Soal Praktikum *Practicum Case* COMP6372 Computer Networks	BINUS UNIVERSITY
Teknik Informatika *Computer Science*	CS- COMP6372 -Var01
Periode Berlaku Mulai Semester Ganjil 2020/2021 ***Valid on*** *Odd Semester Year* 2020/2021	**Revisi 00** *Revision 00*

Learning Outcomes
- Describe basic structures of network

Topic
- Session 01 - Computer Network Introduction

Sub Topics
- Introduction to Packet Tracer
- Network Devices
- Crimping Cables
- Network Topology
- OSI 7 Layer

Soal
Case

Before answer all question below, please watch this video:
- https://www.youtube.com/watch?v=ha3zVvwzMvY
- https://www.youtube.com/watch?v=_NX99ad2FUA
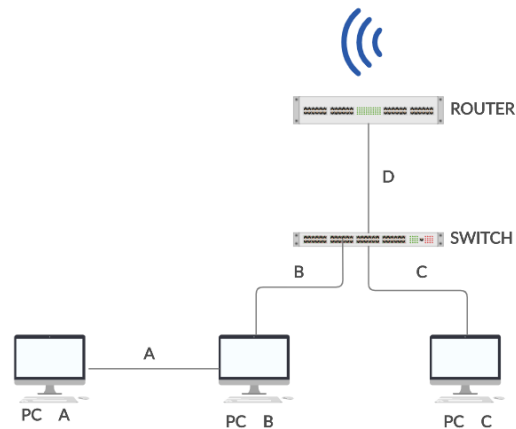- https://www.youtube.com/watch?v=HLziLmaYsO0
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1. Based on its function, UTP cable has 2 types of connecting cables, such as straight cabling and cross cabling. If we want to connect PC to switch, or switch to router, or router to hub, which type of cable is need for those cases?

2. When we want to design a LAN network with 3 different devices:
   - 3 PCs (A, B, C),
   - Switch
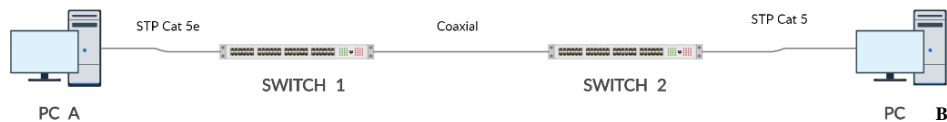   - Router

   With scenario as below :

   - PC A to connect with PC B

- PC B and C to connect through switches
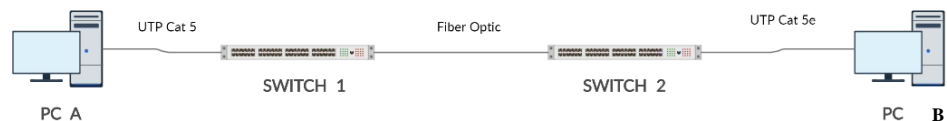- Switch connect to the router ,

From those design, what cables type is needed and explain your answer?
Below is diagram for case number 2, mark cable type on A, B, C, and D.

3. If we have two cases as below, where a LAN computer network that connects computers A and B,

    a. On the **first**, computer A is connected to switch 1 using an STP Cat 5e cable then switch 1 and switch 2 are connected using a coaxial cable from switch 2 to computer B connected using a STP Cat 5 cable .

    b. The **second**, network, computer A is connected to switch 1 using a UTP Cat 5 cable, then switch 1 and switch 2 are connected using a fiber optic cable from switch 2 to computer B connected using a Cat 5e UTP cable. which network has the faster data transmission process? Explain your answer.

4. To build a network we must consider cable selection, each cable has different specification. The choice of cable must be according to needs by considering economical costs but optimal transmission performance. Answer the questions below by considering in terms of efficiency in designing a computer network.

    a. The BINUS admission office plans to build a network that only combines 2 computers peer to peer which is used only for the need of transferring document files so that they can exchange information, in your opinion which type of UTP cable is suitable for coupling the 2 computers and explain.

    b. To improve the processing of multimedia data at BINUS TV, BINUS TV plans to add a PC used to process large-sized videos that it will be connected to a broadcast computer. in your opinion which UTP type cable is suitable for use in this case and give the reason.

    c. In the BINUS TV office, the processing and production computers are connected by 2 cables, namely Cat 5 and Cat6 cables. If the Cat 5 cable is replaced with a Cat 6a cable, what will happen to the data transmission process?

If you don't understand, please ask your assistant!