System And Network Administration Lab
ITL 312

Lab Journal # 05

Submitted By:

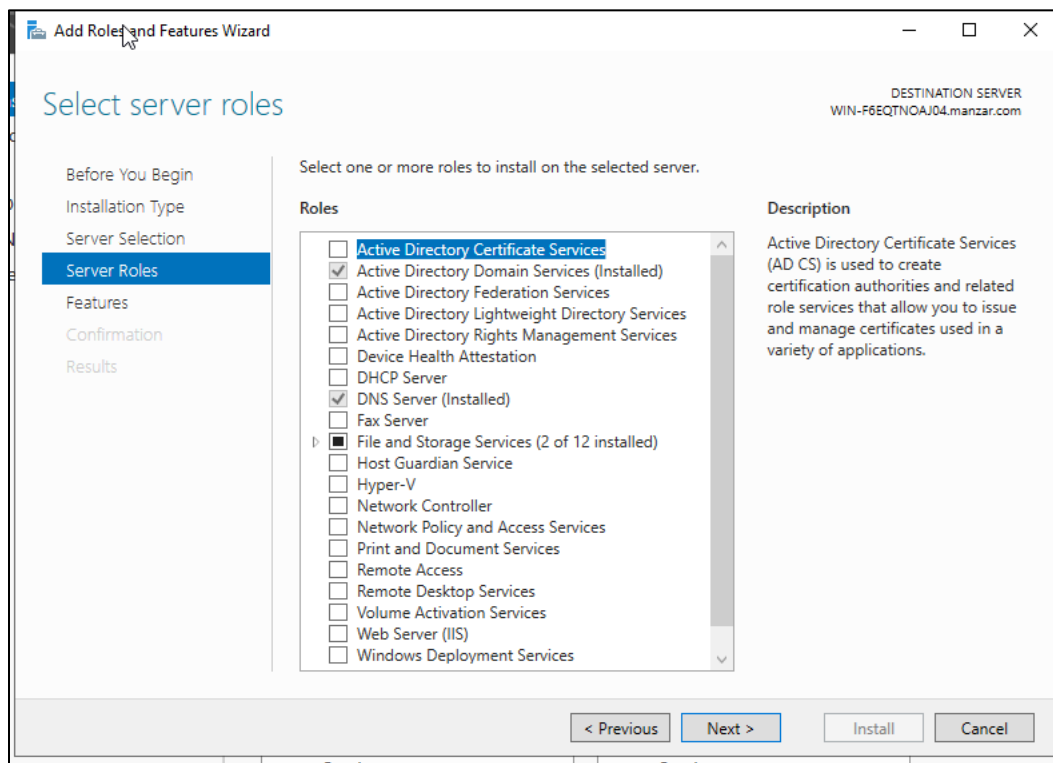| NAME:	ENROLLMENT:
MUHAMMAD IBRAHIM	01-135241-035
MANZER BIBI	01-135241-026
ATEEQ UR REHMAN	01-135241-011
MUHAMMAD TALHA AMIN	01-135241-054
SAIM ZAFAR	01-135241-045

