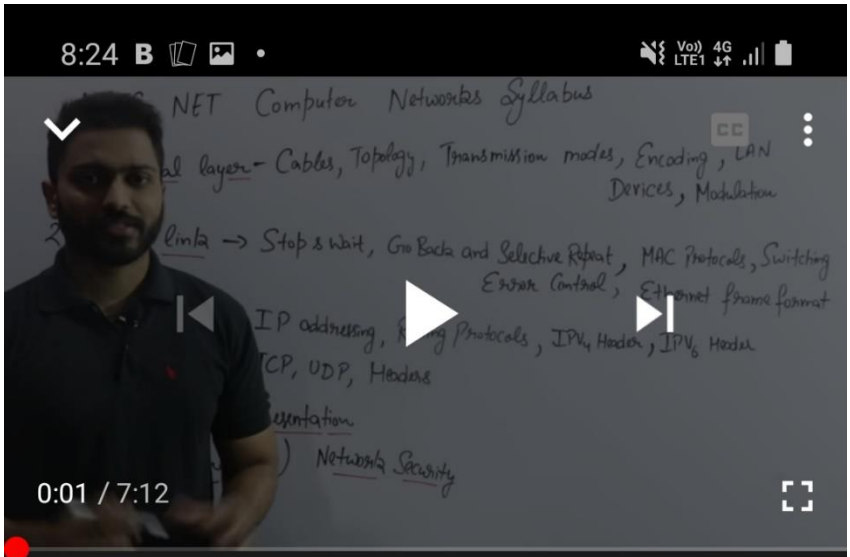


Computer Networks (Complete Playlist)

94 videos · Gate Smashers

Lec-1: Computer Networks and Security Full Syllabus for ...

Lec-2: Introduction to Computer Network | OSI MODEL in easie...

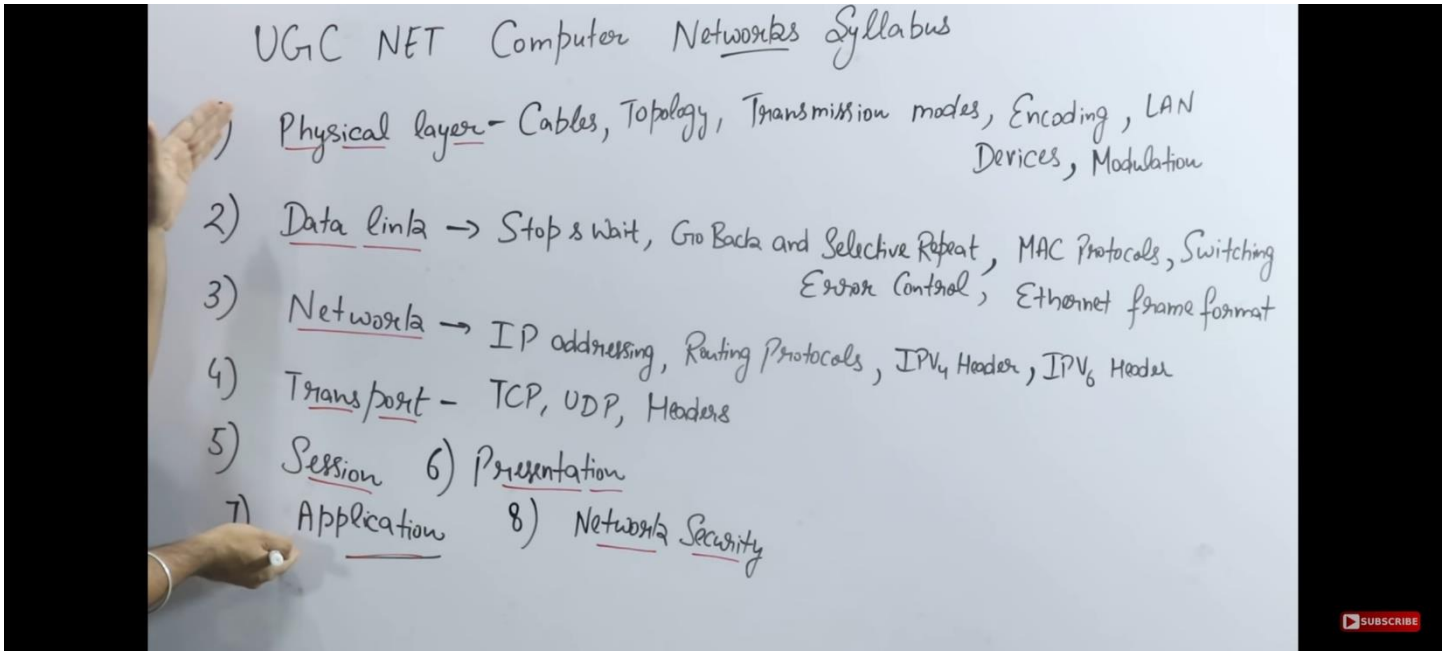
Lec-3: TCP/IP Protocol Suite | Internet Protocol Suite | OSI vs...

