Networking - A system that connects two or more computing devices for transmitting and sharing information.

A group of interconnected nodes that exchange data and resources with each other.

Types of Networks:

Local Area Network (LAN) It allows users to connect within a short distance in a common area.

Wide Area Network (WAN) is an extensive network that's not confined to geographical space.

Wireless local area network (WLAN) operates similarly to a LAN because it transmits data within a small area.

Campus area network (CAN) is a network used in educational environments such as universities or school districts.

Metropolitan Area Network (MAN) is a computer network that is larger than a single building local area network (LAN)

Personal area network (PAN) Is a small-scale network that revolves around one person or device.

Virtual private network (VPN) Establishes a digital connection between your computer and a remote server owned by a VPN provider.

Peer to Peer Network - all the computers in the network are connected to one another

Client to Server Network - there is at least one dedicated central server that controls the network
RJ45 - This type of connector was originally developed for telephone communications but is now used in a range of applications.

REJISTERED JACK 45 - A standardized interface which often connects a computer to a Local Area Network (LAN).

PINS

Orange White (Transmit Data Plus)

Green White (Transmit Data Minus)

Blue White (Receive Data Plus)

Brown White (Receive Data Minus)

Blue GND (Ground)

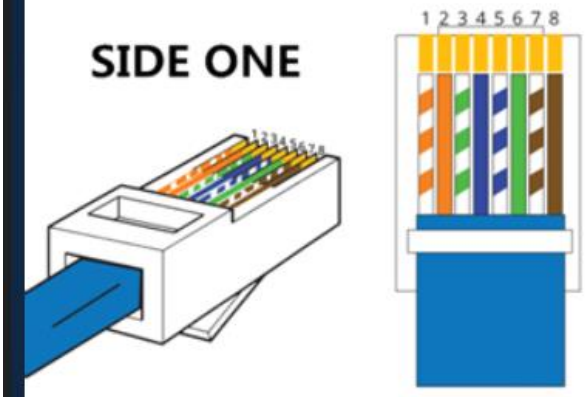
Orange (Receive Clock Plus)

Green (Receive Clock Minus)

Brown (Transmit Clock Plus)

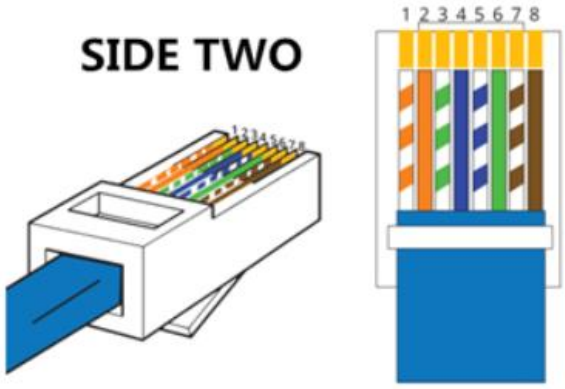
STRAIGHT-THROUGH

SIDE ONE



1. White Orange	5. White Blue
2. Orange	6. Green
3. White Green	7. White Brown
4. Blue	8. Brown

SIDE TWO

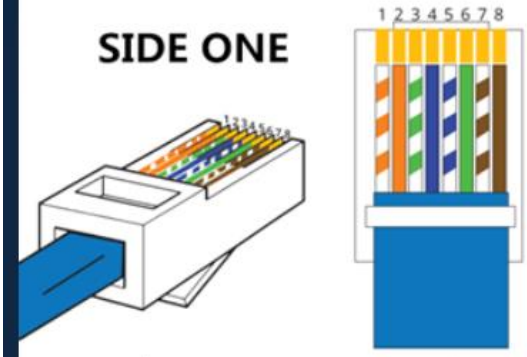


1. White Orange	5. White Blue
2. Orange	6. Green
3. White Green	7. White Brown
4. Blue	8. Brown

RJ45 Configurations

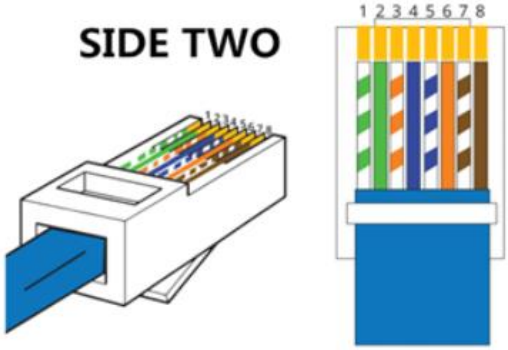
CROSSOVER

SIDE ONE



1. White Orange	5. White Blue
2. Orange	6. Green
3. White Green	7. White Brown
4. Blue	8. Brown

SIDE TWO



1. White Green	5. White Blue
2. Green	6. Orange
3. White Orange	7. White Brown
4. Blue	8. Brown

IP ADDRESS An Internet Protocol (IP) address is a unique numerical identifier for every device or network that connects to the internet.

Dynamic IP address- changes automatically and regularly—most commonly every 24 hours or after a router reset.

Static IP address - generally used for more advanced setups, like hosting a website at home and forwarding ports to a specific device.

IPv4 Address - consists of two things that are the network address and the host address.

IPv6 Address - IP version 6 is the new version of Internet Protocol,

The Dynamic Host Configuration Protocol (DHCP) assigns the distribution of this dynamic set of IP addresses.

The **network** portion of an IP address identifies the network to which a device belongs.

The **host** portion of an IP address identifies a specific device (such as a computer, printer, or server) within a network.