



# **LOYALIST COLLEGE IN TORONTO**

## **In-Class Assignment - 2**

**Course Code – CLOD1004**

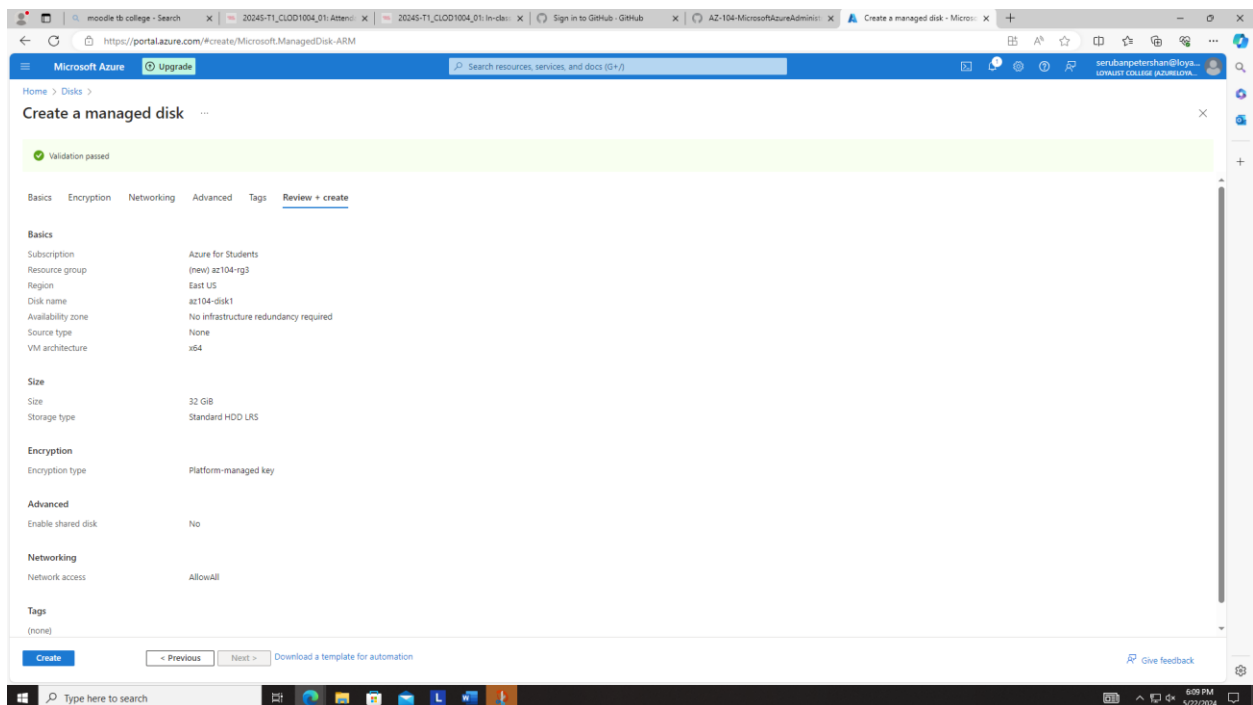
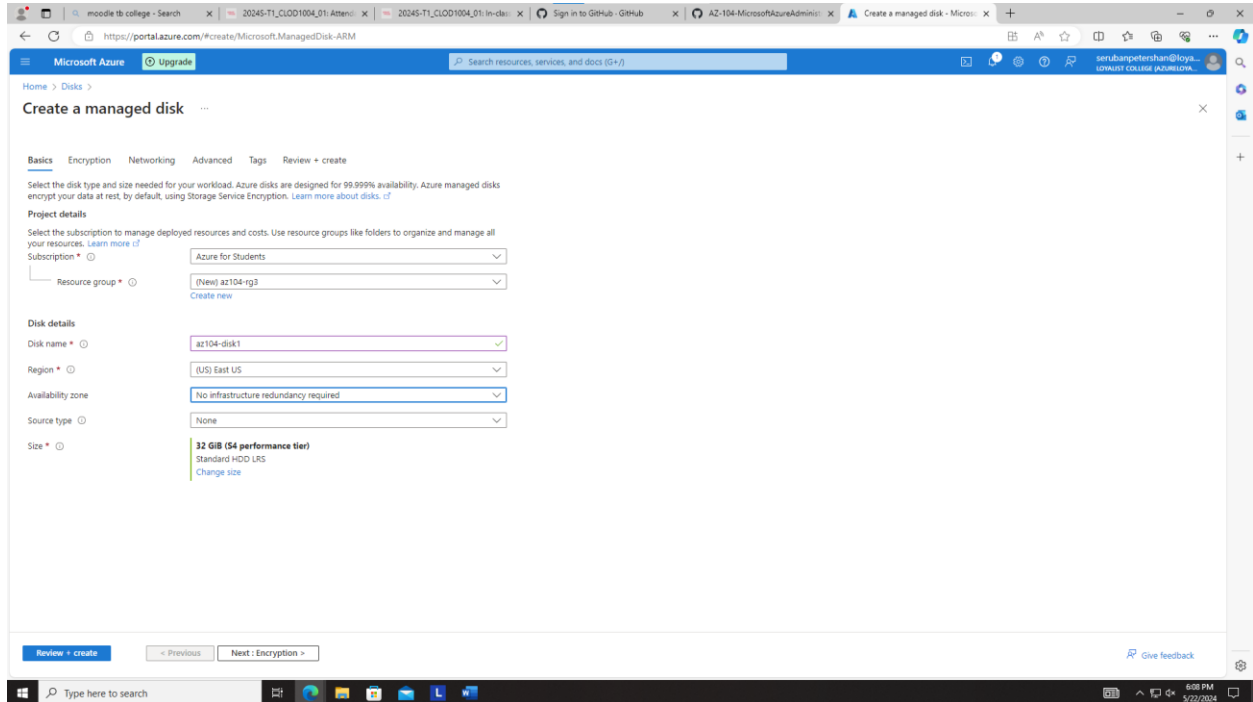
Instructor Name – Bhanuteja Somarouthu

Seruban Peter Shan (500235797)

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# TASK 1

Created a managed disk with 32gb standard with disk name az104-disk1 With **No infrastructure redundancy required** Zone with **East US**



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Later when we check the template files we can see the below code

parameter.json

```
{
  "$schema": "https://schema.management.azure.com/schemas/2015-01-01/deploymentParameters.json#",
  "contentVersion": "1.0.0.0",
  "parameters": {
    "disks_az104_disk1_name": {
      "value": null
    }
  }
}
```

template.json

```
{
  "$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentTemplate.json#",
  "contentVersion": "1.0.0.0",
  "parameters": {
    "disks_az104_disk1_name": {
      "defaultValue": "az104-disk1",
      "type": "String"
    }
  },
  "variables": {},
  "resources": [
    {
      "type": "Microsoft.Compute/disks",
      "apiVersion": "2023-01-02",
      "name": "[parameters('disks_az104_disk1_name')]",
      "location": "eastus",
      "sku": {
        "name": "Standard_LRS",
        "tier": "Standard"
      },
      "properties": {
        "creationData": {
          "createOption": "Empty"
        }
      }
    }
  ]
}
```