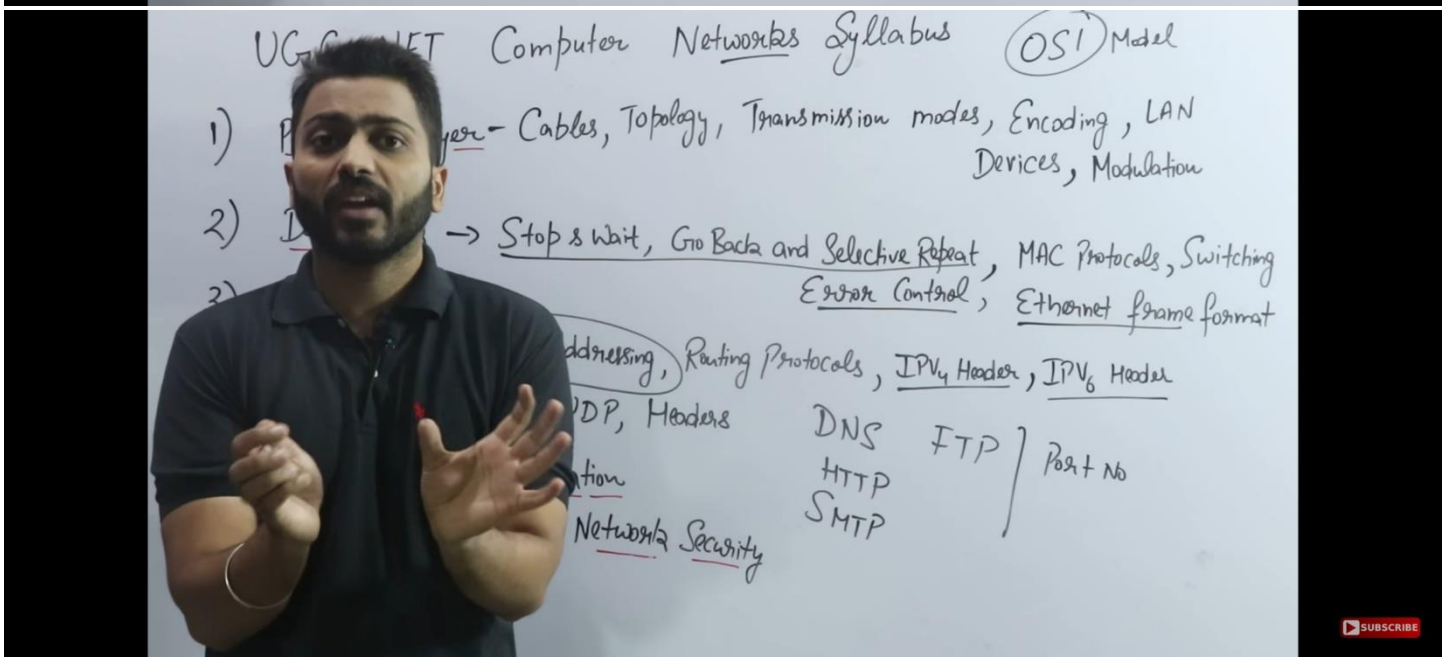
Lec-4: Physical layer in computer networks in hindi | F...

Lec-5: Topologies in Computer Networks |Part 1 | All imp poin...

Lec-6: Topologies in Computer Networks |Part 2 | All imp poin...

Lec-7: Manchester encoding and differential manchester en...


UGC NET Computer Networks Syllabus
1) Physical layer - Cables, Topology, Transmission modes, Encoding, LAN Devices, Modulation
2) Data link → Stop & wait, Go Back n and Selective Repeat, MAC Protocols, Switching Error Control, Ethernet frame format
3) Network → IP addressing, Routing Protocols, IPV4 Header, IPV6 Header
4) Transport - TCP, UDP, Headers
5) Session 6) Presentation
7) Application 8) Network Security
SUBSCRIBE


UGC NET Computer Networks Syllabus OSI Model
1) Physical layer - Cables, Topology, Transmission modes, Encoding, LAN Devices, Modulation
2) Data link → Stop & wait, Go Back n and Selective Repeat, MAC Protocols, Switching Error Control, Ethernet frame format
addressing, Routing Protocols, IPV4 Header, IPV6 Header
UDP, Headers
DNS FTP
HTTP
SMTP
Port No
Network Security
SUBSCRIBE

8:28

Computer Networks (Complete Playlist)
94 videos · Gate Smashers

#ComputerNetworksByGateSmashers

Lec-2: Introduction to Computer Network | OSI MODEL in easiest Way in Hindi | Need of OSI model

