

Assignment

Deploy the following **Azure infrastructure** in a single project:

1. **One Resource Group** (name generated dynamically using locals and expressions).
2. **One Virtual Network** with address space 10.0.0.0/16.
3. **Multiple Subnets** (at least 3) created using **for_each** over a map variable.
4. **Two Linux Virtual Machines** created with **count** inside the first subnet.
 - VM size, OS image, and naming must come from **variables**.
5. **One Public IP** assigned only to the first VM.
6. **Dynamic Tags** created using functions (merge, length, conditionals).
7. **Provisioner (remote-exec)** to install and start Nginx on both VMs.
8. **Outputs** to display:
 - Resource Group name
 - Subnet names (using a for loop in output)
 - Public IP of VM1

Approach

- Use **variables.tf** to define location, VM size, number of VMs, subnet map, and environment.
- Use **locals.tf** for naming conventions like "\${var.env}-rg" and resource prefixes.
- Create subnets using **for_each** over a map variable – use function for this.
- Create VMs using **count**.
- Use **dynamic tags** like
- Use a **provisioner** to install Nginx on each VM.
- Use **outputs.tf** to print important values like IP of VMs