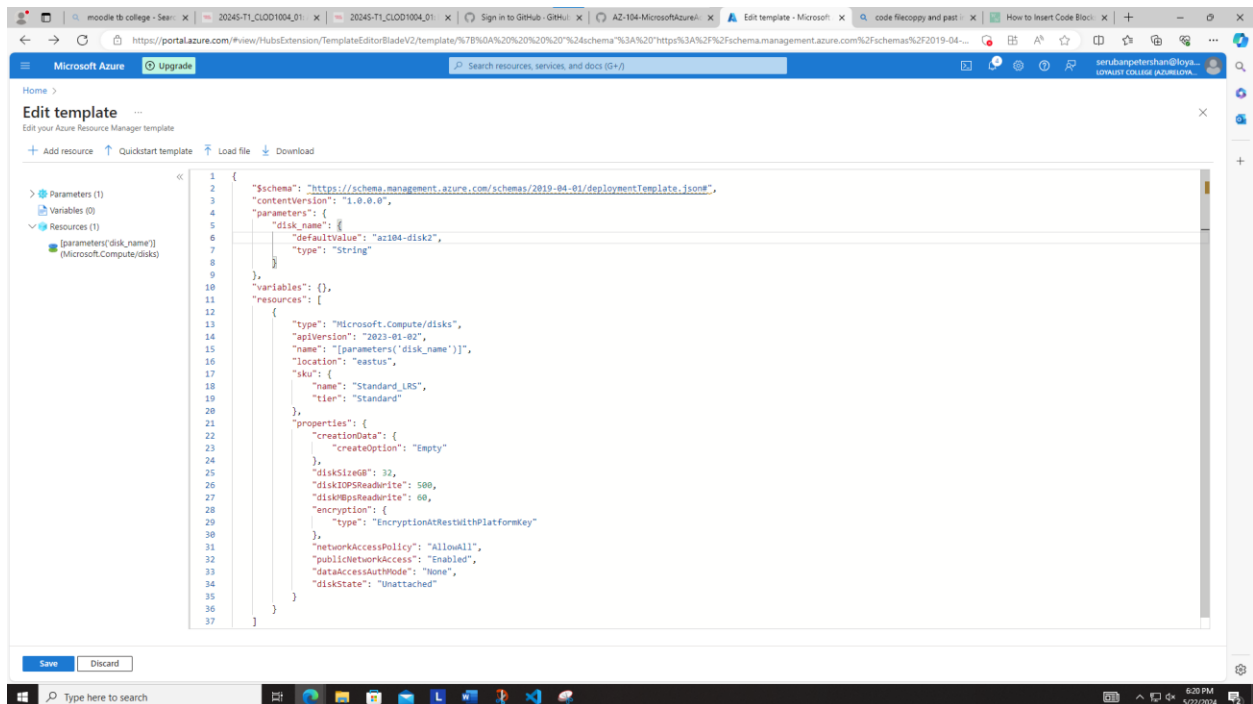
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```

    },
    "diskSizeGB": 32,
    "diskIOPSReadWrite": 500,
    "diskMBpsReadWrite": 60,
    "encryption": {
      "type": "EncryptionAtRestWithPlatformKey"
    },
    "networkAccessPolicy": "AllowAll",
    "publicNetworkAccess": "Enabled",
    "dataAccessAuthMode": "None",
    "diskState": "Unattached"
  }
}
]
}

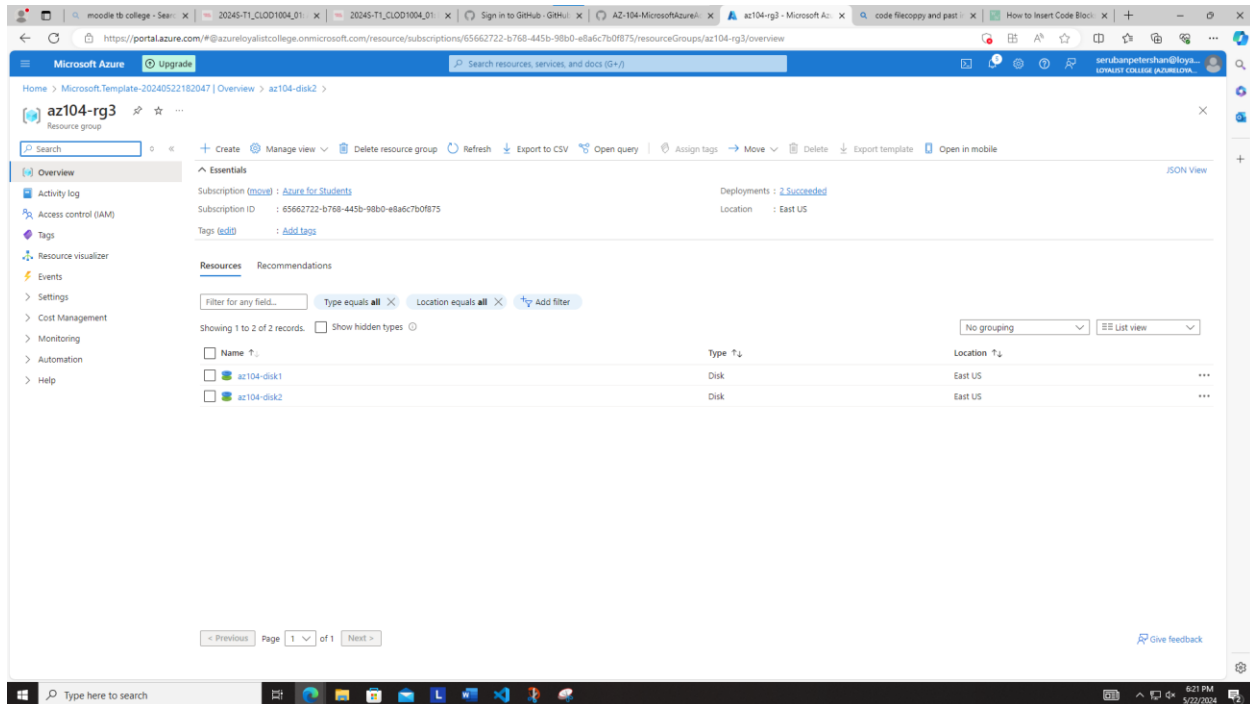
```

Now we want to deploy this with a new name **az104-disk2** on custom deployment so let's go to custom deployment upload the **template.json** later change the name as **az104-disk2**



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After it's created if you check the resource page you will see two disks



And if we look at the new template you will see the changes we made before

