

Atria Institute of Technology



Department of Information Science and Engineering

Big Data Analytics (18CS72)

Assignment-1

SUBMITTED BY

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Section: ISE '2'

Submission Date:

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Sl. No	Description
1	1. create an EC2 Linux instance in AWS Cloud /Any cloud INSTANCE NAME - YOUR NAME INSTANCE TYPE - t2.micro/any other also. key pair name- your name storage - 10 GB Take the screenshot of instance running status Mention the private IP address and Public IP address. (Execute this program/concept and take a screenshot of the output)
2	Execute the basic Linux commands/ simple program on the instance (Execute this program and take a screenshot of the output)
3	Create the GitHub Account with your credentials, Same things stored in public repository in Github. Share the assignment in github link.

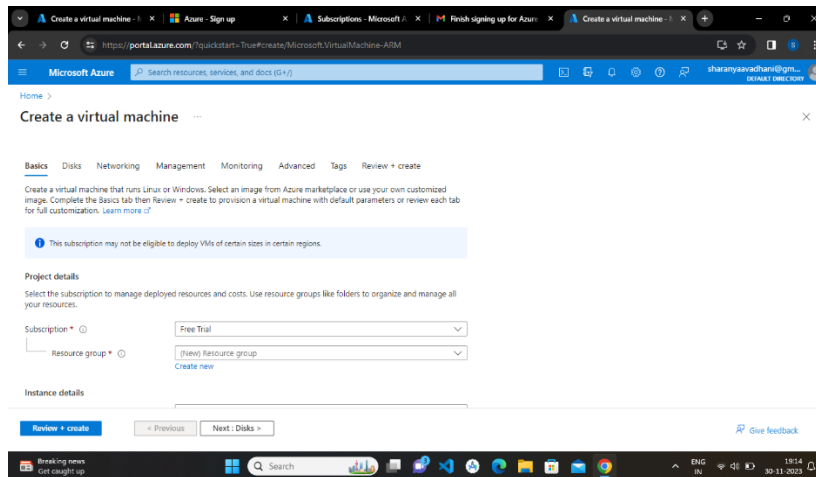
Note:

1. Minimum 10 Screenshots with proper explanation
2. Minimum no of pages – 10
3. Submit your Assignment soft copy (Word & PDF) to anandakumar.ks@atria.edu.
Subject Line in mail: Student_Name_USN_BDA_Assignment1
4. Share your assignment Github link in Assignment Document.
5. Submit Assignment on or before **27th Nov 2023**.

