DevOps Training

1st session

* Devops Definition

<https://docs.microsoft.com/en-us/azure/devops/learn/what-is-devops#getting-to-devops>

* Devops Culture

<https://docs.microsoft.com/en-us/azure/devops/learn/what-is-devops-culture>

<https://martinfowler.com/bliki/DevOpsCulture.html>

* DevOps Application Lifecycle

<https://www.cuelogic.com/blog/devops-lifecycle>

2nd sesión

* Operating and Maintaining DevOps Pipelines
  + Continuous Integration

[What is Continuous Integration? - Azure DevOps | Microsoft Docs](https://docs.microsoft.com/en-us/devops/develop/what-is-continuous-integration#:~:text=Continuous%20Integration%20(CI)%20is%20the,after%20every%20small%20task%20completion.)

<https://www.altexsoft.com/blog/engineering/devops-principles-practices-and-devops-engineer-role/#:~:text=DevOps%20stands%20for%20development%20and,Agile%20and%20continuous%20delivery%20approaches>

<https://azure.microsoft.com/en-us/overview/what-is-devops/#practices>

* Azure DevOps builds - Operating and Maintaining DevOps Pipelines
  + Build Pipelines (Activity)

1. Select a Repo from your project
2. You have to do an analysis of the steps that you need to follow to build your application i.e. Checkout code, install NPM, Install dependencies ,… etc
3. Create a build from scratch in the classic way, you can find some examples about how to do it here:
   1. <https://threewill.com/beginners-guide-to-using-the-classic-azure-devops-build-process/>
   2. <https://docs.microsoft.com/en-us/azure/devops/pipelines/get-started/?view=azure-devops>
   3. List of tasks that can be used in azure pipelines: <https://docs.microsoft.com/en-us/azure/devops/pipelines/tasks/?view=azure-devops>
4. Save and Run your Pipeline

* Infrastructure as Code
  1. <https://docs.microsoft.com/en-us/devops/deliver/what-is-infrastructure-as-code>
  2. <https://devblogs.microsoft.com/devops/what-is-infrastructure-as-code/>
  3. <https://docs.microsoft.com/en-us/dotnet/architecture/cloud-native/infrastructure-as-code>
  4. Azure Resource Manager
     1. <https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/syntax?WT.mc_id=azuredevops-azuredevops-jagord>
     2. <https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/?WT.mc_id=azuredevops-azuredevops-jagord>
     3. <https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/best-practices?WT.mc_id=azuredevops-azuredevops-jagord>
     4. Activity: Create and test your first ARM Template: <https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/template-tutorial-create-first-template?tabs=azure-powershell&WT.mc_id=azuredevops-azuredevops-jagord>
  5. IaC Activity: Check ARM Templates.doc

3rd Session

* Operating and Maintaining DevOps Pipelines
  + Continuous delivery

<https://docs.microsoft.com/en-us/azure/devops/learn/what-is-continuous-delivery>

<https://continuousdelivery.com/>

* Azure Devops – Releases
  + ADO Releases: <https://docs.microsoft.com/en-us/azure/devops/pipelines/release/releases?view=azure-devops>
  + <https://docs.microsoft.com/en-us/azure/devops/pipelines/release/artifacts?view=azure-devops>
* Release Pipelines (Activity)
  + Using the artifact created in our previous activity prepare a release to deploy trough the environments

<https://docs.microsoft.com/en-us/azure/devops/pipelines/release/?view=azure-devops>

<https://docs.microsoft.com/en-us/azure/devops/pipelines/apps/cd/deploy-webdeploy-webapps?view=azure-devops>

* + Identify the steps that you need to follow to release your project.
  + Identify the variables that you need to handle to have a successfully release.
  + Identify the resource and the environment that you want to configure
  + Configure at least one environment to deploy your artifact
  + Save and test your release

4th Session

* YML Pipelines
  + Pipelines Key Concepts url: <https://docs.microsoft.com/en-us/azure/devops/pipelines/get-started/key-pipelines-concepts?view=azure-devops>
  + YML pipeline Basics – url: <https://docs.microsoft.com/en-us/azure/devops/pipelines/yaml-schema?view=azure-devops&tabs=schema%2Cparameter-schema>
* YML Pipelines - Activity