```
{
  "$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentTemplate.json#",
  "contentVersion": "1.0.0.0",
  "parameters": {
    "disk_name": {
      "defaultValue": "az104-disk2",
      "type": "String"
    }
  },
  "variables": {},
  "resources": [
    {
      "type": "Microsoft.Compute/disks",
      "apiVersion": "2023-01-02",
      "name": "[parameters('disk_name')]",
      "location": "eastus",
      "sku": {
        "name": "Standard_LRS",
        "tier": "Standard"
      }
    }
  ]
}
```

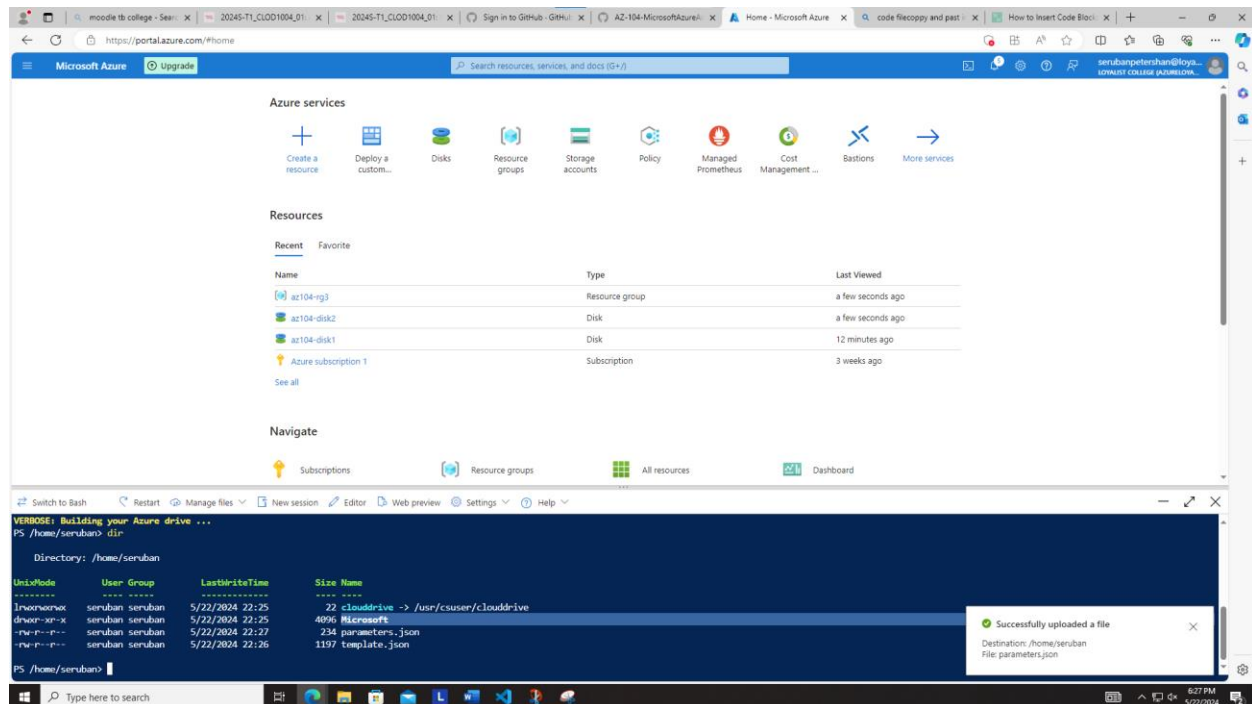
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```

    },
    "properties": {
      "creationData": {
        "createOption": "Empty"
      },
      "diskSizeGB": 32,
      "diskIOPSReadWrite": 500,
      "diskMBpsReadWrite": 60,
      "encryption": {
        "type": "EncryptionAtRestWithPlatformKey"
      },
      "networkAccessPolicy": "AllowAll",
      "publicNetworkAccess": "Enabled",
      "dataAccessAuthMode": "None",
      "diskState": "Unattached"
    }
  }
}
]
}

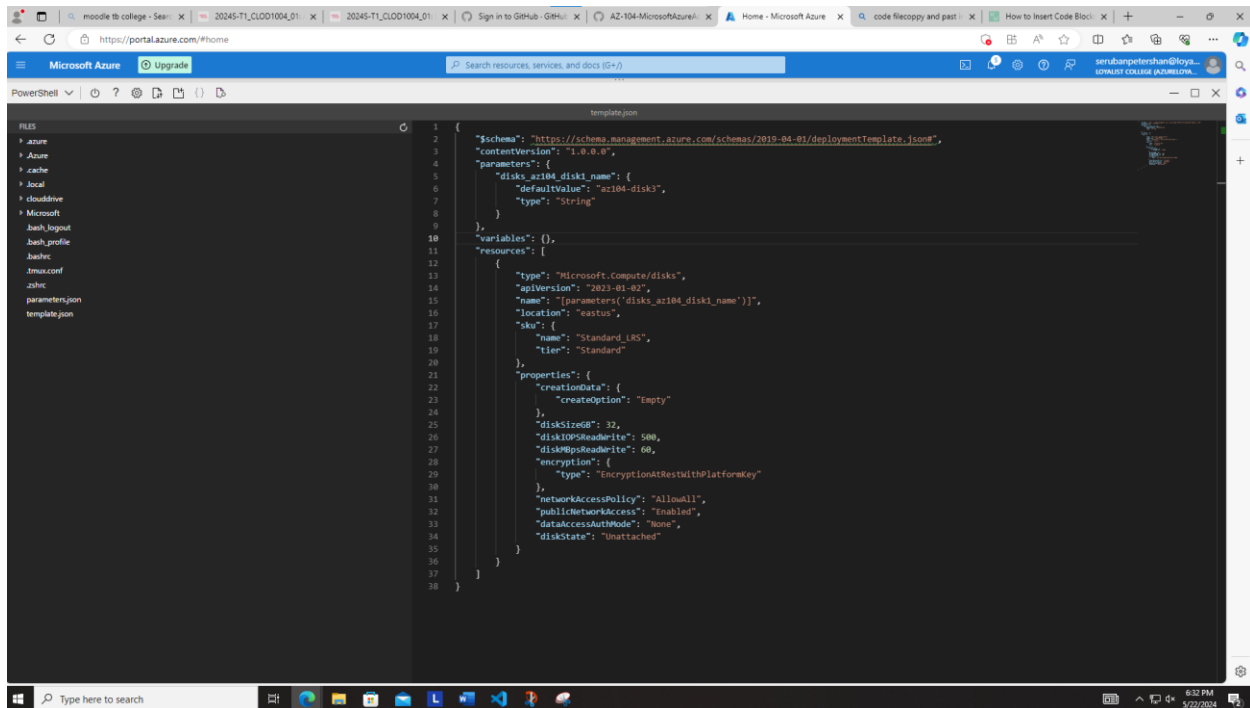
```

After creating Cloudshell and use Powershell as CLI we upload **parameter.json** and **template.json** and when you type dir you will see those two files in your power shell



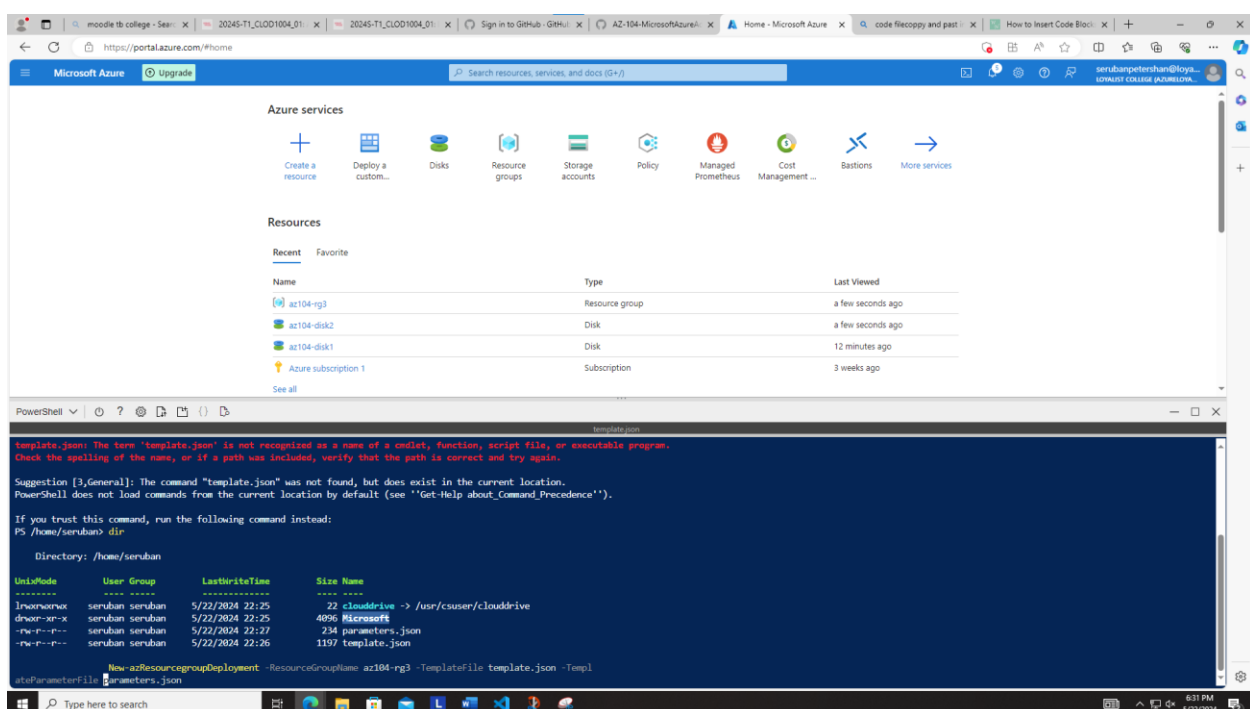
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Now to add a 3<sup>rd</sup> disk we are going to edit through cloud shell editor and change the disk name to **az104-disk3**



```
1 {
2   "$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentTemplate.json#",
3   "contentVersion": "1.0.0.0",
4   "parameters": {
5     "disks_az104_disk_name": {
6       "defaultValue": "az104-disk3",
7       "type": "String"
8     }
9   },
10  "variables": {},
11  "resources": [
12    {
13      "type": "Microsoft.Compute/disks",
14      "apiVersion": "2023-01-02",
15      "name": "[parameters('disks_az104_disk_name')]",
16      "location": "eastus",
17      "sku": {
18        "name": "Standard_LRS",
19        "tier": "Standard"
20      },
21      "properties": {
22        "creationData": {
23          "createOption": "Empty"
24        },
25        "diskSizeGB": 32,
26        "diskIOPSReadWrite": 500,
27        "diskMBpsReadWrite": 60,
28        "encryption": {
29          "type": "EncryptionAtRestWithPlatformKey"
30        },
31        "networkAccessPolicy": "AllowAll",
32        "publicNetworkAccess": "Enabled",
33        "dataAccessAuthMode": "None",
34        "diskState": "Unattached"
35      }
36    }
37  ]
38 }
```

