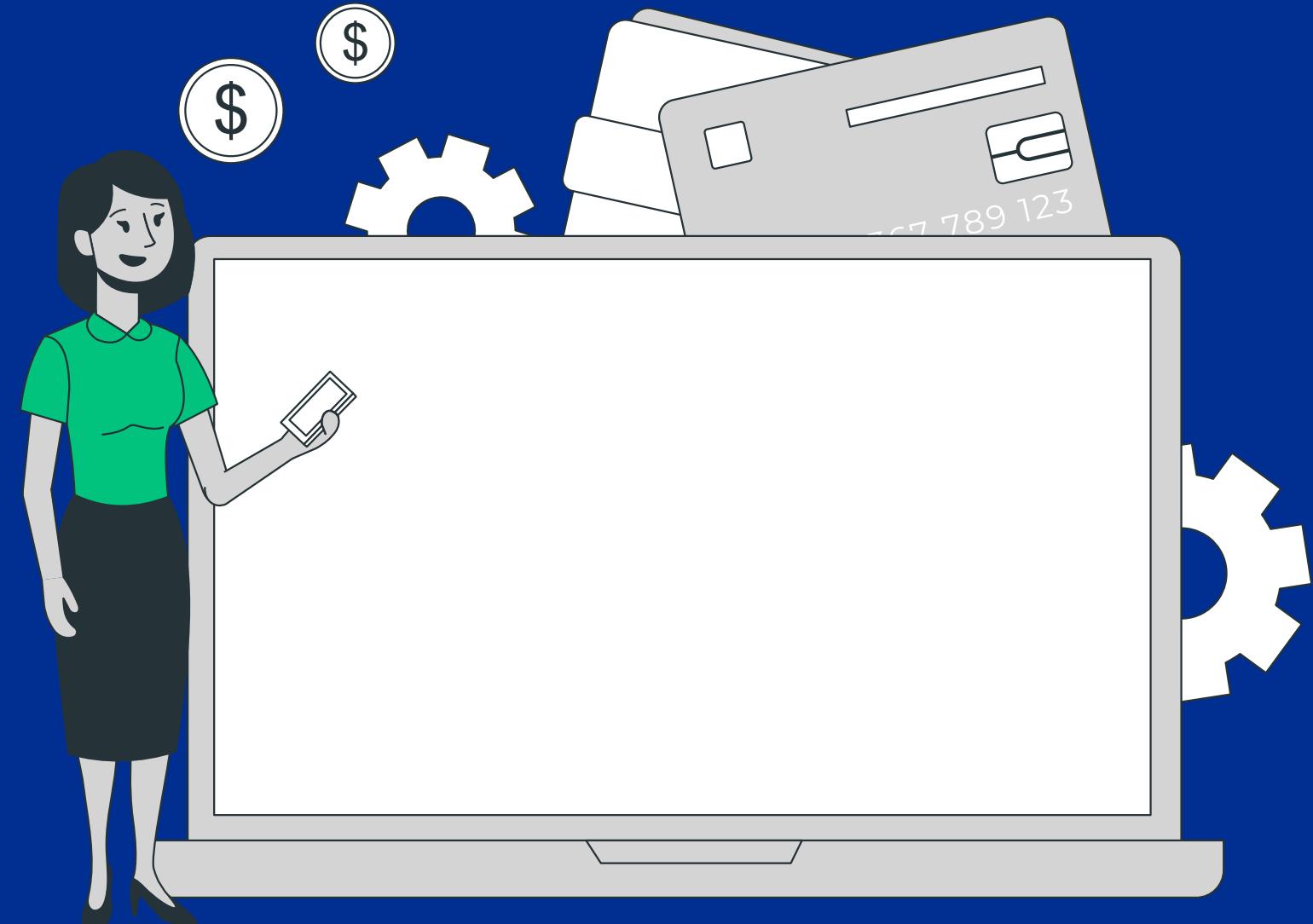
Azure Repos



# Azure Boards



Azure Boards



Software Development Lifecycle

Planning

- First step is planning
- What are we developing
- What processes will be defined
- Workflow