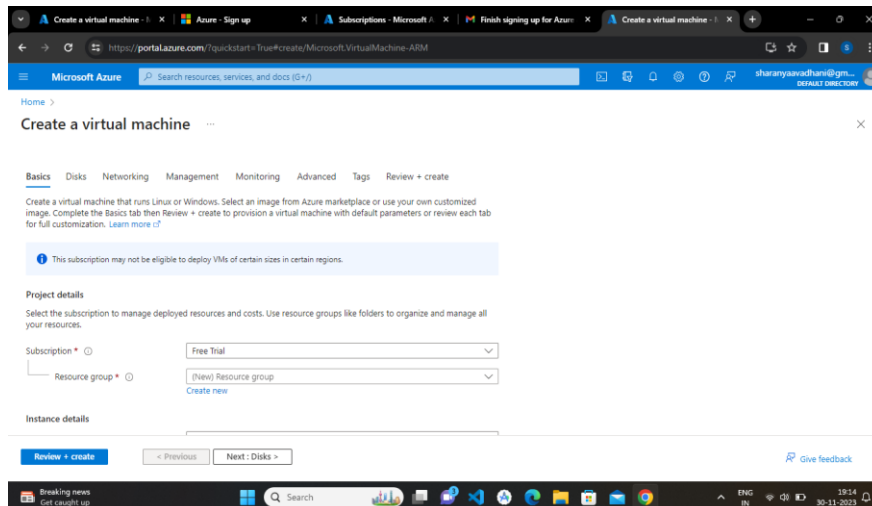
Instance Creation-01

Virtual Machine Instance created in Microsoft Azure

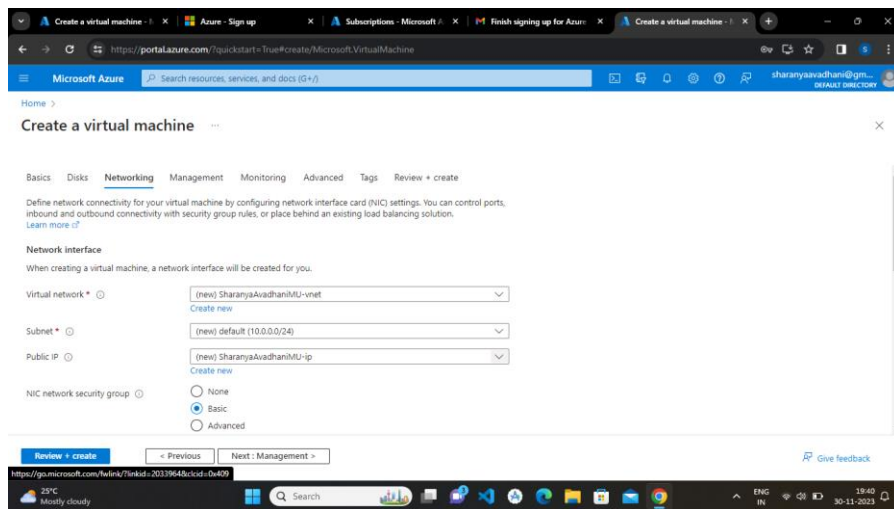
Step:1 Creating a Virtual Machine



Step:2 Filling the basic details

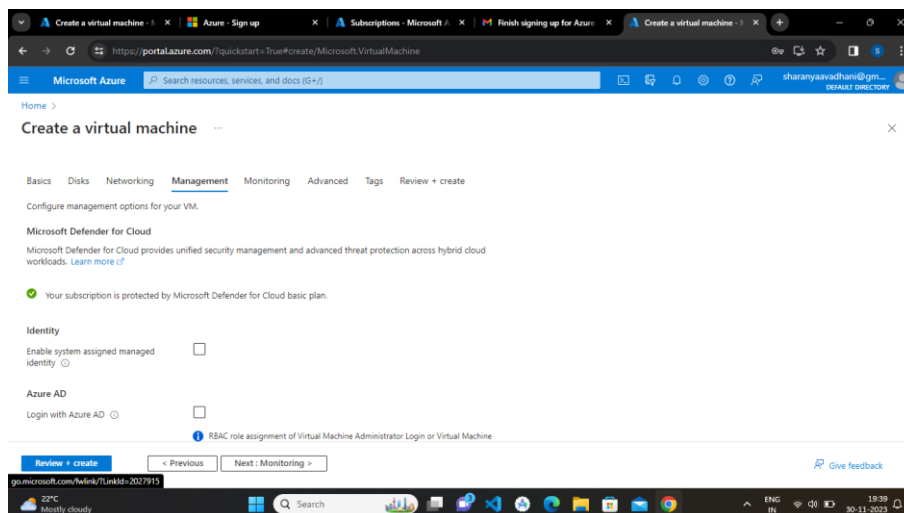


Step:3 Network Interface



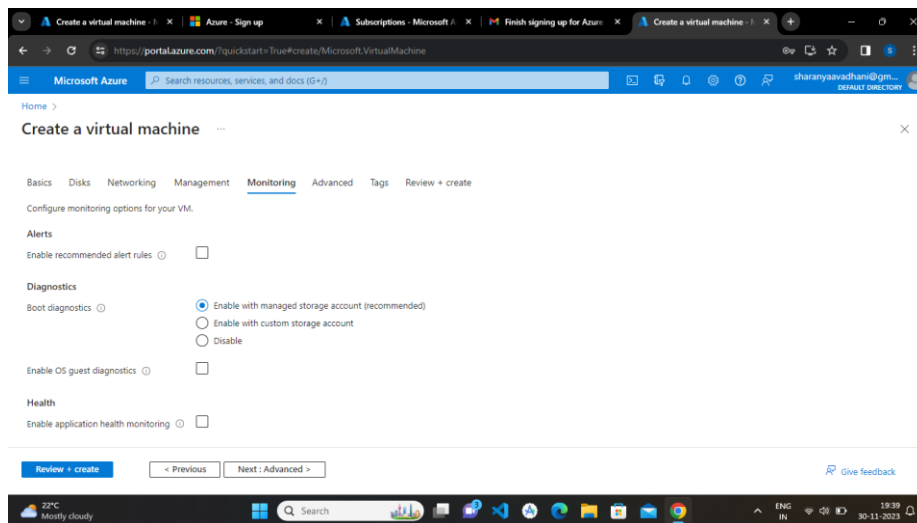
The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal, specifically the 'Networking' tab. The page title is 'Create a virtual machine'. Below the title, there are tabs for 'Basics', 'Disks', 'Networking', 'Management', 'Monitoring', 'Advanced', 'Tags', and 'Review + create'. The 'Networking' tab is selected. The main heading is 'Network interface'. Below it, a sub-heading says 'When creating a virtual machine, a network interface will be created for you.' The form contains the following fields: 'Virtual network' with a dropdown menu showing '(new) SharanyaAvadhaniMU-vnet' and a 'Create new' link; 'Subnet' with a dropdown menu showing '(new) default (10.0.0.0/24)' and a 'Create new' link; 'Public IP' with a dropdown menu showing '(new) SharanyaAvadhaniMU-ip' and a 'Create new' link; and 'NIC network security group' with radio buttons for 'None', 'Basic' (selected), and 'Advanced'. At the bottom, there are buttons for 'Review + create', '< Previous', and 