Now we shall type the PowerShell azure code to create using the template and parameter file



```
template.json: The term 'template.json' is not recognized as a name of a cmdlet, function, script file, or executable program.
Check the spelling of the name, or if a path was included, verify that the path is correct and try again.

Suggestion [J,General]: The command "template.json" was not found, but does exist in the current location.
PowerShell does not load commands from the current location by default (see "Get-Help about_Command_Precedence").

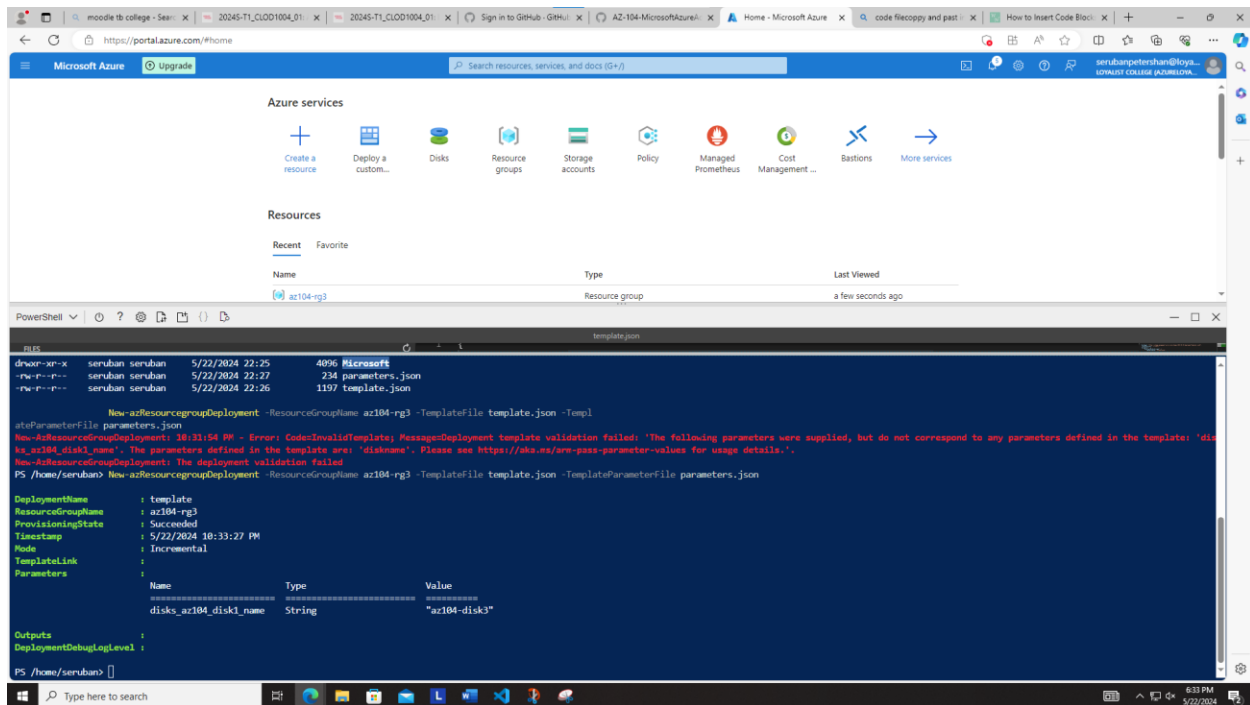
If you trust this command, run the following command instead:
PS /home/seruban> dir

Directory: /home/seruban

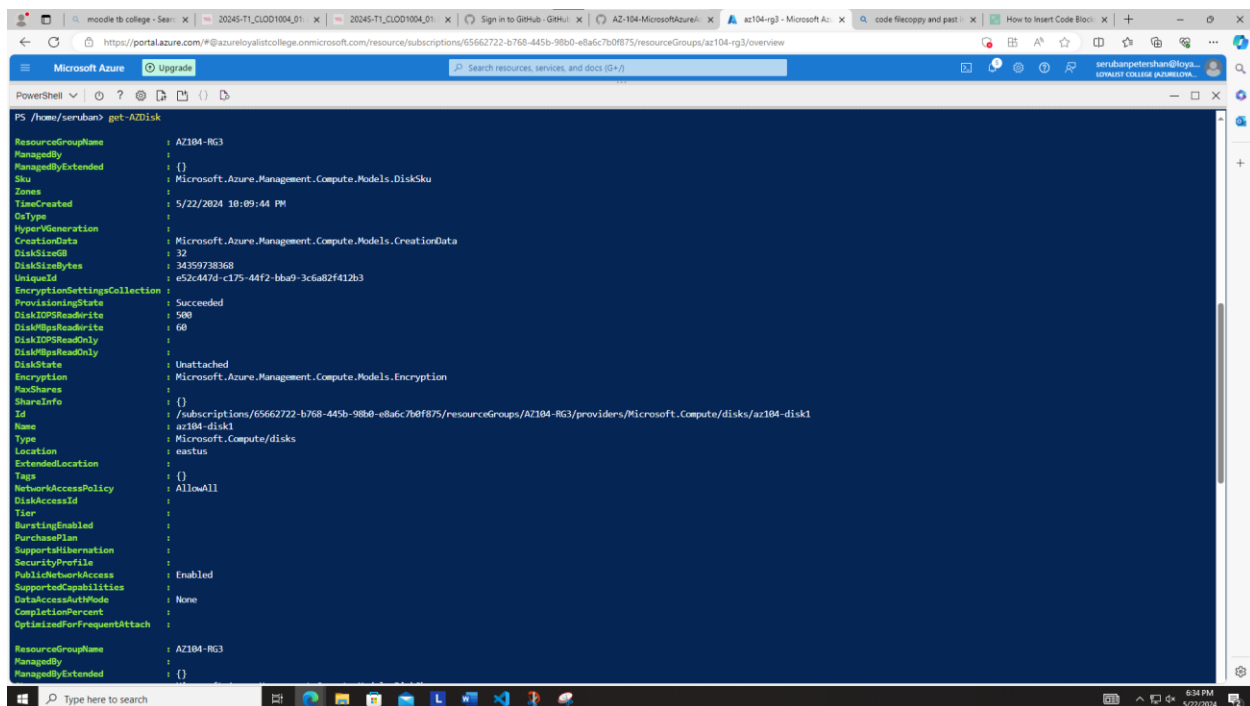
UnitMode      User Group      LastWriteTime         Size Name
-----
lsnoname      seruban seruban  5/22/2024 22:25         22 cloudrive -> /usr/couser/cloudrive
dnon-xr-x     seruban seruban  5/22/2024 22:25        4096 Microsoft
-rw-r--r--    seruban seruban  5/22/2024 22:27         234 parameters.json
-rw-r--r--    seruban seruban  5/22/2024 22:26        1197 template.json

New-AzResourceGroupDeployment -ResourceGroupName az104-rg3 -TemplateFile template.json -TemplateParameterFile parameters.json
```

