TASK 1:

Setting Up a Home Wi-Fi Router

Introduction

Setting up a home Wi-Fi router is essential to create a wireless network that provides internet access to multiple devices, including smartphones, laptops, and smart home devices. This document provides a step-by-step guide to set up your Wi-Fi router efficiently and securely.

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Step 1: Unboxing and Equipment Setup

- **Required Materials:**

    o   Wi-Fi Router

    o   Power Adapter

    o   Ethernet Cable

    o   Modem
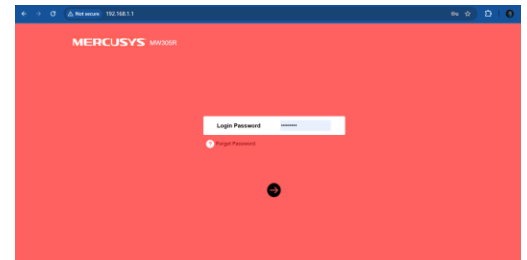
    o   Computer or Smartphone

Instructions:

1. Unbox the Wi-Fi router and ensure that all components are included (router, power adapter, and Ethernet cable).

2. Place the router in a central location in your home to maximize the wireless coverage area.

3. Connect the power adapter to the router and plug it into an electrical outlet.

Step 2: Connecting the Router

1. If you are using a separate modem for internet connectivity, connect the Ethernet cable from the modem's output port to the router's **WAN** or **Internet** port.

2. Turn on both the modem and router and wait for the lights to stabilize.

3. If you're using a built-in modem-router combo, you can skip to the next step.
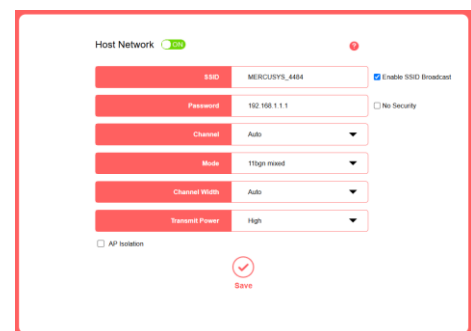
Step 3: Accessing the Router's Configuration Page

1. Open a web browser on your computer or smartphone and type the router's IP address into the address bar. Common IP addresses include 192.168.1.1 or 192.168.0.1. Check the user manual for your router's specific IP address.

2. Log in to the router's configuration page using the default username and password. This information is usually provided on a label on the router or in the manual.

    o Common default credentials:

        ▪ Username: admin

        ▪ Password: admin or password

3. Once logged in, you will have access to the router's settings

    dashboard.

Step 4: Configuring Basic Wi-Fi Settings

1. Navigate to the **Wireless Settings** or **Wi-Fi Settings** section.

2. Change the **SSID** (Wi-Fi network name) to something unique that will help you identify your network. This is the name that will appear in the list of available networks on your devices.

3. Set the **Wi-Fi Password** (also referred to as the Pre-Shared Key). Ensure that it is a strong password to prevent unauthorized access to your network.

4. Select the appropriate **Encryption Type**.

5. Click **Save** or **Apply** to finalize the changes.

Step 5: Securing the Network

1. **Change the Default Router Login Credentials:**

    o Go to the **Administration** or **System Settings** section and change the default username and password for the router login to prevent others from accessing the configuration page.

2. **Enable Firewall:**

   o Most routers come with built-in firewall settings that can be enabled to provide an extra layer of security for your home network.

3. **Update Router Firmware:**

   o Check for available firmware updates in the **Advanced Settings** section and update your router's firmware to ensure it is running the latest software with security patches.

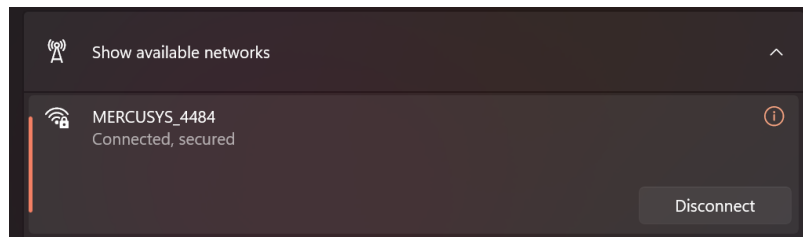**Step 6: Testing the Wi-Fi Network**

1. **Connect Devices:**

   o Open the Wi-Fi settings on your devices (laptop, smartphone, etc.), select the newly configured Wi-Fi network (SSID), and enter the password to connect.

