Experiment: Do the following Cabling works in a network a) Cable Crimping b) Standard Cabling and c) Cross Cabling d) IO connector crimping e) Testing the crimped cable using a cable tester.

Aim:

To do the following

a) Cable Crimping
b) Standard Cabling
c) Cross Cabling
d)IO connector crimping
e) Testing the crimped cable using a cable tester

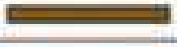
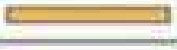
Apparatus/Tools/Equipments/Components:

RJ-45 connector,
IO Connector,
Crimping Tool,
Twisted pair Cable,
Cable Tester.

Principle:

Standard Cabling:

1. 10BaseT and 100BaseT are most common mode of LAN. You can use UTP category-5 cable for both modes.
2. A straight cable is used to connect a computer to a hub

RJ45 Pin # (END 1)	Wire Color	Diagram End #1	RJ45 Pin # (END 2)	Wire Color	Diagram End #2
1	White/Orange		1	White/Green	
2	Orange		2	Green	
3	White/Green		3	White/Orange	
4	Blue		4	White/Brown	
5	White/Blue		5	Brown	
6	Green		6	Orange	
7	White/Brown		7	Blue	
8	Brown		8	White/Blue	

Cross Cabling:

A cross cable is used to connect 2 computers directly (with ONLY the UTP cable). It is also used then you connect 2 hubs with a normal port on both hubs

Diagram shows you how to prepare straight through wired connection

RJ45 Pin # (END 1)	Wire Color	Diagram End #1	RJ45 Pin # (END 2)	Wire Color	Diagram End #2
1	White/Orange		1	White/Green	
2	Orange		2	Green	
3	White/Green		3	White/Orange	
4	Blue		4	White/Brown	
5	White/Blue		5	Brown	
6	Green		6	Orange	
7	White/Brown		7	Blue	
8	Brown		8	White/Blue	

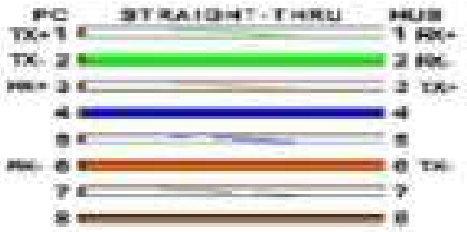
Procedure:

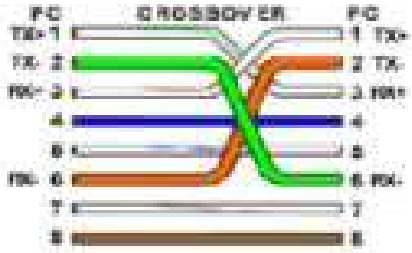
Cable Crimping steps:

1. Remove the outmost vinyl shield for 12mm at one end of the cable (we call this side A-side).
2. Arrange the metal wires in parallel
3. Insert the metal wires into RJ45 connector on keeping the metal wire arrangement.

5. Make the other side of the cable (we call this side B-side) in the same way.

6. After you made it, you don't need to take care of the direction of the cable.





IO connector crimping: Run the full length of Ethernet cable in place, from endpoint to endpoint, making sure to leave excess.

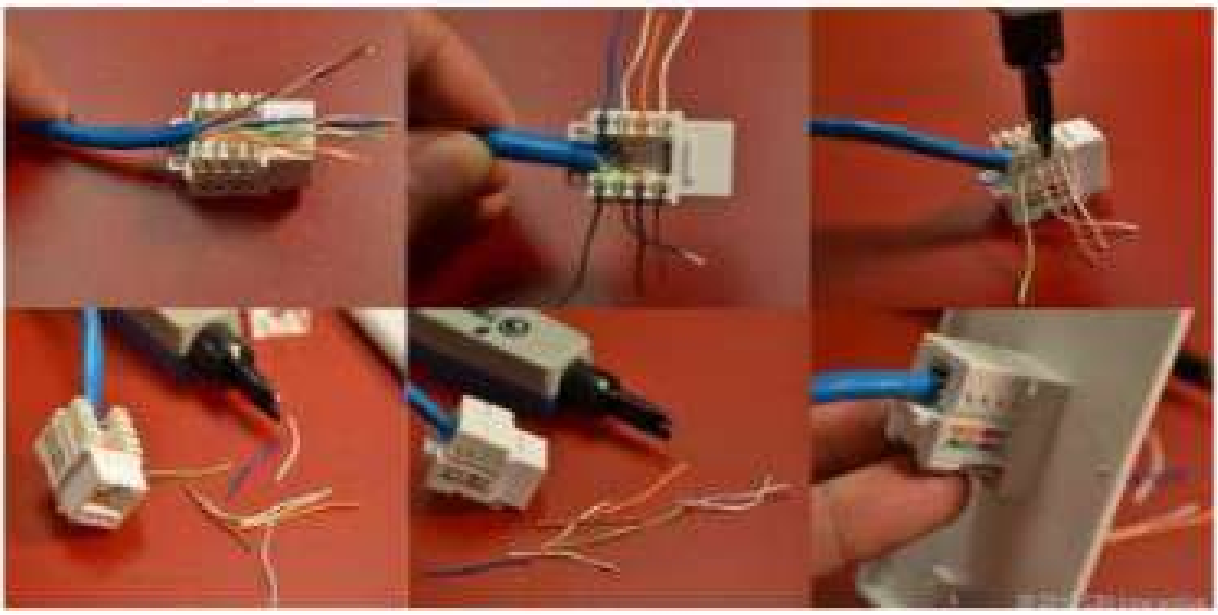
At one end, cut the wire to length leaving enough length to work, but not too much excess.

Strip off about 2 inches of the Ethernet cable sheath.

Align each of the colored wires according to the layout of the jack.

Use the punch down tool to insert each wire into the jack.

Repeat the above steps for the second RJ45 jack.



Testing the crimped cable using a cable tester:
Step 1 : Skin off the cable jacket 3.0 cm long cable stripper up to cable

Step 2: Untwist each pair and straighten each wire 190 0 1.5 cm long.

Step 3 : Cut all the wires

Step 5 : Place the connector into a crimping tool, and squeeze hard so that the handle reaches its full swing.

Step 6: Use a cable tester to test for proper continuity

Result:

Cable Crimping, Standard Cabling and Cross Cabling, IO connector crimping and testing the crimped cable using a cable tester are done successfully