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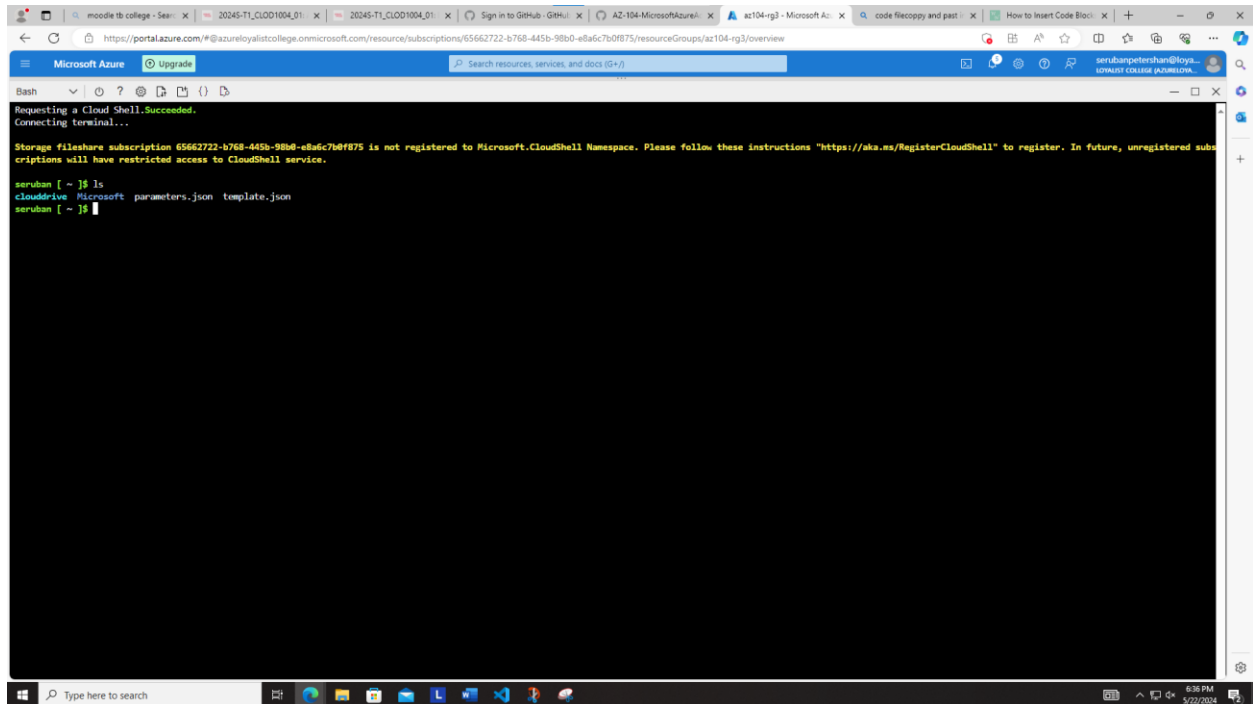
When we type get -AZDisk we will get the new disk name if available



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Now let's switch to bash and try to create another disk with name **az104-disk4**

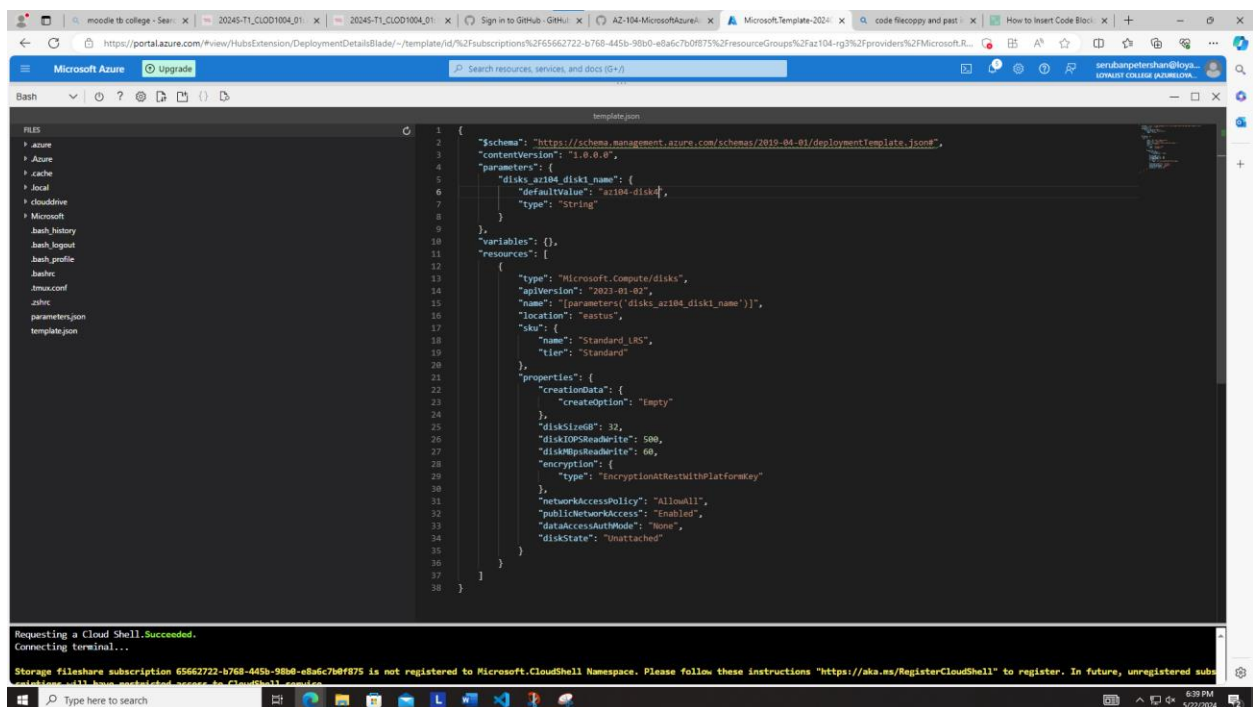


```
Bash
Requesting a Cloud Shell.Succeeded.
Connecting terminal...

Storage files share subscription 65662722-b768-445b-98b0-e8a6c7b0f875 is not registered to Microsoft.CloudShell Namespace. Please follow these instructions "https://aka.ms/RegisterCloudShell" to register. In future, unregistered subscriptions will have restricted access to CloudShell service.

seruban [ ~ ]$ ls
cloudrive  Microsoft  parameters.json  template.json
seruban [ ~ ]$
```