# Azure Boards

The screenshot shows the Azure DevOps Boards interface for the project "demo\_testing". The left sidebar includes links for Overview, Boards (which is selected), Work items, Backlogs, Sprints, Queries, Delivery Plans, Repos, and Pipelines. The main area displays a table of work items:

ID	Title	Assigned To	State	Area Path
4	Test pipeline	meghakadur691993	Active	demo_testing
5	Create new project	meghakadur691993	New	demo_testing
3	remove hardcoded values from yaml file	Unassigned	New	demo_testing
2	create build and release pipeline	Unassigned	New	demo_testing
1	Test case failing	meghakadur691993	New	demo_testing

provides software development teams with the interactive and customizable tools they need to manage their software projects.



# Azure Repos



Azure Repos



Software Development Lifecycle

Planning

Code

Version control tool to manage our code

Collaborate on code

Code review

Create pull request

# Azure Repos

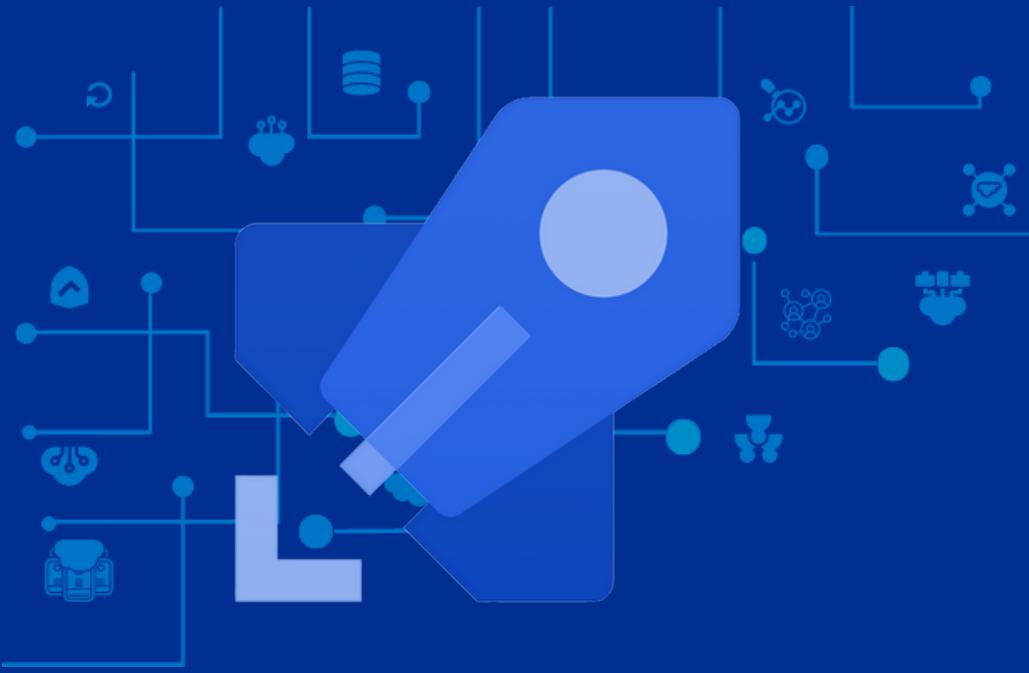
# Azure Repos



The screenshot shows the Azure DevOps interface for a repository named "demo\_testing". The left sidebar lists "Overview", "Boards", "Repos" (which is selected), "Files", "Commits", "Pushes", "Branches" (highlighted in yellow), "Tags", and "Pull requests". The main content area shows the "main" branch of the "demo\_testing" repository. The "README.md" file is selected, displaying its contents. The file contains:

```
1 # Introduction
2 TODO: Give a short introduction of your project.
3
4 # Getting Started
5 TODO: Guide users through getting your code up and running.
6 1. Installation process
7 2. Software dependencies
8 3. Latest releases
9 4. API references
10
11 # Build and Test
12 TODO: Describe and show how to build your code and run tests.
13
```

