# Diploma in Information Technology

## Second Trimester

**Assignment Title:** Cloud Project and Video Explainer

**Project Name: Wheel Wisdom**

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**Submitted to:** Hena Iqbal

**Unit Code:** ICT 1711

**Unit Name:** Introduction to Server Environments and Architecture.

## IP Address

20.168.10.220

## DNS

https://wheelwisdom.site/

# Project proposal: Wheel Wisdom

**Project title:**

Wheel Wisdom – A digital hub for car enthusiasts and vehicle support.

Wheel Wisdom is an online platform for car owners, mechanics, and automobile enthusiasts seeking a community-driven space to share and solve vehicle-related problems. The website will allow users to post issues they expect with their cars and receive helpful responses. It's a core solution from other members, along with problem-solving. The platform will feature engaging content such as articles on famous car models, automotive history, maintenance guides, and general car-related information. The idea is to create a space where people can connect over a shared interest in vehicles while providing practical help in a user-friendly manner. Organized environment.

The platform will serve as a digital hub for learning, interaction, and support in the Automotive World, designed for individuals who may not have easy access to mechanics, want a second opinion, or simply enjoy discussing and learning more about. Those users can browse topics, read informative content, and contribute their experiences or advice. A key feature of Wild Wisdom will be its ability to build a sense of community among its users, encouraging knowledge sharing, discussion, and helpful engagement by combining educational content. The Real-World Problem-Solving Real Wisdom aims to become a trusted and valuable source resource for car enthusiasts and everyday drivers.

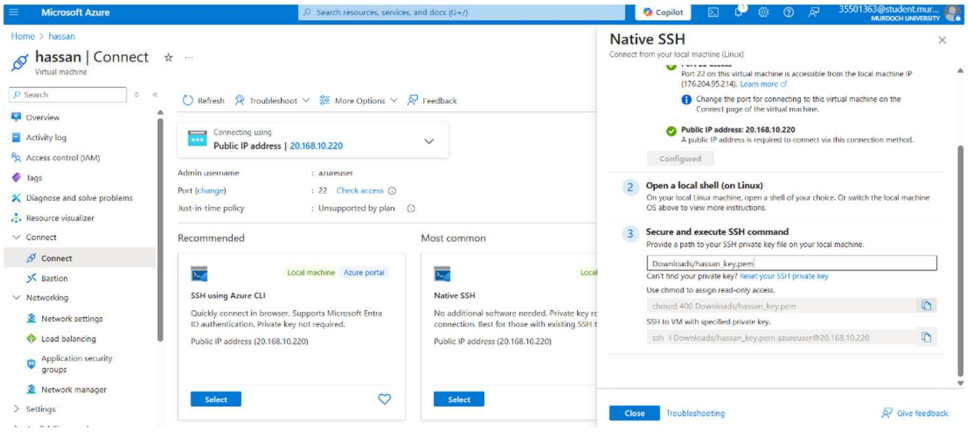
# Configuration of my Server in Microsoft Azure


Installing Apache

```
azureuser@hassan:~$ sudo apt install apache2
```

```
azureuser@hassan:~$ sudo apt upgrade apache2
```