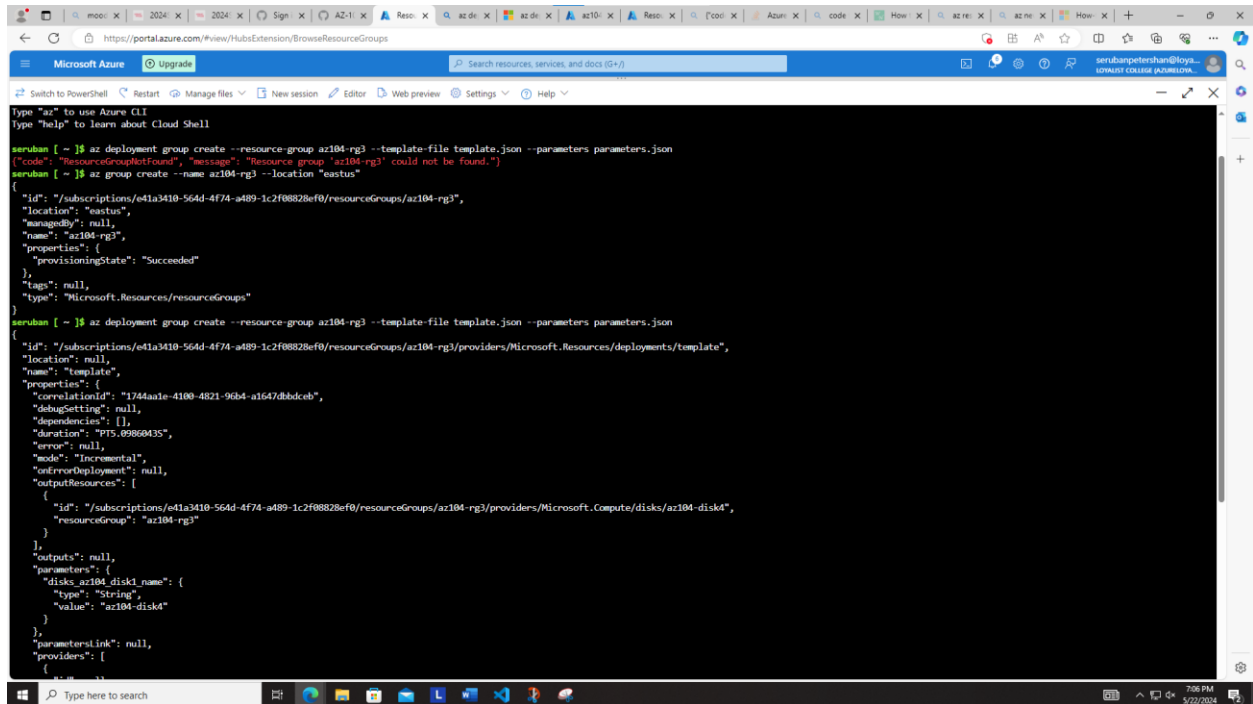
After editing it on the cloudshell editor



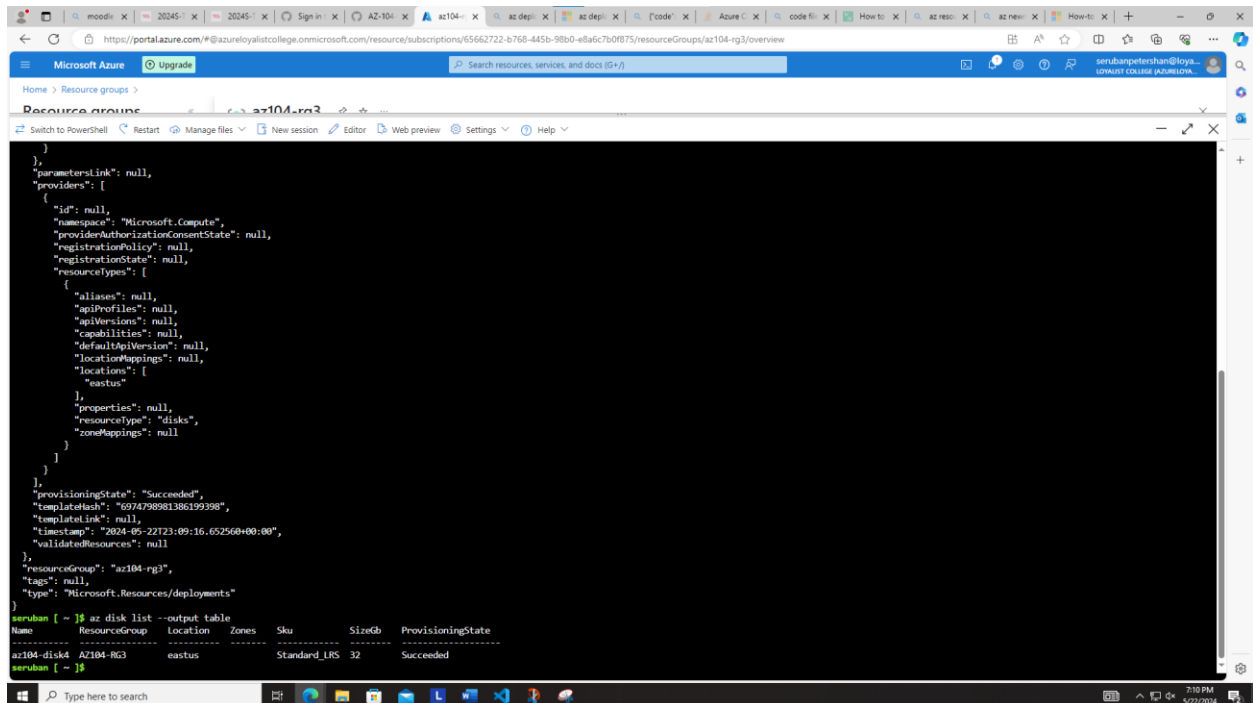
```
template.json
1 {
2   "$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentTemplate.json#",
3   "contentVersion": "1.0.0.0",
4   "parameters": {
5     "disks_az104_disk1_name": {
6       "defaultValue": "az104-disk4",
7       "type": "String"
8     },
9   },
10  "variables": {},
11  "resources": [
12    {
13      "type": "Microsoft.Compute/disks",
14      "apiVersion": "2023-01-02",
15      "name": "[parameters('disks_az104_disk1_name')]",
16      "location": "eastus",
17      "sku": {
18        "name": "Standard_LRS",
19        "tier": "Standard"
20      },
21      "properties": {
22        "creationData": {
23          "createOption": "Empty"
24        },
25        "diskSizeGB": 32,
26        "diskIOPSReadWrite": 500,
27        "diskMbpsReadWrite": 40,
28        "encryption": {
29          "type": "EncryptionAtRestWithPlatformKey"
30        },
31        "networkAccessPolicy": "AllowAll",
32        "publicNetworkAccess": "Enabled",
33        "dataAccessAuthMode": "None",
34        "diskState": "Unattached"
35      }
36    }
37  ]
38 }
```

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We type the code to create the disk