'Next: Management >'. The browser's address bar shows 'https://portal.azure.com/?quickstart=TRUE#create/Microsoft.VirtualMachine'. The taskbar at the bottom shows the date as 30-11-2023 and the time as 18:40.

Step:4 Configuring manage option for the VM

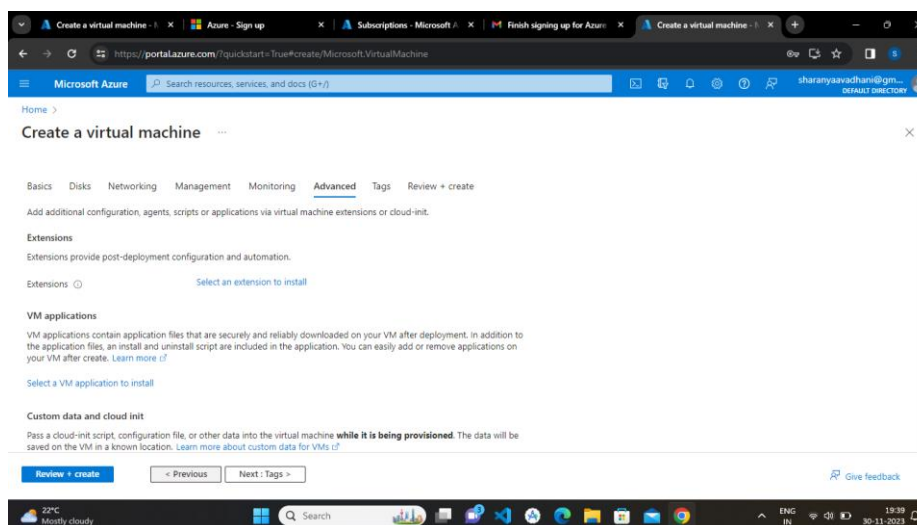


The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal, specifically the 'Management' tab. The page title is 'Create a virtual machine'. Below the title, there are tabs for 'Basics', 'Disks', 'Networking', 'Management', 'Monitoring', 'Advanced', 'Tags', and 'Review + create'. The 'Management' tab is selected. The main heading is 'Configure management options for your VM.' Below it, there is a section for 'Microsoft Defender for Cloud' with a green checkmark and the text 'Your subscription is protected by Microsoft Defender for Cloud basic plan.' Below this, there are two sections: 'Identity' with a checkbox for 'Enable system assigned managed identity' and 'Azure AD' with a checkbox for 'Login with Azure AD'. At the bottom, there are buttons for 'Review + create', '< Previous', and 'Next: Monitoring >'. The browser's address bar shows 'https://portal.azure.com/?quickstart=TRUE#create/Microsoft.VirtualMachine'. The taskbar at the bottom shows the date as 30-11-2023 and the time as 18:39.

