WORKSHOP-3

Know the neighbour

Steps to configure the inbound and outbound rules in firewall to ping the IP Address in the SSU network:-

1) First find the IP address of your and your friends computer connected to the SSU-ARUBA network.

2) Then open the advance firewall options in the settings in firewall section.

3) After that choose inbound rules option to create a rule for allowing the IP adddress of your friends computer.

4) Then select create new rules option and then select custom option.

5) Then leave the default settings as it is and only add IP address of your friends computer in remote IP address and select allow all connections. After that give a name to create a new rule.

6) Then save it and try to ping, it will be successful.

WORKSHOP-4

1) Download Mosquito from the given link.

2) Run the setup and tick the service option and install it.

3) To start the Mosquitto broker as a service, go to the Services application first: open Windows search and type services.msc or Services and press enter. Then find the service named Mosquitto Broker, right-click on it, and start it.

4) Run command prompt as administrator.

5) Change your directory to program files\ mosquito(Or wherever you have installed it).

6) Then start mosquito using command net start mosquito.

7) Then publish a server on a topic and create another window of command promt and change your directory to where is your mosquitto server and create a subscriber server on that window

8) Now try sending messages on the publisher window and see it getting printed in the second subscriber window.

WORKSHOP-5

Q) What are the classification of IoT boards?

Ans: IoT (Internet of Things) boards come in various shapes, sizes, and functionalities, catering to different needs and applications. Here's a classification based on common criteria:

1.Microcontroller-based IoT Boards:

- These boards are built around microcontrollers and are typically lightweight and power-efficient.

- Examples include Arduino boards (such as Arduino Uno, Arduino Nano, Arduino Mega), ESP8266, ESP32, Raspberry Pi Pico, and STM32 boards.

2.Single-board Computers (SBCs):

- These boards integrate more powerful processors compared to microcontrollers and often support full operating systems like Linux.

- Examples include Raspberry Pi (various models like Raspberry Pi 4, Raspberry Pi Zero), BeagleBone, and NVIDIA Jetson Nano.

3.Wireless Connectivity-Focused Boards:

- Boards designed primarily for wireless communication, including Wi-Fi, Bluetooth, Zigbee, LoRa, etc.

- Examples include Particle Photon, ESP32, Nordic nRF52 series, and Pycom boards.

Q) Identify the name of the board you used today in your classroom.

Ans: The board we used in classroom is the arduino uno microcontroller board based on the microchip ATmega328p.

Q) Into which category of IoT boards does it fall?

Ans: It falls under the category of Microcontroller-based IoT Boards.