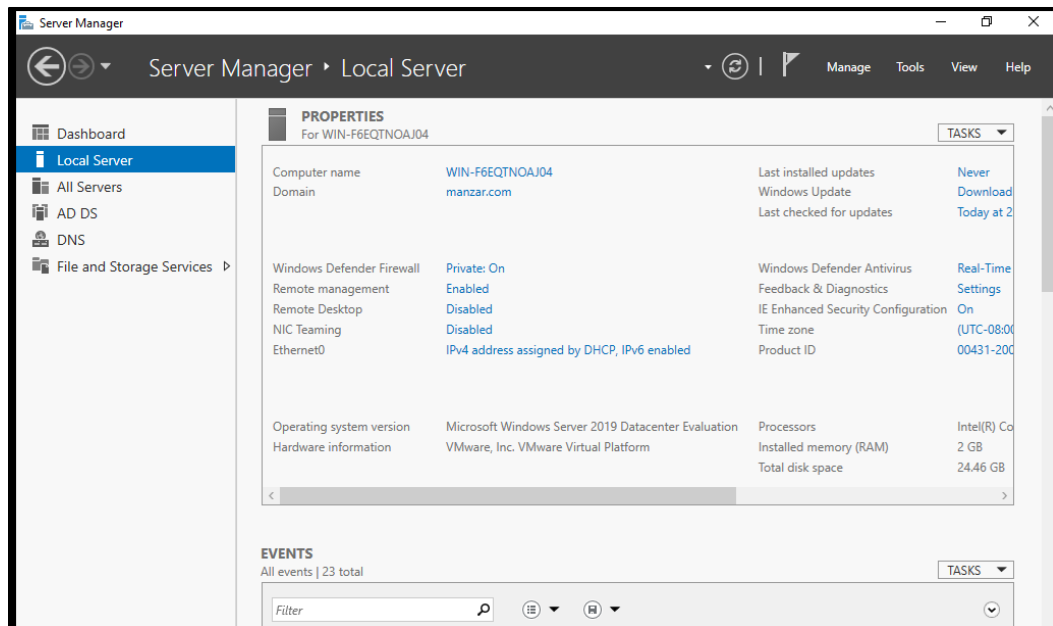Submitted To:
SIR RAJA SHUMAIL

Department of Computer Sciences
BAHRIA UNIVERSITY, ISLAMABAD

Q. Configure DNS Server. Implement Forward lookup zone and reverse lookup zone. **(Add relevant screenshots)**
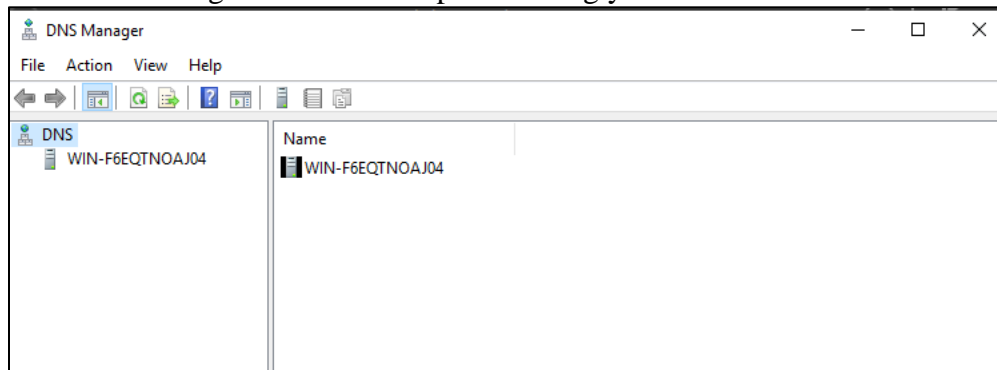
Step 1: Install DNS Server Role

1. **Open Server Manager** (automatically starts when you log in)
2. Click **Manage → Add Roles and Features**
3. Click **Next** on the "Before you begin" screen
4. Select **Role-based or feature-based installation → Next**
5. Select your server from the server pool → **Next**
6. Scroll down and check **DNS Server**