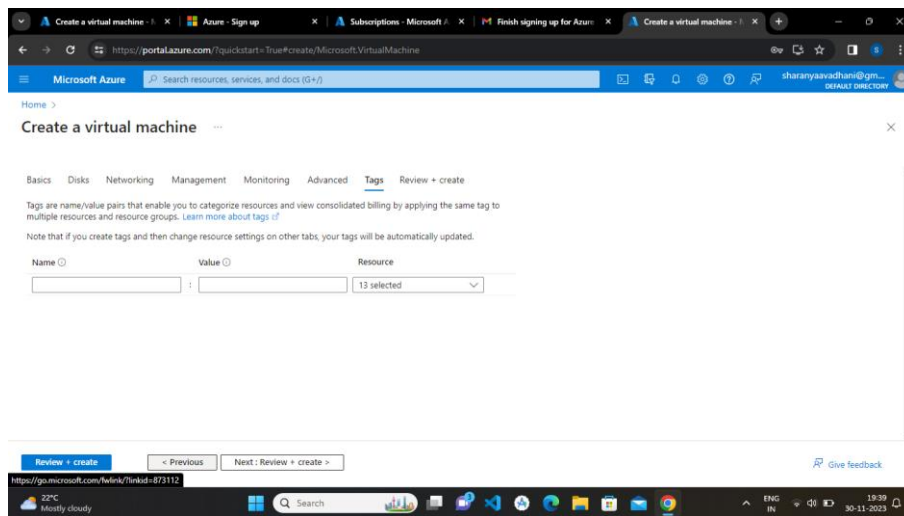
Step:5 Configuring monitoring option for the VM



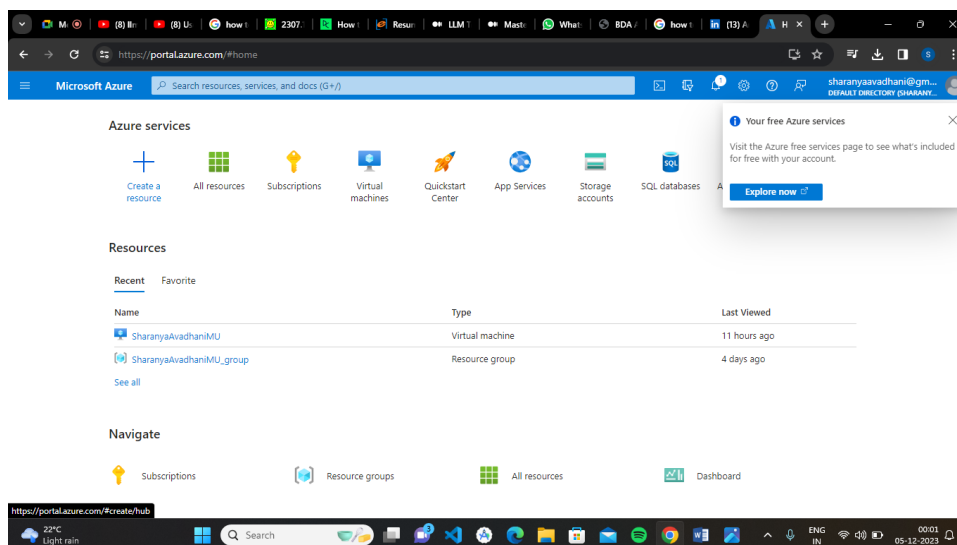
Step:6 Add additional configuration, agents, scripts via virtual machine extensions.



Step:7 creating tags. Tags are the name value pair.



Microsoft Azure Dashboard



Virtual Machine Details

The screenshot displays the Microsoft Azure portal interface. The browser address bar shows the URL: <https://portal.azure.com/#@sharanyaavadhanigmail.onmicrosoft.com/resource/subscriptions/7a92128b-2a55-4443-a17b-39100604422b/resourceGroup...>. The user is logged in as **sharanyaavadhani@gm...** with the role **DEFAULT DIRECTORY (SHARANYA...**.