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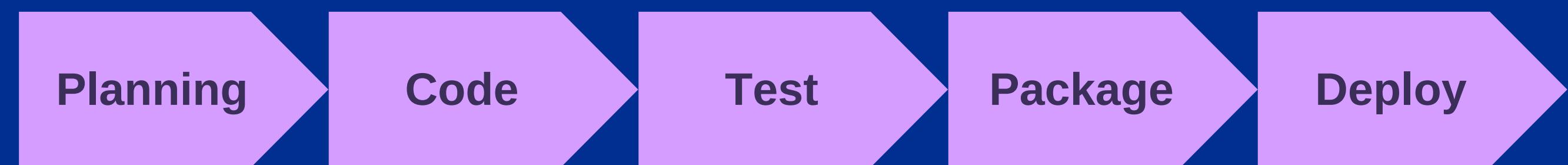


# Azure Pipelines

# Azure Pipelines



Software Development Lifecycle



CI/CD Pipelines are the heart of DevOps

Azure pipelines can be written in Yaml

Azure pipelines automatically builds and tests the code

Azure pipelines supports CI and CD



# Azure Artifacts

Azure Artifacts enable developers to share their code efficiently and manage all their packages from one place.

## Azure Artifacts

A screenshot of the Azure DevOps Artifacts interface. The left sidebar shows project navigation with "demo\_testing" selected. The main area displays a list of feeds categorized by package type: NuGet, npm, Maven, Python, and PIP. Each category lists specific feed names like ".NET Core dotnet", "NuGet.exe", "Visual Studio", "npm", "Maven", "Gradle", and "pip".

Azure DevOps demo\_testing / demo\_testing / Artifacts / Feeds

← Connect to feed  
megatesting

NuGet

- .NET Core dotnet
- NuGet.exe
- Visual Studio

npm

- npm

Maven

- Maven

Python

- Gradle

PIP pip

Project settings https://dev.azure.com/meghatesting



# Azure Test Plans

The screenshot shows the Azure DevOps interface for 'Test Plans'. The left sidebar lists 'Fabrikam Fiber' under 'Azure DevOps' and includes links for Overview, Boards, Repos, Pipelines, Test Plans (which is selected), Test plans, Progress report, Parameters, Configurations, Runs, Load test, and Test Cases. The main area is titled 'Test Plans' and shows a table of test plans. The table has columns for Title, State, Area Path, and Iteration Path. The data is filtered by 'All' and shows the following rows:

Title	State	Area Path	Iteration Path
Sprint 1	Active	Fabrikam Fiber	Fabrikam Fiber\Release 1\Sprint 1
All sprints	Active	Fabrikam Fiber	Fabrikam Fiber\Release 2
Sprint 2	Active	Fabrikam Fiber	Fabrikam Fiber\Release 2\Sprint 2
Hello World Test	Active	Fabrikam Fiber	Fabrikam Fiber
Sprint 3	Active	Fabrikam Fiber	Fabrikam Fiber\Release 1\Sprint 3
Azure DevOps Security	Active	Fabrikam Fiber	Fabrikam Fiber\Release 1\Sprint 3
Test plan, Release 3	Active	Fabrikam Fiber\Web	Fabrikam Fiber\Release 3
Sprint 3	Active	Fabrikam Fiber	Fabrikam Fiber\Release 2\Sprint 1
Test Plan for Cycle 1	Active	Fabrikam Fiber	Fabrikam Fiber\Release 2\Sprint 2

Azure Artifacts

Perform Manual testing

Automated Testing

Test Reports can be viewed

# Things to know before starting your DevOps Career!



Good hold on Linux basics and scripting

>>> Learn programming languages.

>>> Understanding the concepts.

>>> Communication and collaboration.



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# How to create Microsoft Azure Custom Marketplace Extension?