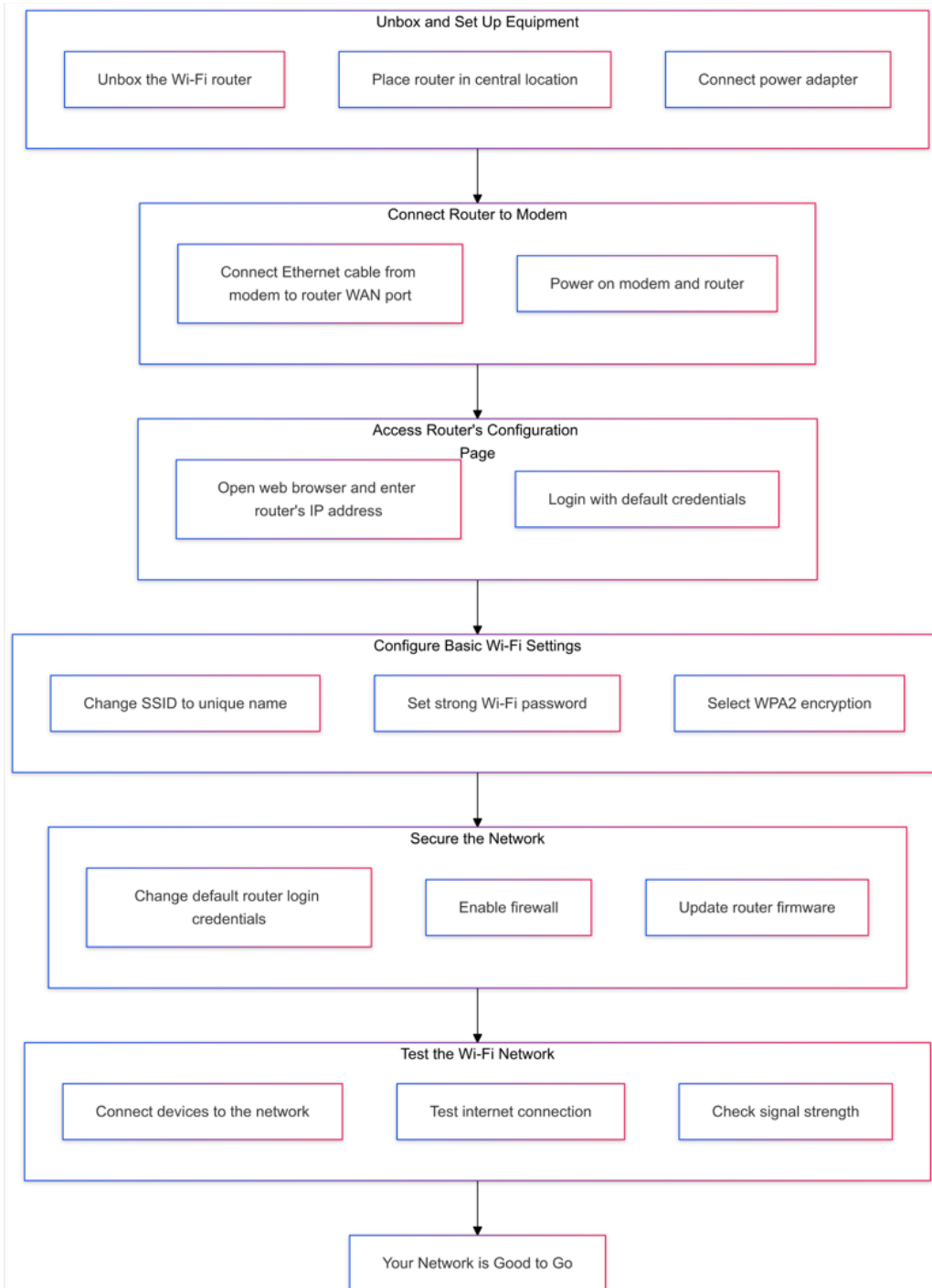2. **Test Internet Connection:**

   o After connecting, open a browser and navigate to any website to confirm that the internet is working correctly.

3. **Check Signal Strength:**

   o Move around your home with a connected device and check the signal strength in different areas. If necessary, adjust the router's position for better coverage.

Flow Chart

Unbox and Set Up Equipment

| Unbox the Wi-Fi router | Place router in central location | Connect power adapter |

Connect Router to Modem

| Connect Ethernet cable from modem to router WAN port | Power on modem and router |

Access Router's Configuration Page

| Open web browser and enter router's IP address | Login with default credentials |

Configure Basic Wi-Fi Settings

| Change SSID to unique name | Set strong Wi-Fi password | Select WPA2 encryption |

Secure the Network

| Change default router login credentials | Enable firewall | Update router firmware |

Test the Wi-Fi Network

| Connect devices to the network | Test internet connection | Check signal strength |

Your Network is Good to Go

Conclusion

By following these steps, you have successfully set up your home Wi-Fi router. Ensure that you regularly monitor your network settings and keep the router's firmware updated for optimal performance and security. For more advanced settings, refer to the router's user manual.