678,592 views · 3 years ago

14K Dislike Share Download Save

Gate Smashers 769K subscribers

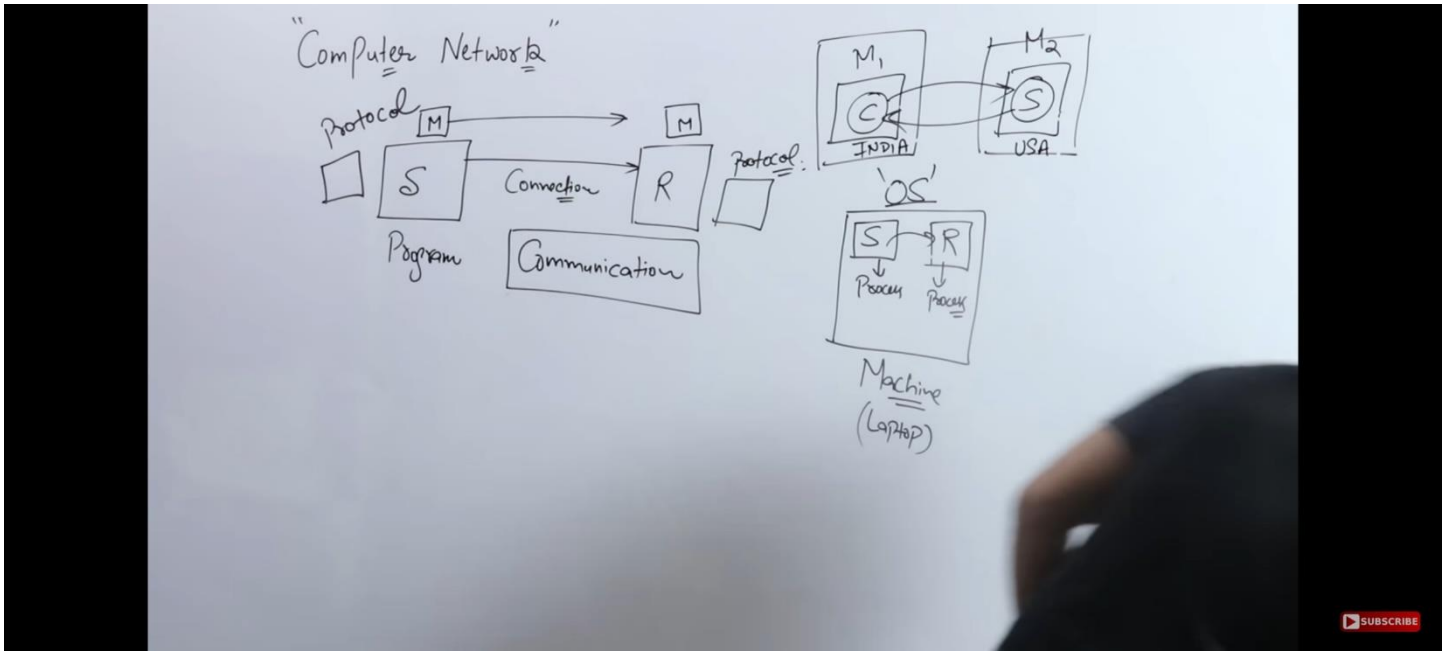
SUBSCRIBED JOIN

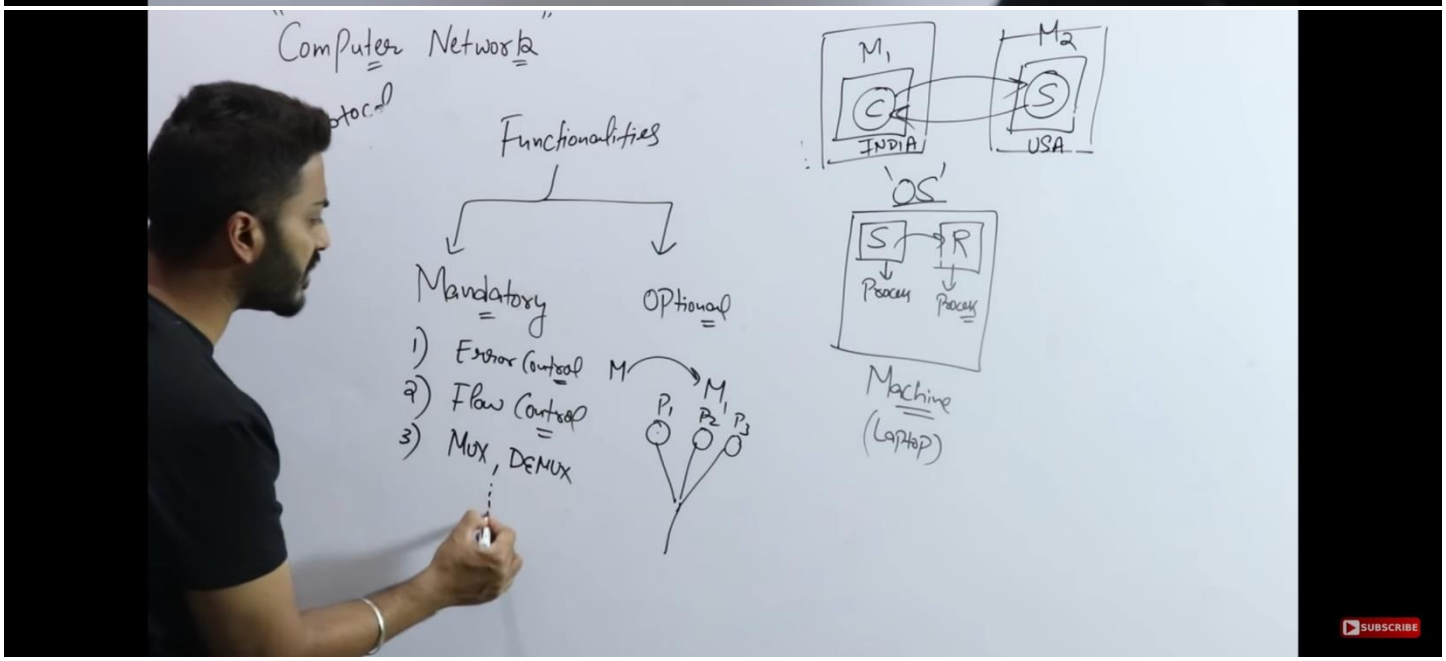
Published on 23 Mar 2018

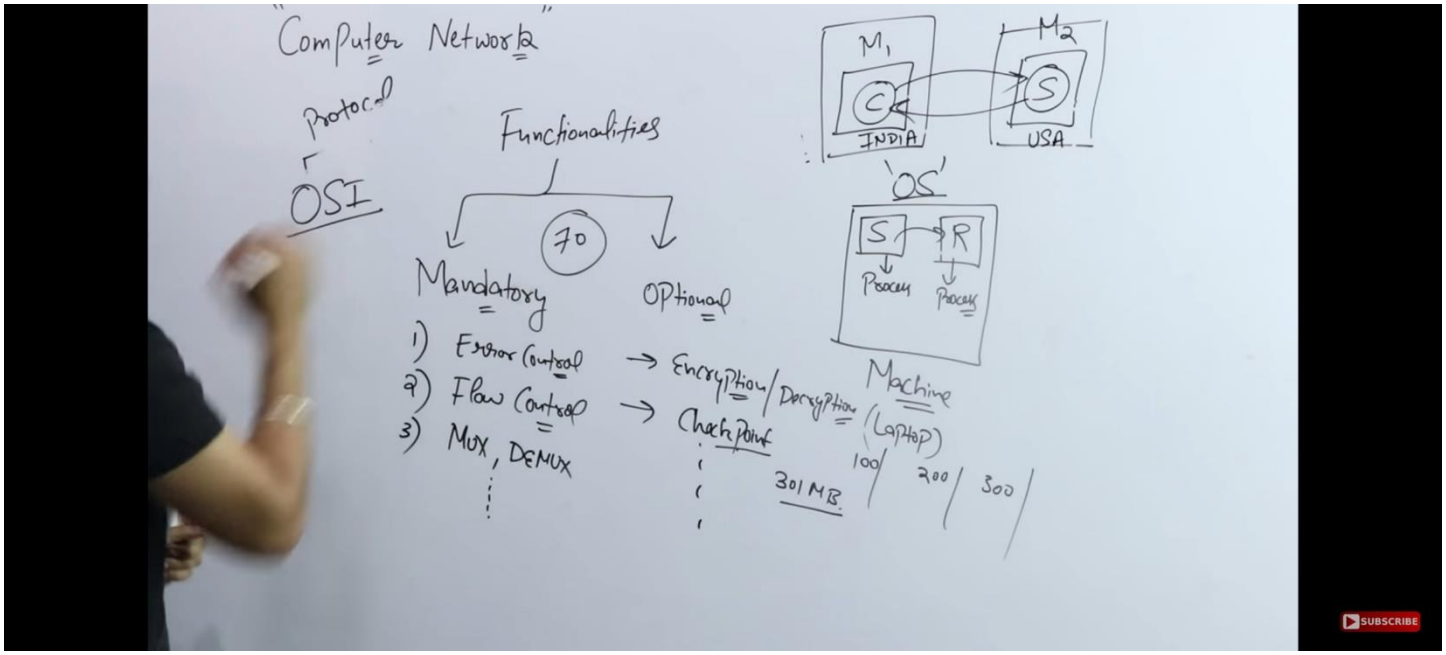
In this video Introduction to Computer Network is discussed with real life examples.
0:00 - Introduction
11:33 - Functionalities

