**1) What are different artifacts you need to create - name of the artifacts and its purpose**

With Azure DevOps, we can share packages across all projects Examples Like Maven, npm, NuGet, and Python package

1. a NuGet package is a single ZIP file with the .nupkg extension that contains compiled code (DLLs), other files related to that code, and a descriptive manifest that includes information like the package's version number

2. npm is a package manager for the JavaScript programming language maintained by npm

3. Maven is a build automation tool used primarily for Java projects.

**2) List the tools you will to create and store the Terraform templates.**

Visual studio code can be used for creating the Terraform templates.

Storing Terraform templates can used in GIT, GitHub, GitLab Version Control

**3) Explain the process and steps to create automated deployment pipeline.**

Git repositories for source control.

Build and Release pipelines for CI/CD automation.

Agile tools covering Kanban/scrum project methodologies.

Continuous Integration-Continuous integration is the process of automating builds and testing that occur as the code is completed and committed to the system

Continuous Delivery-

Continuous Delivery is the ability to get changes of all types—including new features, configuration changes, bug fixes and experiments

Continuous Deployment-Continuous Deployment, your application is run through an automated pipeline workflow.

**4) Create a sample Terraform template you will use to deploy Below services:**

Please find the Terraform Templates added in the folder

Vnet

2 Subnet

NSG to open port 80 and 443

1 Window VM in each subnet

1 Storage account

**5) Explain how you will access the password stored in Key Vault and use it as Admin Password in the VM**

**Azure Key Vault Secrets Data Source**

Create Key Vault Secret data sources for each of the secrets you require.

Key Vault Secret Data Source

data "azurerm\_key\_vault\_secret" "Prasanna-admin-login-password" {

name = "Vm -admin-password"

key\_vault\_id = data.azurerm\_key\_vault.prasanna.id

}

output "secret\_value" {

value = data.azurerm\_key\_vault\_secret.ufo-admin-login-password.value

}