During Ubuntu Server Installation:

```
50GB storage - Select manual partitioning

/boot - Create 1GB partition for /boot

/swap - Create swap partition (2x RAM size)

If RAM is 2GB → swap = 4GB

If RAM is 4GB → swap = 8GB

/ - Remaining space for root partition

Example partitioning scheme:
/dev/sda1 - /boot - 1GB - ext4
/dev/sda2 - /swap - 4GB - swap
/dev/sda3 - /     - 45GB - ext4
```

Step 2: VM Naming (5 points)

```
sudo hostnamectl set-hostname tabasan
```

Step 3: SSH Login (20 points)

```
ssh username@server-ip
whoami
pwd
```

Step 4: Create Folder Structure

```
mkdir ~/tabasan
touch ~/tabasan/rodary.txt
echo "I nailed the midterm exam" > ~/tabasan/rodary.txt
cat ~/tabasan/rodary.txt
```

Step 5: Set Ownership and Permissions

```
sudo chown -R root:www-data ~/tabasan
sudo chmod -R 761 ~/tabasan
ls -la ~/tabasan/
```

Step 6: Install Apache and PHP

```
sudo apt update
sudo apt install apache2 php libapache2-mod-php -y
sudo systemctl status apache2
```

Step 7: Configure Custom Site

```
sudo nano /etc/apache2/sites-available/tabasan.conf
<VirtualHost *:80>
```

```
    ServerAdmin webmaster@localhost
    DocumentRoot /var/www/tabasan
    ServerName tabasan.local

    <Directory /var/www/tabasan>
        Options -Indexes +FollowSymLinks
        AllowOverride All
        Require all granted
    </Directory>

    ErrorLog ${APACHE_LOG_DIR}/tabasan_error.log
    CustomLog ${APACHE_LOG_DIR}/tabasan_access.log combined
</VirtualHost>

sudo a2ensite tabasan.conf
sudo a2dissite 000-default.conf
```

Step 8: Redirect Document Root

```
sudo mkdir /var/www/tabasan
sudo cp -r ~/tabasan/* /var/www/tabasan/
```

Step 9: Set Document Root Permissions

```
sudo chown -R www-data:www-data /var/www/tabasan
sudo chmod -R 755 /var/www/tabasan
ls -la /var/www/tabasan/
```

Step 10: Create Required Files

```
cd /var/www/tabasan

sudo tee index.php > /dev/null <<'EOF'
<?php
echo "<h1>Welcome to Tabasan Site</h1>";
echo "<p>This is the homepage</p>";
echo "<a href='about.php'>About Page</a>";
?>
EOF

sudo tee about.php > /dev/null <<'EOF'
<?php
echo "<h1>About Tabasan Site</h1>";
echo "<p>This is the about page</p>";
echo "<a href='index.php'>Home Page</a>";
if (file_exists('rodary.txt')) {
    echo "<p>" . file_get_contents('rodary.txt') . "</p>";
} else {
    echo "<p>File not found</p>";
}
?>
EOF
```

Step 11: Final Configuration and Testing

```
sudo a2enmod rewrite
sudo systemctl restart apache2
```

```
curl http://localhost/
```

Verification Commands

```
ls -la ~/tabasan/
cat ~/tabasan/rodary.txt
ls -la /var/www/tabasan/
sudo apache2ctl configtest
sudo systemctl status apache2
curl http://localhost/index.php
curl http://localhost/about.php
sudo systemctl is-active apache2
namei -l /var/www/tabasan/rodary.txt
```