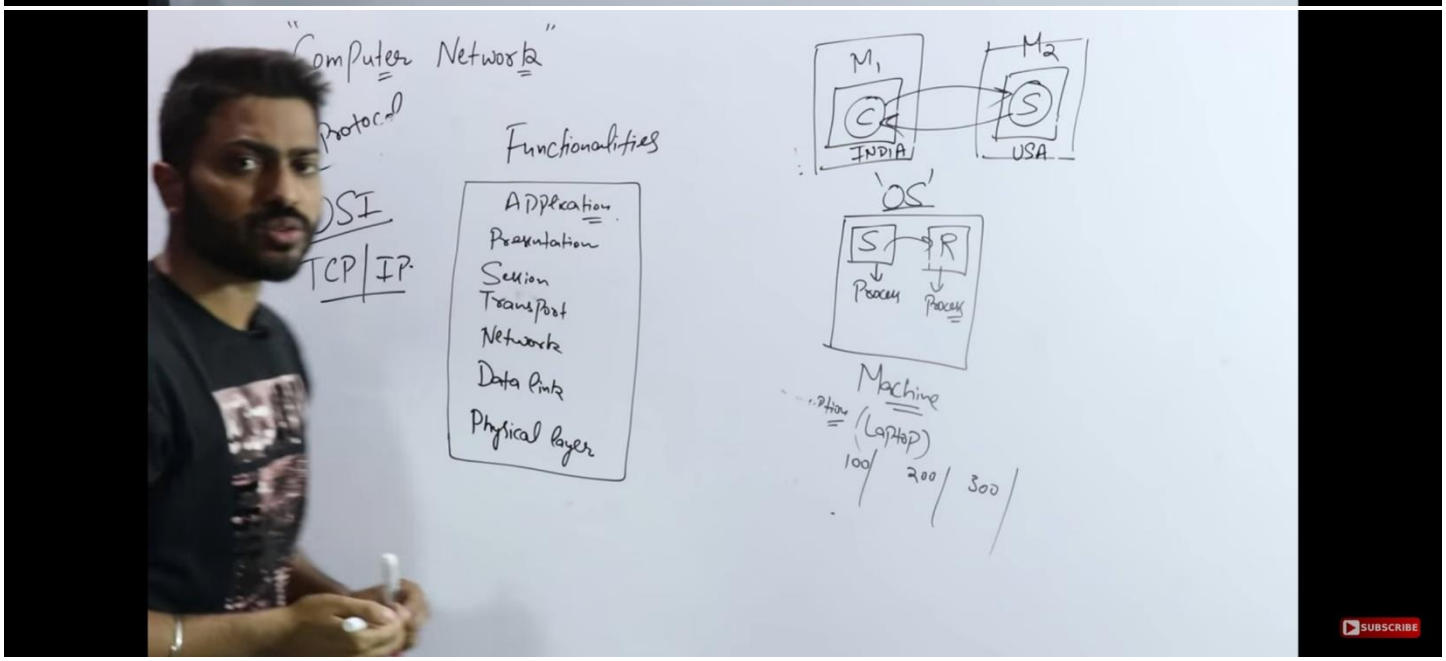
▶Full Course of Computer Networks:
https://www.youtube.com/playlist?list...

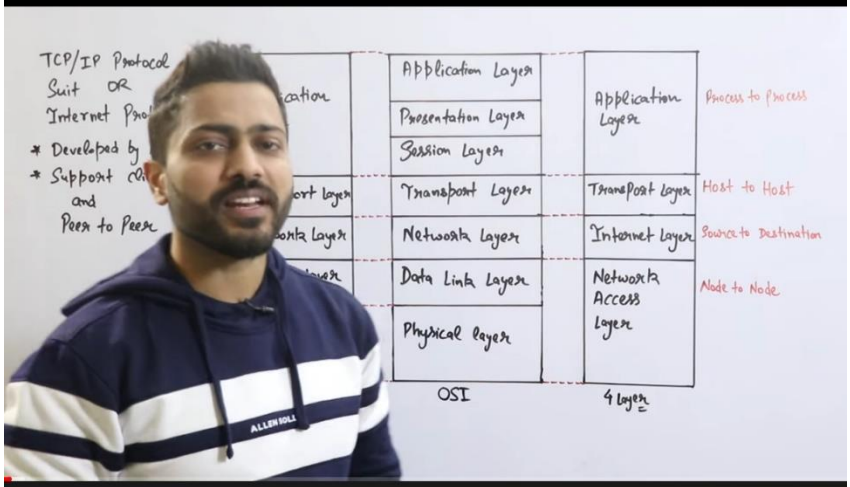
▶Subscribe to our new channel:


"Computer Networks"
Protocol
M
S
Connection
R
Program
Communication
Protocol
M1
INDIA
M2
USA
'OS'
S
R
Process
Process
Machine
(Laptop)
SUBSCRIBE


"Computer Networks"
Functionalities
Mandatory
Optional
1) Error Control
2) Flow Control
3) MUX, DEMUX
M
M1
P1
P2
P3
M1
INDIA
M2
USA
'OS'
S
R
Process
Process
Machine
(Laptop)
SUBSCRIBE


"Computer Network"
Protocol
OSI
Functionalities
70
Mandatory
Optional
1) Error Control
2) Flow Control
3) Mux, DeMux
Encryption/Decryption
CheckPoint
M1
M2
C
S
INDIA
USA
'OS'
S
R
Process
Process
Machine
(Laptop)
100
200
300
301 MB
SUBSCRIBE


"Computer Network"
Protocol
OSI
TCP/IP
Functionalities
Application
Presentation
Session
Transport
Network
Data Link
Physical Layer
M1
M2
C
S
INDIA
USA
'OS'
S
R
Process
Process
Machine
(Laptop)
100
200
300
SUBSCRIBE



Computer Networks (Complete Playlist)

94 videos · Gate Smashers

Lec-3: TCP/IP Protocol Suite | Internet Protocol Suite | OSI vs...

