

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.
 - o 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:
 - o Resource Group name
 - o Subnet names (using a for loop in output)
 - o Public IP of VM1
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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