Prerequisites and Dependencies :

- » Azure DevOps Organization
- » Node.JS(Version.10x or higher)
- » Typescript Complier

# Folder Structure

```
| -- -- images  
|   | -- -- extension-icon.png  
| -- -- buildAndReleaseTask  
|   | -- -- package.json  
|   | -- -- package-lock.json  
|   | -- -- task.json  
|   | -- -- tsconfig.json  
|   | -- -- index.js  
|   | -- -- index.ts  
| -- -- vss-extension.json
```

# Run Commands

- » "npm init -yes" (to install libraries and dependencies)
- » "npm install azure-pipelines-task-lib -save"
- » "npm install @types/node -save-dev"
- » "npm install @types/q -save-dev"
- » "tsc --init --target es6"

# task.json

```
releasetask > task.json > name
{
  "$schema": "https://raw.githubusercontent.com/Microsoft/azure-pipelines-task-lib/master/tasks.schema.json",
  "id": "4ee7bc38-9797-42dd-bf5b-0517f0826a7d",
  "name": "newcustomtask-megha",
  "friendlyName": "megha",
  "description": "megha",
  "helpMarkDown": "",
  "category": "Utility",
  "author": "{{taskauthor}}",
  "version": {
    "Major": 0,
    "Minor": 1,
    "Patch": 0
  },
  "instanceNameFormat": "Echo $(samplestring)",
  "inputs": [
    {
      "name": "samplestring",
      "type": "string",
      "label": "Sample String",
      "defaultValue": "",
      "required": true,
      "helpMarkDown": "A sample string"
    }
  ],
  "execution": {
    "Node10": {
      "target": "index.js"
    }
  }
}
```

# index.ts

```
import tl = require('azure-pipelines-task-lib/task');

async function run() {
    try {
        const inputString: string | undefined = tl.getInput('samplestring', true);
        if (inputString == 'bad') {
            tl.setResult(tl.TaskResult.Failed, 'Bad input was given');
            return;
        }
        console.log('Hello', inputString);
    }
    catch (err) {
        tl.setResult(tl.TaskResult.Failed, err.message);
    }
}

run();
```

# Run command

"tfx extension create - --manifest-globs vss-extension.json"

The screenshot shows the 'Extensions' tab selected in the 'megcustom' extension details page. The table lists one extension entry:

Name	Version	Works with	Updated	Availability	Rating	Installs
create new task	0.0.2	-	a day ago	Private (shared with me)	★★★★★ (0)	1

The screenshot shows the 'Installed' tab selected in the 'Extensions' page. The table lists one installed extension entry:

Extension	Security	Browse marketplace
create new task by megcustom		

Details for the 'create new task' extension:

create new task by megcustom  
Tools for building/releasing with Fabrikam. Includes one build/release task.

# Share your extension

The screenshot shows the Azure DevOps Extensions interface. On the left, the 'Extensions' tab is selected for the 'megcustom (megcustom)' extension. The table lists one item: 'create new task' by 'Azure' at version '0.0.2'. On the right, a modal window titled 'create new task' shows the 'Shared with' section. It lists 'Shared with ^' and 'List of all organizations the extension is shared with.' A table shows a single entry: 'Share name: DevOpsMeg' with a 'Unshare' button next to it.

Name ↑	Version	Works with	Update
create new task	...	0.0.2	-

create new task

Shared with ^

List of all organizations the extension is shared with.

Share name	Organization
DevOpsMeg	Unshare

# Final Extension created

Tasks Variables Triggers Options History | Save & queue Discard Summary Queue ... ↗

Pipeline Build pipeline

Get sources Testing main

Agent job 1 Run on agent +

Echo Some settings need attention

Add tasks Refresh megha

Creating Azure custom marketplace extension megha  
Creating Azure custom marketplace extension megha by {{taskauthor}} Add

Tasks Variables Triggers Options History | Save & queue Discard Summary Queue ... ↗

Pipeline Build pipeline

Get sources Testing main

Agent job 1 Run on agent +

Echo Hello Creating Azure custom marketplace extension megha ✓

Creating Azure custom marketplace extension ... ⓘ

Task version 0.\* Link settings View YAML Remove

Display name \* Echo Hello

Sample String \* ⓘ Hello

Control Options

Output Variables



Thank  
You!