Lec-4: Physical layer in computer networks in hindi | F...

Lec-5: Topologies in Computer Networks |Part 1 | All imp poin...

Lec-6: Topologies in Computer Networks |Part 2 | All imp poin...

Lec-7: Manchester encoding and differential manchester en...

Lec-8: Various Devices In Computer Networks | Hardwar...

Lec-9: Types Of Cables in Computer Networks | Coaxial, ...

Lec-10: Repeaters in Computer

TCP/IP Protocol
Suit OR
Internet Protocol

- Developed by ARPANET
- Support Client-Server and Peer to Peer

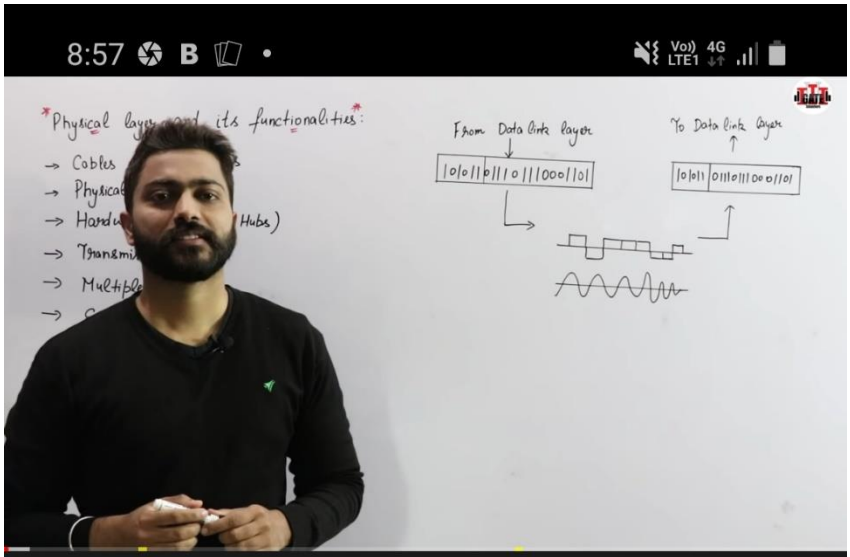
5-layer TCP/IP	OSI	4 layer	
Application Layer	Application Layer	Application Layer	Process to Process
	Presentation Layer		
	Session Layer		
Transport Layer	Transport Layer	Transport Layer	Host to Host
Network Layer	Network Layer	Internet Layer	Source to Destination
Data Link Layer	Data Link Layer	Network Access Layer	Node to Node
Physical Layer	Physical layer		

TCP/IP Protocol
Suit OR
Internet Protocol

* Developed by ARPANET
* Support Client-Server and Peer to Peer

5-layer TCP/IP	OSI	4 layer	
Application Layer	Application Layer	Application Layer	Process to Process
	Presentation Layer		
	Session Layer		
Transport Layer	Transport Layer	Transport Layer	Host to Host
Network Layer	Network Layer	Internet Layer	Source to Destination
Data Link Layer	Data Link Layer	Network Access Layer	Node to Node
Physical Layer	Physical layer		

SUBSCRIBE

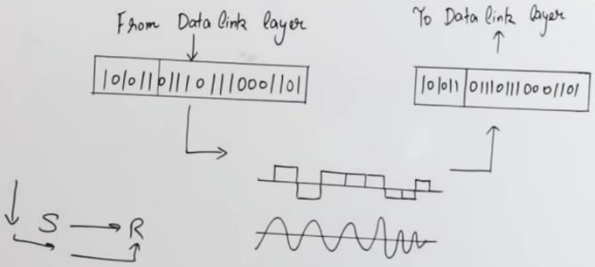


Computer Networks (Complete Playlist)

94 videos · Gate Smashers

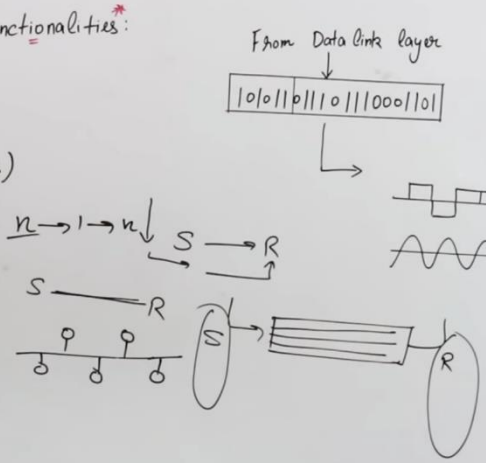
*Physical layer and its functionalities:

→ Cables and Connectors
→ Physical topology
→ Hardwares (Repeaters, Hubs)
→ Transmission mode
→ Multiplexing
→ Encoding