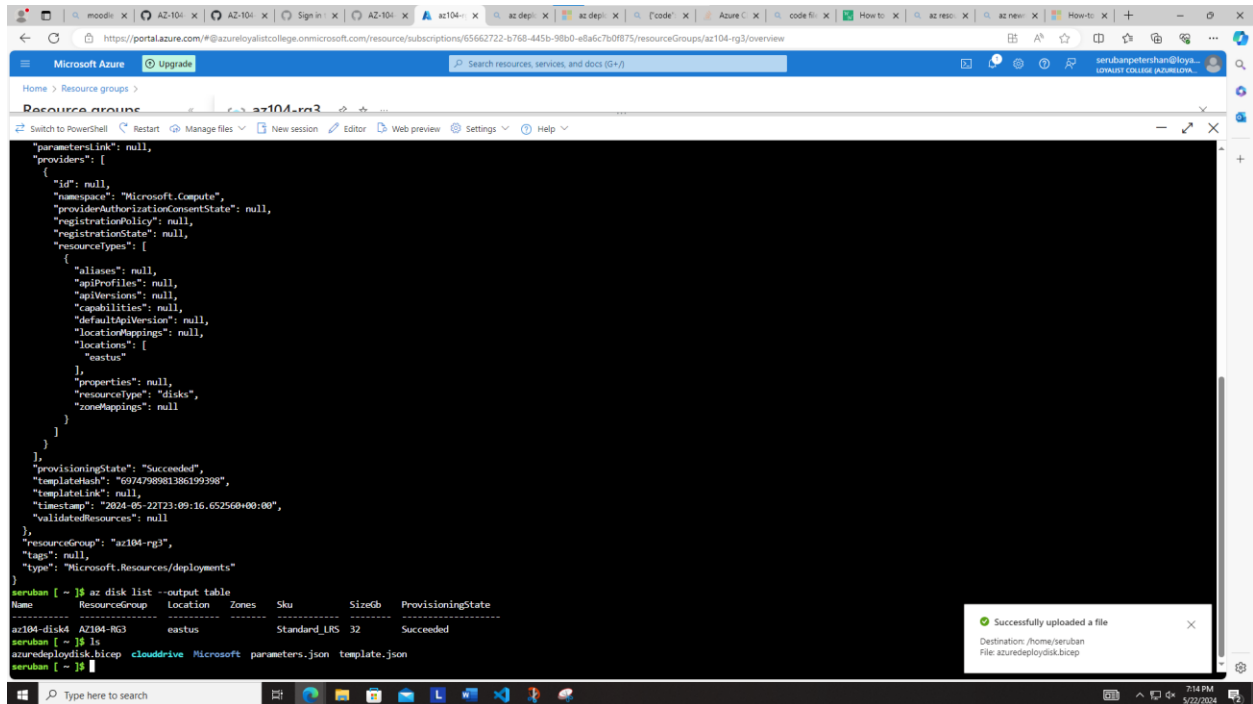
```
seruban [ ~ ] $ az deployment group create --resource-group az104-rg3 --template-file template.json --parameters parameters.json
{"code": "ResourceGroupNotFound", "message": "Resource group 'az104-rg3' could not be found."}
seruban [ ~ ] $ az group create --name az104-rg3 --location "eastus"
{
  "id": "/subscriptions/e1a3410-564d-4f74-a489-1c2f0882bef0/resourceGroups/az104-rg3",
  "location": "eastus",
  "managedBy": null,
  "name": "az104-rg3",
  "properties": {
    "provisioningState": "Succeeded"
  },
  "tags": null,
  "type": "Microsoft.Resources/resourceGroups"
}
seruban [ ~ ] $ az deployment group create --resource-group az104-rg3 --template-file template.json --parameters parameters.json
{
  "id": "/subscriptions/e1a3410-564d-4f74-a489-1c2f0882bef0/resourceGroups/az104-rg3/providers/Microsoft.Resources/deployments/template",
  "location": null,
  "name": "template",
  "properties": {
    "correlationId": "1744aa1e-4100-4821-96b4-a1647dbdc6b",
    "debugSetting": null,
    "dependencies": [],
    "duration": "PT5.6960435S",
    "error": null,
    "mode": "Incremental",
    "onErrorDeployment": null,
    "outputResources": [
      {
        "id": "/subscriptions/e1a3410-564d-4f74-a489-1c2f0882bef0/resourceGroups/az104-rg3/providers/Microsoft.Compute/disks/az104-disk4",
        "resourceGroup": "az104-rg3"
      }
    ],
    "outputs": null,
    "parameters": {
      "disks_az104_disk_name": {
        "type": "string",
        "value": "az104-disk4"
      }
    },
    "parametersLink": null,
    "providers": [
      {
        "id": null,
        "namespace": "Microsoft.Compute",
        "providerAuthorizationConsentState": null,
        "registrationPolicy": null,
        "registrationState": null,
        "resourceTypes": [
          {
            "aliases": null,
            "apiProfile": null,
            "apiVersions": null,
            "capabilities": null,
            "defaultApiVersion": null,
            "locationMappings": null,
            "locations": [
              "eastus"
            ],
            "properties": null,
            "resourceType": "disks",
            "zoneMappings": null
          }
        ]
      }
    ],
    "provisioningState": "Succeeded",
    "templateHash": "6974798981386199398",
    "templateLink": null,
    "timestamp": "2024-05-22T23:09:16.652560+00:00",
    "validatedResources": null
  },
  "resourceGroup": "az104-rg3",
  "tags": null,
  "type": "Microsoft.Resources/deployments"
}
```



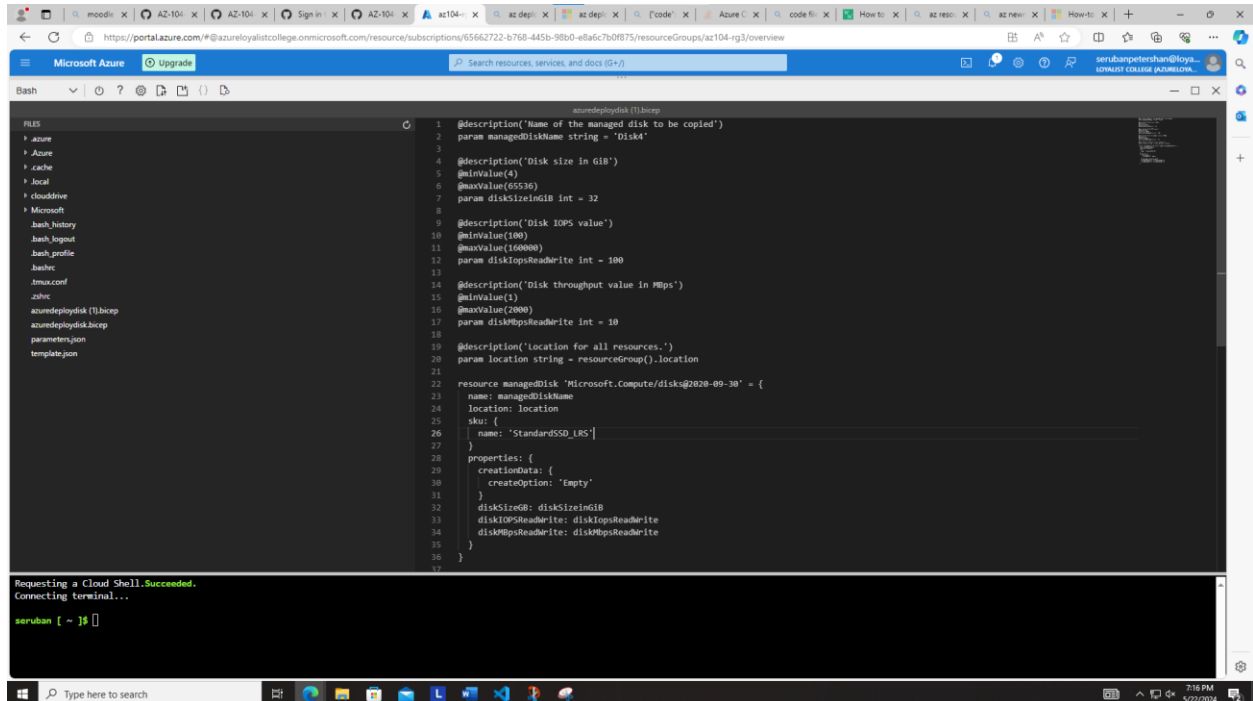
```
seruban [ ~ ] $ az disk list --output table
-----
Name                                ResourceGroup Location Zones Sku      SizeGb ProvisioningState
-----
az104-disk4                          AZ104-RG3    eastus  Standard_LRS 32      Succeeded
seruban [ ~ ] $
```

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Now let us upload the bicep file and edit that to create **Disk4**