Connecting with my Ubuntu




1. Click connect
2. Select Native ssh
3. Write the location of your private key
4. Copy and paste this command in ubuntu

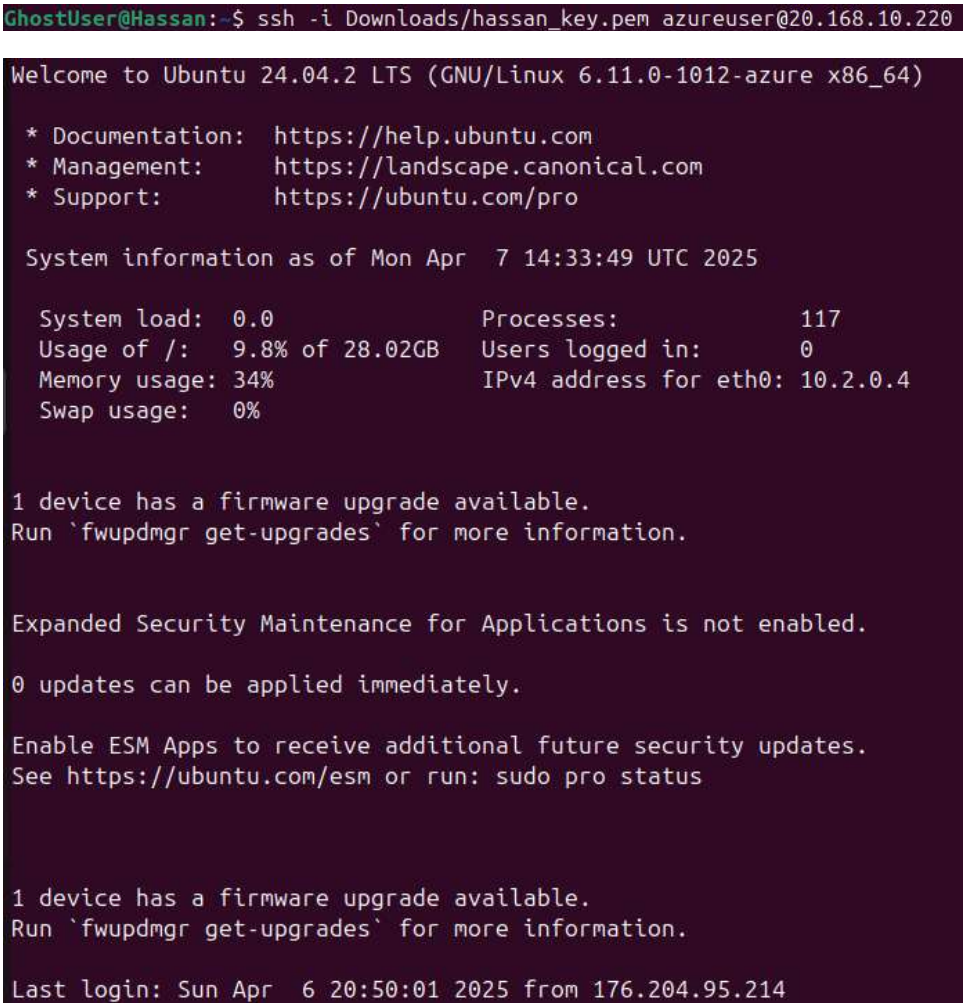
First run this:

chmod 400 Downloads/hassan_key.pem

```
GhostUser@Hassan:~$ chmod 400 Downloads/hassan_key.pem
```

Then run this:

ssh -i Downloads/hassan_key.pem azureuser@20.168.10.220



# Domain Purchased


Connecting with my local web Ip address by adding these records

| | | | | | | |
|---|---|---|---|---|---|---|
| A | @ | 20.168.10.220 | 600 seconds | | | |
| CNAME | blogs | wheelwisdom.site. | 1 Hour | | | |
| SOA | @ | Primary nameserver: ns25.domaincontrol.com. | 1 Hour | | | |

# Installing SSL Certificate

**In my case**

1. **First command**

```
azureuser@hassan:~$ sudo apt-get install certbot python3-certbot-apache
```

2. Second Command

```
azureuser@hassan:~$ sudo nano /etc/apache2/sites-available/default-ssl.conf
```

And some lines in this file

```
<VirtualHost *:443>
    ServerAdmin webmaster@wheelwisdom.site
    DocumentRoot /var/www/html
    ServerName wheelwisdom.site

    SSLEngine on
    SSLCertificateFile /path/to/certificate.crt
    SSLCertificateKeyFile /path/to/private.key
    SSLCertificateChainFile /path/to/chainfile.pem
```

3. Write this command

```
azureuser@hassan: $ sudo certbot --apache --force-renewal -d wheelwisdom.site
Saving debug log to /var/log/letsencrypt/letsencrypt.log
Renewing an existing certificate for wheelwisdom.site

Successfully received certificate.
Certificate is saved at: /etc/letsencrypt/live/wheelwisdom.site/fullchain.pem
Key is saved at:         /etc/letsencrypt/live/wheelwisdom.site/privkey.pem
This certificate expires on 2025-07-05.
These files will be updated when the certificate renews.
Certbot has set up a scheduled task to automatically renew this certificate in the background.

Deploying certificate
Successfully deployed certificate for wheelwisdom.site to /etc/apache2/sites-enabled/wheelwisdom.site-le-ssl.conf
Your existing certificate has been successfully renewed, and the new certificate has been installed.

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
If you like Certbot, please consider supporting our work by:
 * Donating to ISRG / Let's Encrypt:   https://letsencrypt.org/donate
 * Donating to EFF:                    https://eff.org/donate-le
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

Now ssl is successfully applied to my domain.

For writing html code I write

```
azureuser@hassan:/$ sudo nano /var/www/html/index.html
```

And then edit it with my html code and then my website will be running.