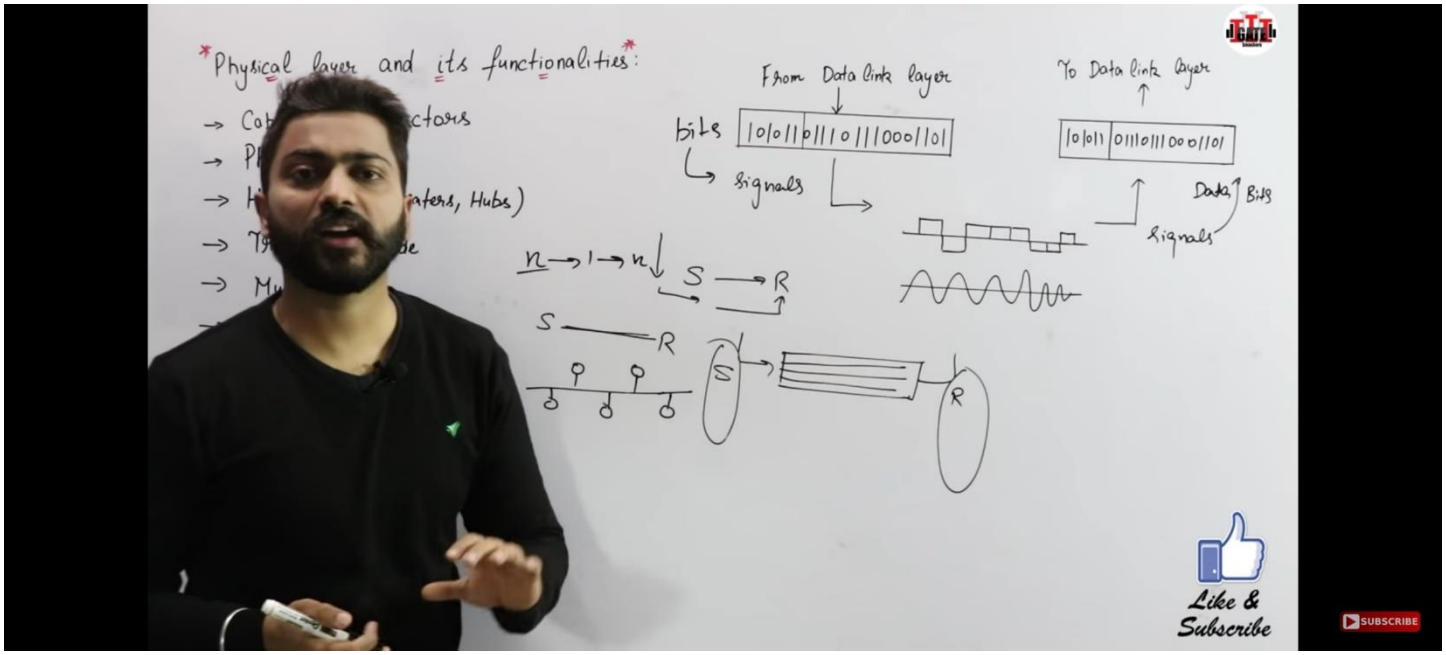


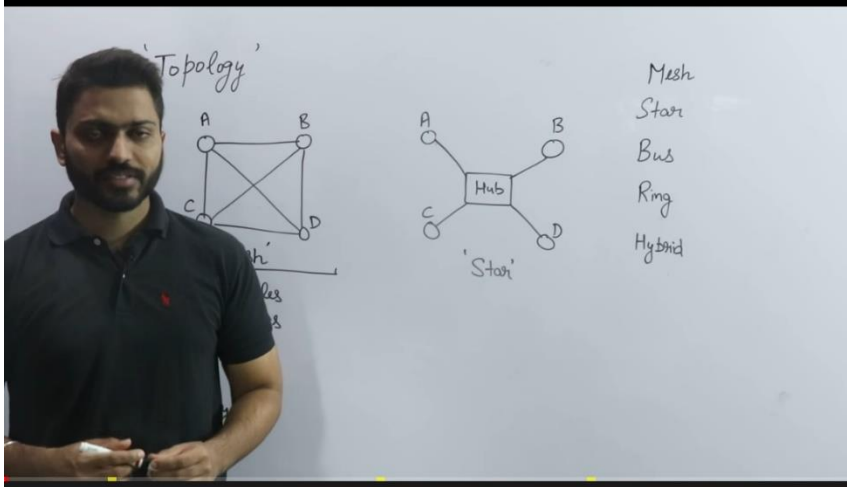
*Physical layer and its functionalities:

→ Cables and Connectors
→ Physical topology
→ Hardwares (Repeaters, Hubs)
→ Transmission mode
→ Multiplexing
→ Encodi



SUBSCRIBE


Physical layer and its functionalities:
From Data link layer
To Data link layer
bits
Signals
Data Bits
Signals
n → 1 → n
S → R
S
R
Like & Subscribe
SUBSCRIBE



Computer Networks (Complete Playlist)

94 videos · Gate Smashers

Lec-5: Topologies in Computer Networks |Part 1 | All imp poin...

Lec-6: Topologies in Computer Networks |Part 2 | All imp poin...

Lec-7: Manchester encoding and differential manchester en...

Lec-8: Various Devices In Computer Networks | Hardwar...

Lec-9: Types Of Cables in Computer Networks | Coaxial, ...

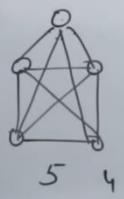
Lec-10: Repeaters in Computer Networks | Physical layer devi...

Lec-11: Hub in Computer Networks | Physical layer devi...

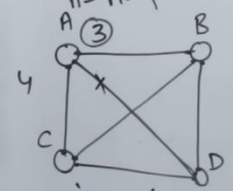
Lec-12: Bridges In Computer

'Topology'

n = no of nodes

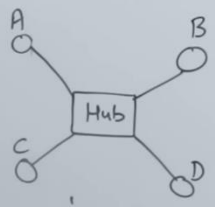


10



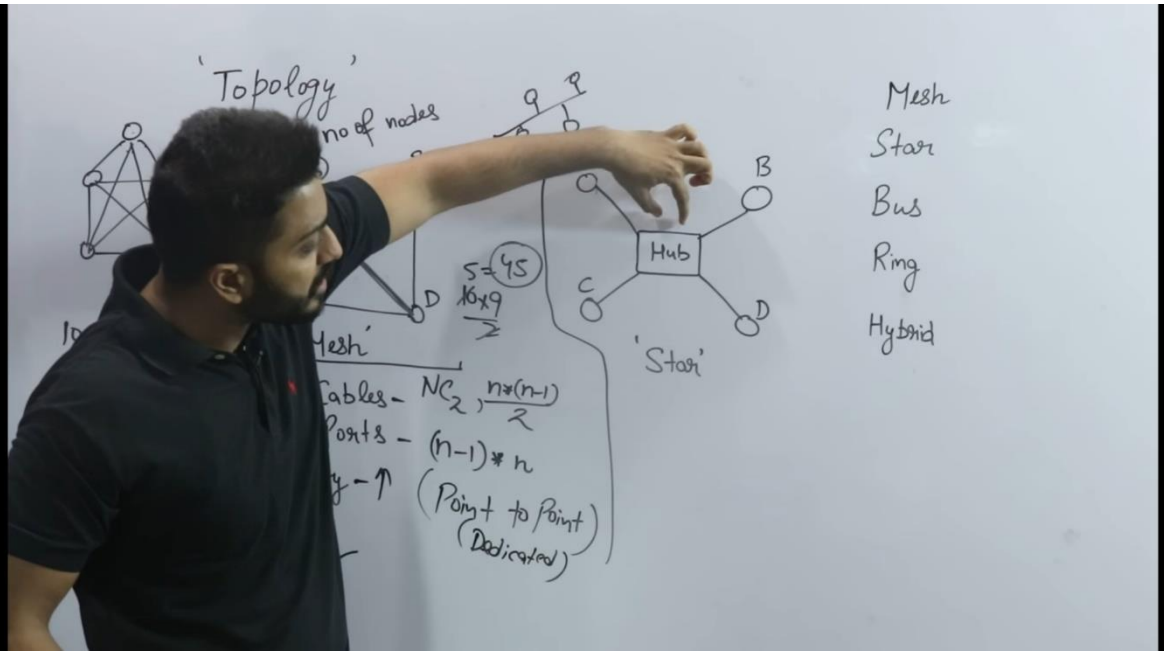
'Mesh'