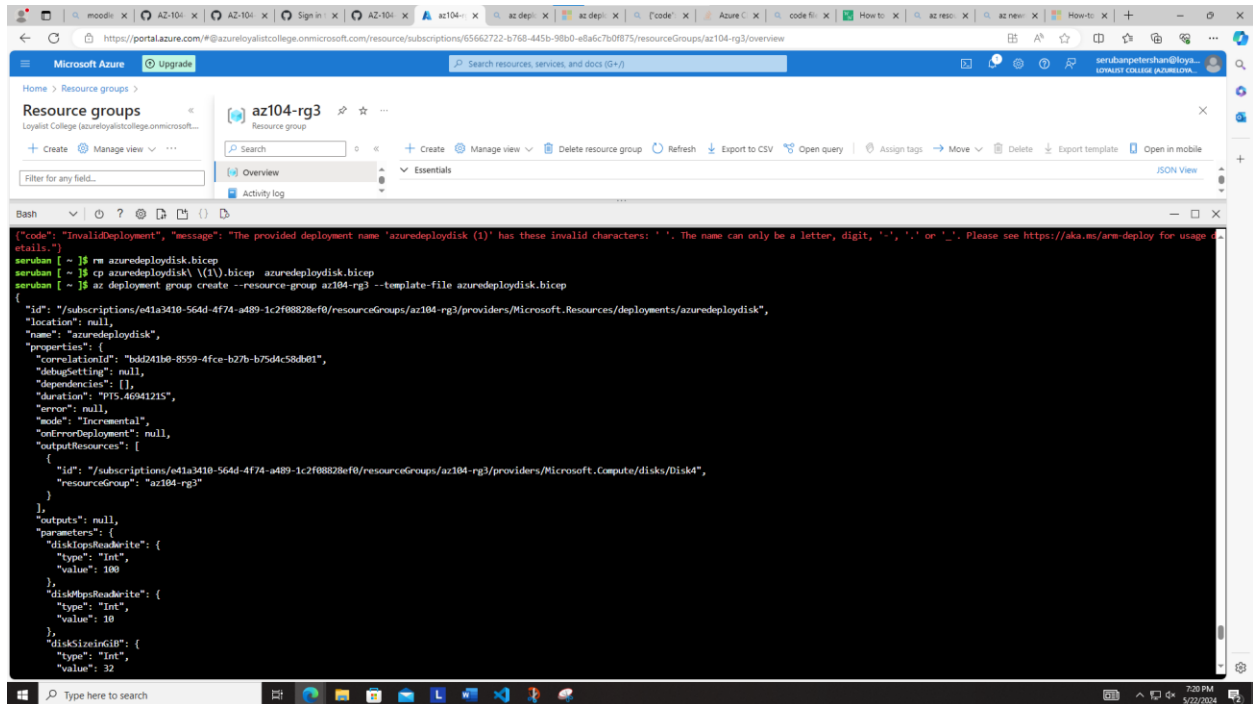


With 32GB and StandardSSD\_LRS



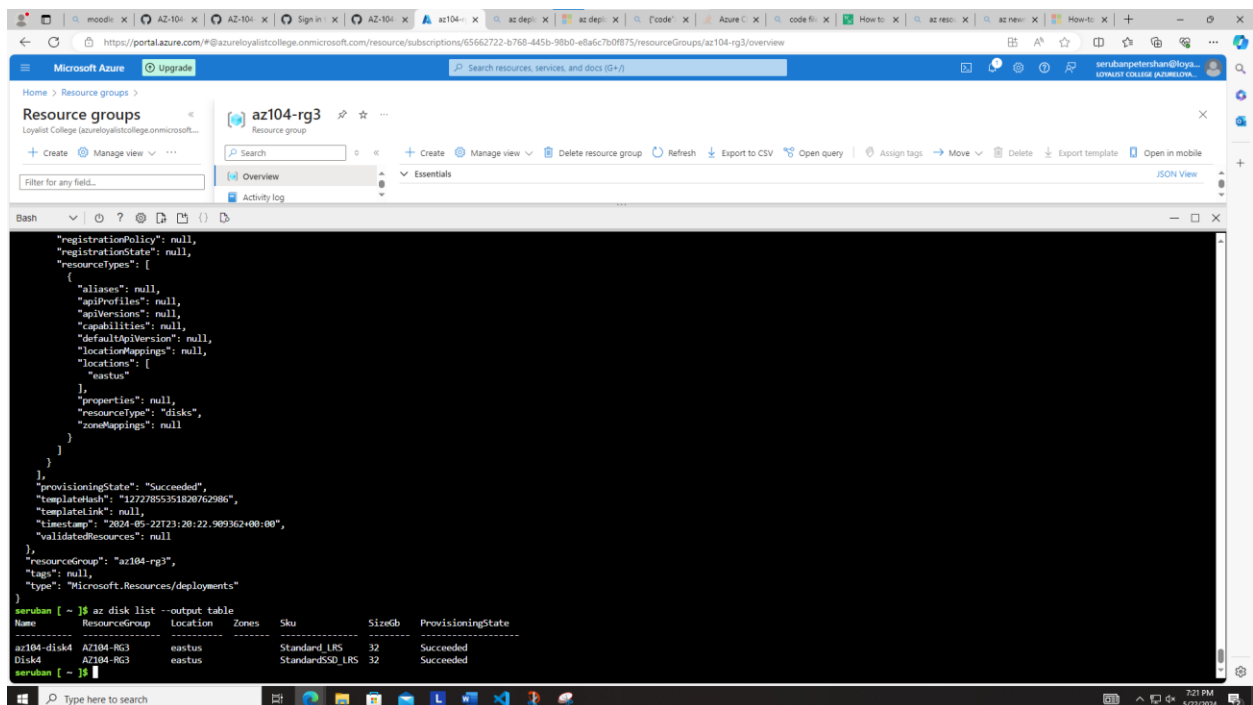
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Then you type the code to use the bicep file as template to create this DISK



The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Azure logo, search bar, and user profile. The main content area displays the 'az104-rg3' resource group overview. A terminal window is open at the bottom, showing the following commands and output:

```
Bash
seruban [ ~ ] $ az deployment group create --resource-group az104-rg3 --template-file azuredeploydisk.bicep
{
  "id": "/subscriptions/ef1a3410-564d-4f74-a489-1c2f08828ef0/resourceGroups/az104-rg3/providers/Microsoft.Resources/deployments/azuredeploydisk",
  "location": null,
  "name": "azuredeploydisk",
  "properties": {
    "correlationId": "b6d241b0-8559-4fce-b27b-b75d4c58db01",
    "debugLogging": null,
    "dependencies": [],
    "duration": "PT5.46941215S",
    "error": null,
    "mode": "Incremental",
    "onErrorDeployment": null,
    "outputResources": [
      {
        "id": "/subscriptions/ef1a3410-564d-4f74-a489-1c2f08828ef0/resourceGroups/az104-rg3/providers/Microsoft.Compute/disk4",
        "resourceGroup": "az104-rg3"
      }
    ],
    "outputs": null,
    "parameters": {
      "diskSizeInGiB": {
        "type": "Int",
        "value": 100
      },
      "diskSizeInGiB8": {
        "type": "Int",
        "value": 10
      },
      "diskSizeInGiB8": {
        "type": "Int",
        "value": 32
      }
    }
  }
}
```



The screenshot shows the Microsoft Azure portal interface. The top navigation bar includes the Azure logo, search bar, and user profile. The main content area displays the 'az104-rg3' resource group overview. A terminal window is open at the bottom, showing the following commands and output:

```
Bash
seruban [ ~ ] $ az disk list --output table
Name ResourceGroup Location Zones Sku SizeGb ProvisioningState
az104-disk4 AZ104-REG3 eastus Standard_LRS 32 Succeeded
Disk4 AZ104-REG3 eastus StandardSSD_LRS 32 Succeeded
seruban [ ~ ] $
```

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This is the result of creating in those disk in resource group

The screenshot shows the Microsoft Azure portal interface for the resource group 'az104-rg3'. The left sidebar contains navigation options like 'Overview', 'Activity log', 'Access control (IAM)', 'Tags', 'Resource visualizer', 'Events', 'Settings', 'Deployments', 'Security', 'Deployment stacks', 'Policies', 'Properties', 'Locks', 'Cost Management', 'Monitoring', 'Automation', and 'Help'. The main content area shows the 'Resources' tab with a table of resources:

Name	Type	Location
az104-disk1	Disk	East US
az104-disk2	Disk	East US
az104-disk3	Disk	East US
az104lod1003	Storage account	East US

The screenshot shows the Microsoft Azure portal interface for the resource group 'az104-rg3'. The left sidebar contains navigation options like 'Overview', 'Activity log', 'Access control (IAM)', 'Tags', 'Resource visualizer', 'Events', 'Settings', 'Deployments', 'Security', 'Deployment stacks', 'Policies', 'Properties', 'Locks', 'Cost Management', 'Monitoring', 'Automation', and 'Help'. The main content area shows the 'Resources' tab with a table of resources:

Name	Type	Location
az104-disk4	Disk	East US
Disk4	Disk	East US

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