Bluetooth connection process:

Inquiry

→ If two bluetooth device know absolutely nothing about each other.

→ inquiry try to discover the other.

Paging

→ Forming of connection b/w two bluetooth device.

→ Connected (Different modes)

Bluetooth connected mode

Active mode

→ Regular connected mode

→ Sniff mode

→ power saving mode

Hold mode

→ temporary power saving mode

Difference between (Bluetooth & BLE):

Feature	Bluetooth classic	Bluetooth low energy (BLE)
Number of channel	79 channels each of width 1MHz	40 channels each of width 2MHz
Spreading	Frequency Hopping spread spectrum (FHSS)	Frequency Hopping spread spectrum
Data link layer protocol	TDMA	TDMA
Error detection	8 bit CRC	24 bit CRC, Acks
Maximum no. of device active slaves	7	unlimited

→ depart of sleep modes

park mode

Zigbee communication

→ Zigbee is a IEEE 802.15.4 based specificat

→ High-level communication protocols

→ Used to create PAN

→ Consumes less power

→ Cost-effective wireless technology

→ Low power, data rate, close proximity wireless adhoc network.

	Zigbee IEEE 802.15.4
Application	Control and monitor
Frequency bands	2.4 GHz, 868 MHz, 915 MH
Bandwidth	20-250 kbps
Range	1-75 and more.

Zigbee device types

Zigbee coordinator (ZC)

Zigbee Router (ZR)

Zigbee End device (ZED)

Zigbee coordinator

→ Capable device

→ Stores information about the network

→ Trust centre & repository for security keys.

Zigbee router

→ Running an application function

→ act an immediate router.

→ passing data on from other devices.

Zigbee end device

→ cannot relay data from other device

→ long battery life

→ least amount of memory

→ To manufacture than a zero or zc.

WIFI communication

IP based communication

→ Utilizes the IEEE 802.11 std

→ Range 66 feet from AP

→ 2.4GHz WiFi upto 450 Mbps

→ 5GHz WIFI upto 1300 Mbps

WIFI communication

	WIFI IEEE 802.11
Application	Wireless LAN
Frequency bands	2.4 GHz
Battery life	0.1-5
Bandwidth	2-100Mbps