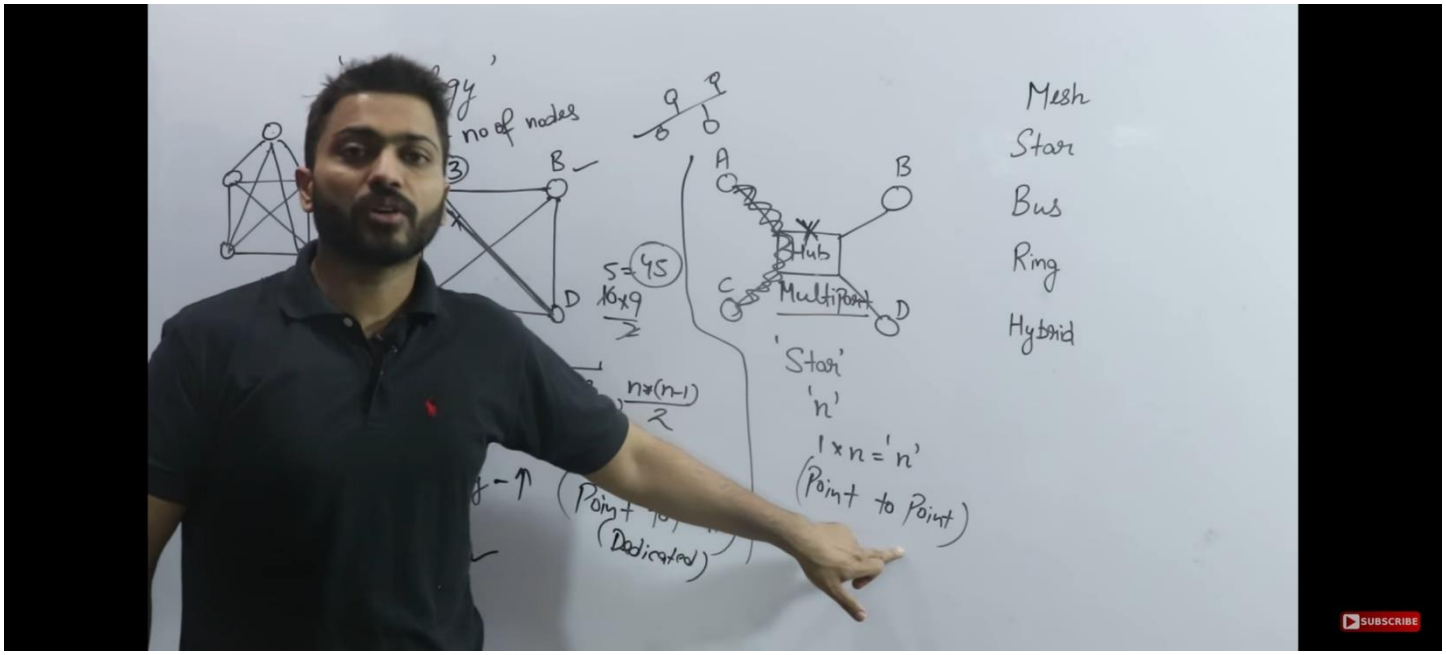
* No. of Cables - $^nC_2$, $\frac{n*(n-1)}{2}$
* No. of Ports - $(n-1)*n$
* Reliability - ↑
* Cost
* Security

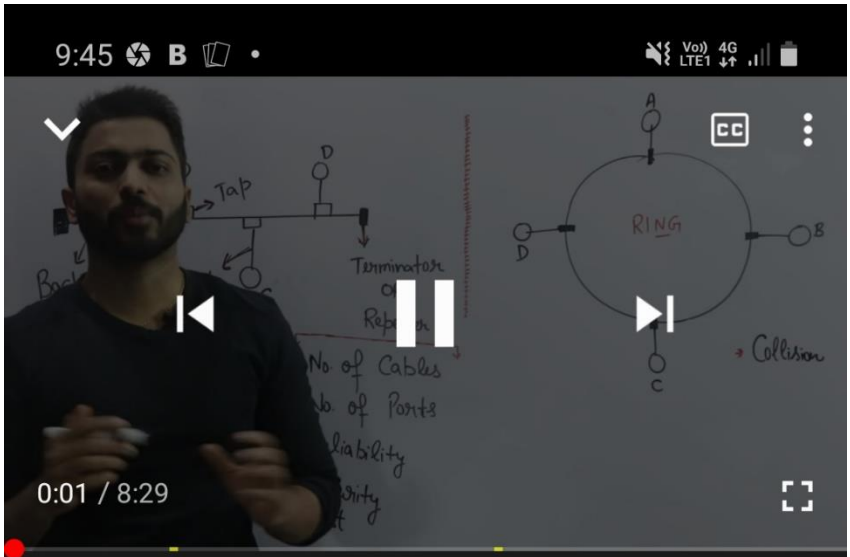


'Star'

Mesh
Star
Bus
Ring
Hybrid




no of nodes
A
B
C
D
Hub
MultiPort
'Star'
'n'
1 x n = 'n'
(Point to Point)
(Dedicated)
Mesh
Star
Bus
Ring
Hybrid
SUBSCRIBE



Computer Networks (Complete Playlist)

94 videos · Gate Smashers

Lec-6: Topologies in Computer Networks |Part 2 | All imp poin...

Lec-7: Manchester encoding and differential manchester en...

