



Experiment 1.1

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Semester: **5TH**

Subject Name: **Computer Networks**

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1. Aim: To study of different types of Network cables & their Color coding and practically implement the cross-wired cable and straight through cable using crimping tool.

2. Requirements (Hardware/Software):

- a) RJ-45 connector
- b) Crimping Tool
- c) Twisted pair Cable

3. Procedure:

Step 1: Strip the cable jacket about 1.5 inch down from the end.

Step 2: Spread the four pairs of twisted wire apart. For Cat 5e, you can use the pull string to strip the jacket farther down if you need to, then cut the pull string. Cat 6 cables have a spine that will also need to be cut.

Step 3: Untwist the wire pairs and neatly align them in the T568B orientation. Be sure not to untwist them any farther down the cable than where the jacket begins; we want to leave as much of the cable twisted as possible.

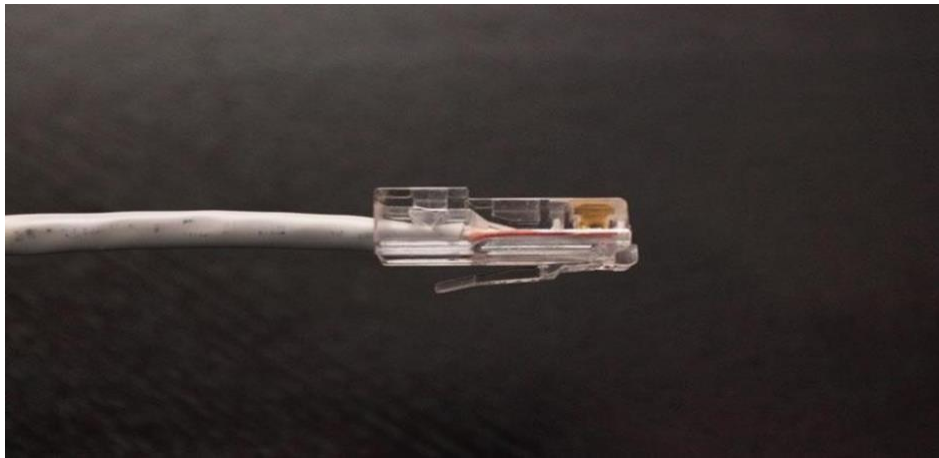
Step 4: Cut the wires as straight as possible, about 0.5 inch above the end of the jacket.

















Step 5: Carefully insert the wires all the way into the modular connector, making sure that each wire passes through the appropriate guides inside the connector.

Step 6: Push the connector inside the crimping tool and squeeze the crimper all the way down.

Step 7: Repeat steps 1-6 for the other end of the cable.

Step 8: To make sure you've successfully terminated each end of the cable, use a cable tester to test each pin.



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	

4. Output:



5. Learning Outcome:

- a) Learned how to strip the cable jacket.
- b) Learned how to separate and untwist wire pairs.
- c) To align wires in order.
- d) Insert wires into an RJ45 connector and crimp it.
- e) Learned how to use a cable twister to verify the connections.