The main content area shows the details for the virtual machine **SharanyaAvadhaniMU**. The left sidebar contains navigation options: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Settings, Networking, Connect, Disks, Size, Microsoft Defender for Cloud, Advisor recommendations, Extensions + applications, and Availability + scaling.

The **Overview** tab is selected, displaying the following information:

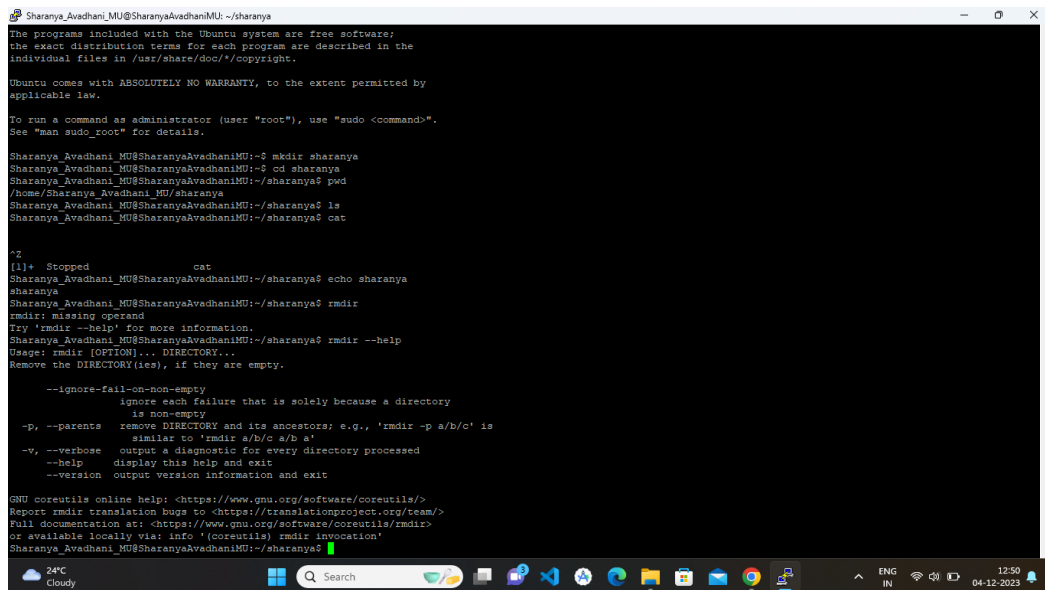
- Advisor (1 of 11):** Log Analytics agent should be installed on virtual machines →
- Essentials:**
 - Resource group (move): [SharanyaAvadhaniMU_group](#)
 - Status: Stopped (deallocated)
 - Location: South India
 - Subscription (move): [Free Trial](#)
 - Subscription ID: 7a92128b-2a55-4443-a17b-39100604422b
 - Operating system: Linux
 - Size: Standard B1s (1 vcpu, 1 GiB memory)
 - Public IP address: [20.235.145.125](#)
 - Virtual network/subnet: [SharanyaAvadhaniMU-vnet/default](#)
 - DNS name: [Not configured](#)
 - Health state: -
- Tags (edit):** [Add tags](#)
- Properties:** Monitoring, Capabilities (7), Recommendations (11), Tutorials
- Virtual machine:**
 - Computer name: SharanyaAvadhaniMU
 - Operating system: Linux
- Networking:**
 - Public IP address: [20.235.145.125](#) (Network [sharanyaavadhani404](#) interface)

The bottom of the screen shows a Windows taskbar with the date and time: 00:02, 05-12-2023.