o Click **Add Features** when prompted
7. Click **Next** through the remaining screens
8. Click **Install**
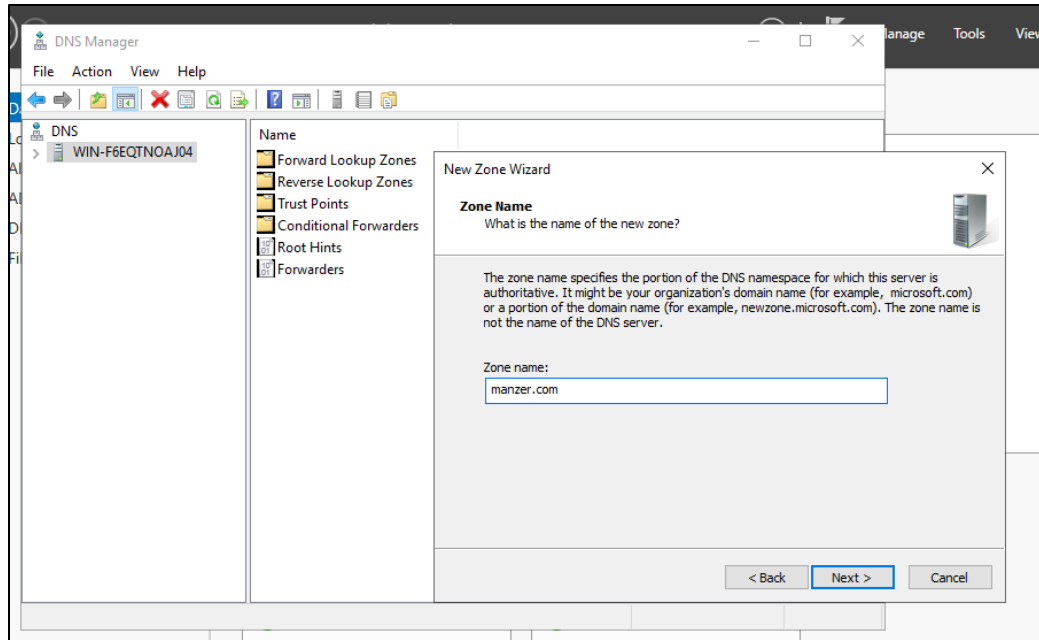9. After installation completes, click **Close**

Step 2: Open DNS Manager

1. In Server Manager, click **Tools → DNS**
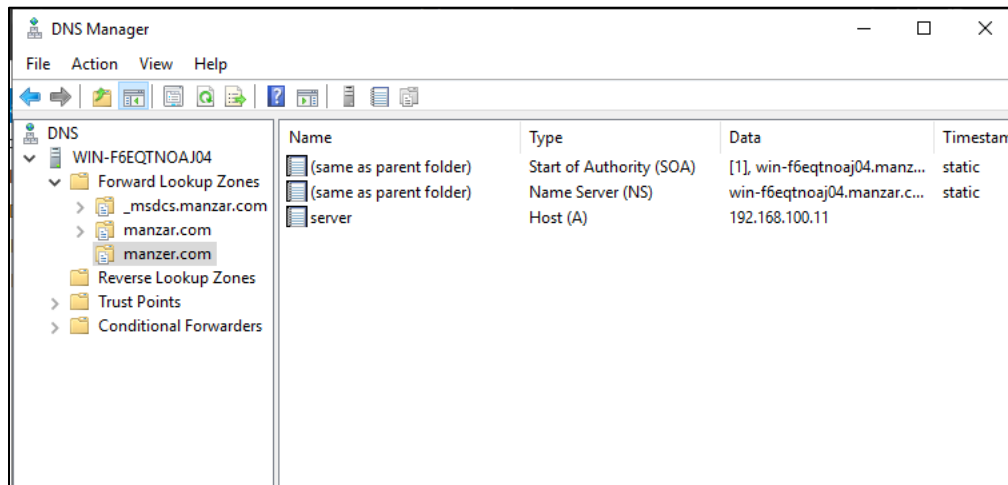2. The DNS Manager console will open showing your server