Running sample Program on Linux Instance

Commands executed are:

1. mkdir
2. cd
3. pwd
4. ls
5. echo
6. rmdir



```
Sharanya_Avadhani_MU@SharanyaAvadhaniMU: ~/sharanya
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

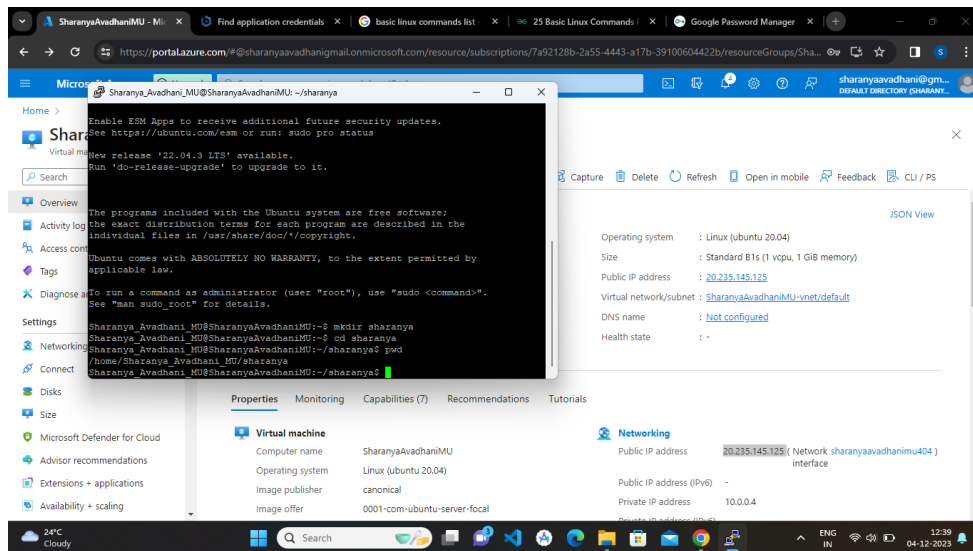
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

Sharanya_Avadhani_MU@SharanyaAvadhaniMU:~$ mkdir sharanya
Sharanya_Avadhani_MU@SharanyaAvadhaniMU:~$ cd sharanya
Sharanya_Avadhani_MU@SharanyaAvadhaniMU:~/sharanya$ pwd
/home/Sharanya_Avadhani_MU/sharanya
Sharanya_Avadhani_MU@SharanyaAvadhaniMU:~/sharanya$ ls
Sharanya_Avadhani_MU@SharanyaAvadhaniMU:~/sharanya$ cat

^Z
[1]+  Stopped                  cat
Sharanya_Avadhani_MU@SharanyaAvadhaniMU:~/sharanya$ echo sharanya
sharanya
Sharanya_Avadhani_MU@SharanyaAvadhaniMU:~/sharanya$ rmdir
rmdir: missing operand
Try 'rmdir --help' for more information.
Sharanya_Avadhani_MU@SharanyaAvadhaniMU:~/sharanya$ rmdir --help
Usage: rmdir [OPTION]... DIRECTORY...
Remove the DIRECTORY(ies), if they are empty.

  --ignore-fail-on-non-empty  ignore each failure that is solely because a directory
                             is non-empty
  -p, --parents              remove DIRECTORY and its ancestors; e.g., 'rmdir -p a/b/c' is
                             similar to 'rmdir a/b/c a/b a'
  -v, --verbose              output a diagnostic for every directory processed
  --help                     display this help and exit
  --version                  output version information and exit

GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Report rmdir translation bugs to <https://translationproject.org/team/>
Full documentation at: <https://www.gnu.org/software/coreutils/rmdir>
or available locally via: info '(coreutils) rmdir invocation'
Sharanya_Avadhani_MU@SharanyaAvadhaniMU:~/sharanya$
```

1. **ls:** The ls command lists the files in the current directory. It is one of the most basic and simple command.
2. **Mkdir:** create one or more directories specified by the Directory parameter.
3. **Pwd:** prints the full name (the full path) of current/working directory.
4. **Echo:** The echo command in Linux is a built-in command that allows users to display lines of text or strings that are passed as arguments.
5. **Rmdir:** removes the directory, specified by the Directory parameter, from the system.
6. **Cd:** can be used to change into a subdirectory, move back into the parent directory, move all the way back to the root directory or move to any given directory.

Assignment GitHub Link

<https://github.com/SharanyaAvadhani/BDA-Assignment>