Step 3: Create Forward Lookup Zone

1. In DNS Manager, expand your server name
2. Right-click **Forward Lookup Zones → New Zone**
3. **New Zone Wizard** opens → Click **Next**
4. Select **Primary zone → Next**
5. Select **Forward lookup zone → Next**
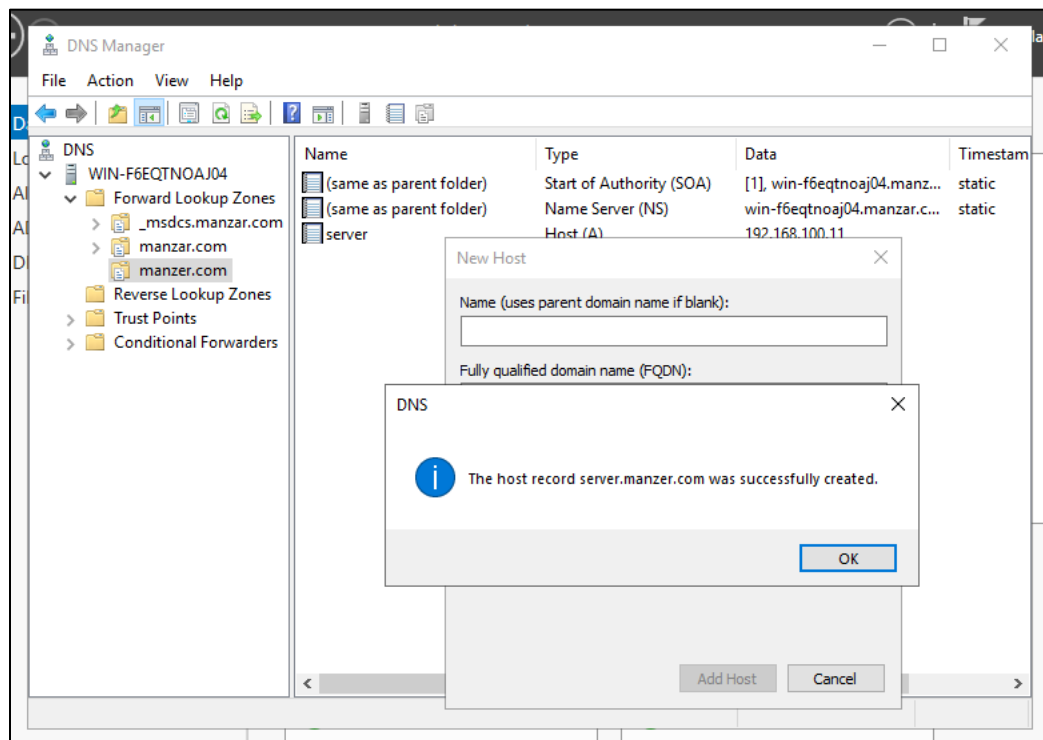6. Enter your **Zone name → Next**

7. Select **Create a new file with this file name** → **Next**
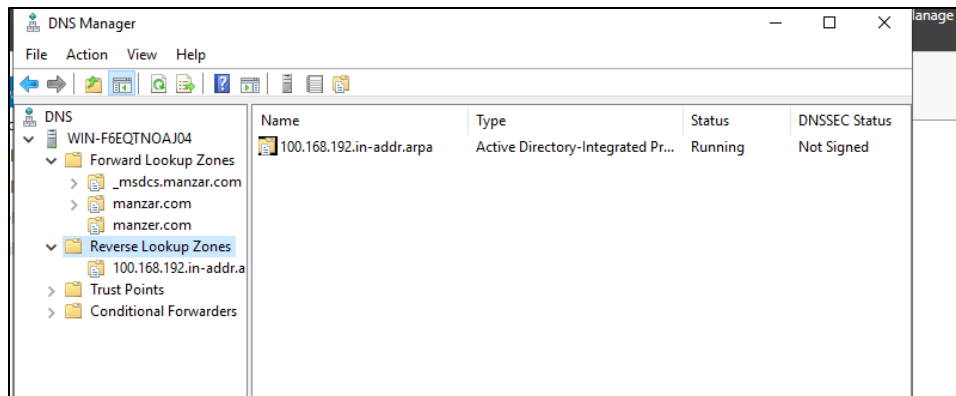8. Select **Do not allow dynamic updates** → **Next**
9. Click **Finish**

Step 4: Add Host Record to Forward Lookup Zone

1. In DNS Manager, expand **Forward Lookup Zones**
2. Click on your newly created zone
3. Right-click in the empty area (or right-click the zone) → **New Host (A or AAAA)**
4. Enter:

o **Name**: Hostname
o **IP address**: 192.168.100.11
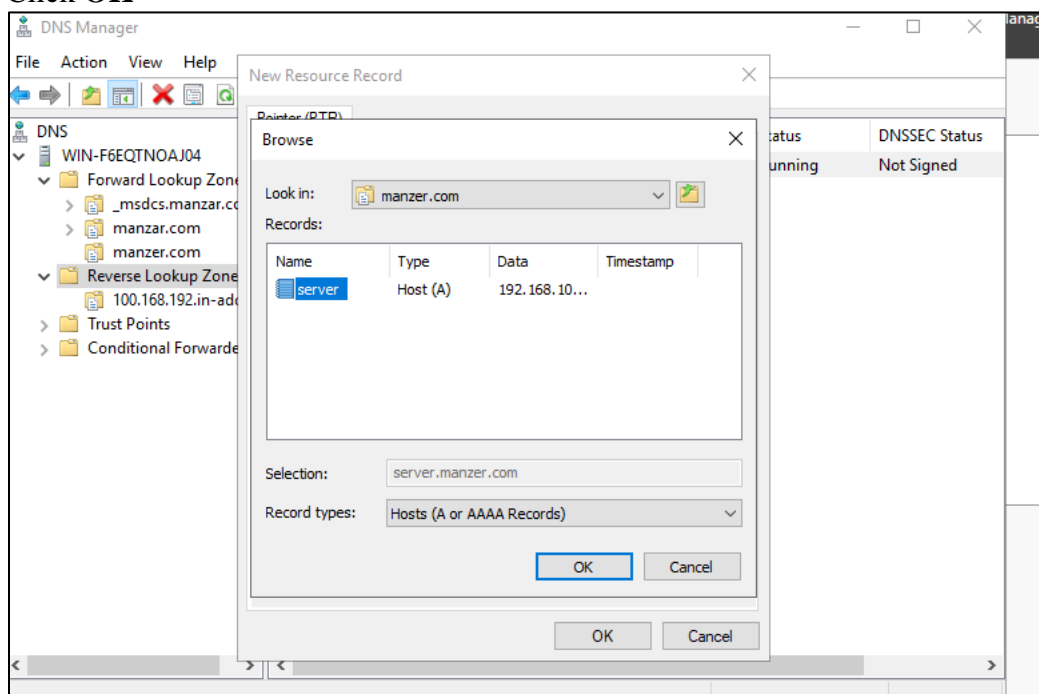5. Click **Add Host** → Click **OK** → Click **Done**

Step 5: Create Reverse Lookup Zone

1. In DNS Manager, right-click **Reverse Lookup Zones** → **New Zone**
2. Click **Next** on the welcome screen
3. Select **Primary zone** → **Next**
4. Select **Reverse lookup zone** → **Next**
5. Select **IPv4 Reverse Lookup Zone** → **Next**
6. Choose **Network ID** and enter your network ID

o The reverse lookup zone name will auto-populate

7. Click **Next**
8. Select **Create a new file with this file name** (default is fine) → **Next**
9. Select **Do not allow dynamic updates** → **Next**
10. Click **Finish**.

Step 6: Add PTR Record to Reverse Lookup Zone

1. Expand **Reverse Lookup Zones** and click on your reverse zone
2. Right-click in the empty area → **New Pointer (PTR)**
3. Enter:

o **Host IP address**: The last octet of the IP
o **Host name**: Browse
4. Click **OK**

Q. Use special command to verify that your configuration is successful? **(Add relevant screenshots)**

Verify DNS Configuration

Verification Method 1: Using nslookup (The "Special Command")

Open **Command Prompt** (as administrator) and run these commands:

Test forward lookup:


```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.17763.3650]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>nslookup server.manzer.com
Server:  localhost.localdomain
Address:  ::1

Name:    server.manzer.com
Address:  192.168.100.11


C:\Users\Administrator>
```

Test reverse lookup:

```
C:\Users\Administrator>nslookup 192.168.100.11
Server:  localhost.localdomain
Address:  ::1

Name:    server.manzer.com
Address:  192.168.100.11
```

Verification Method 2: Using Ping

```
C:\Users\Administrator>ping server.manzer.com

Pinging server.manzer.com [192.168.100.11] with 32 bytes of data:
Reply from 192.168.100.11: bytes=32 time<1ms TTL=128
Reply from 192.168.100.11: bytes=32 time<1ms TTL=128
Reply from 192.168.100.11: bytes=32 time<1ms TTL=128
Reply from 192.168.100.11: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.100.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\Administrator>
```