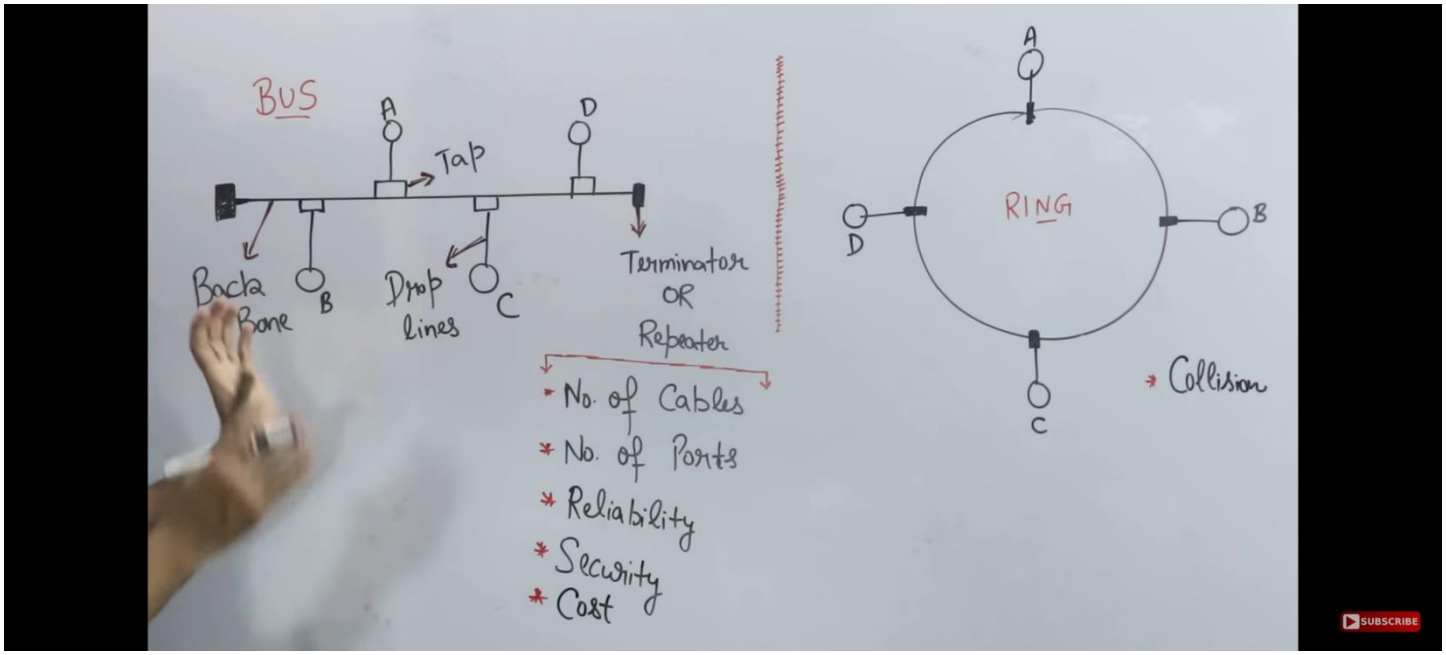
Lec-8: Various Devices In Computer Networks | Hardwar...

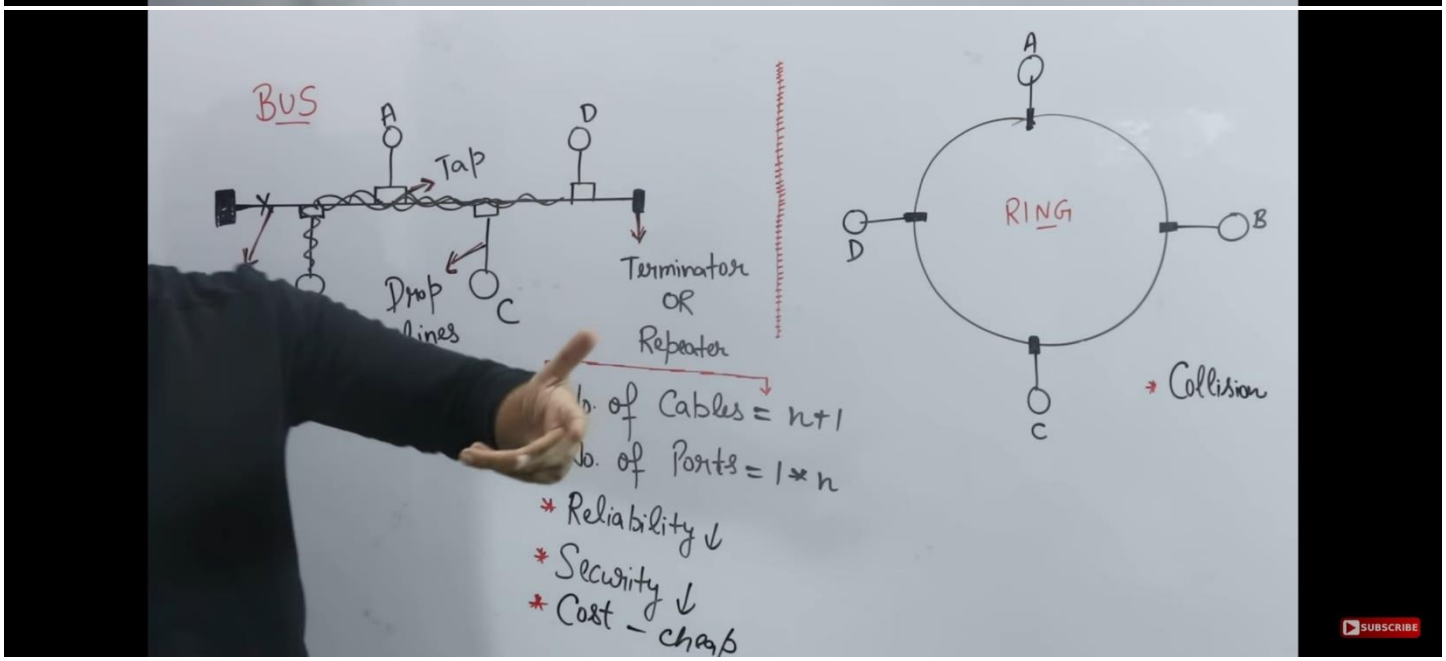
Lec-9: Types Of Cables in Computer Networks | Coaxial, ...

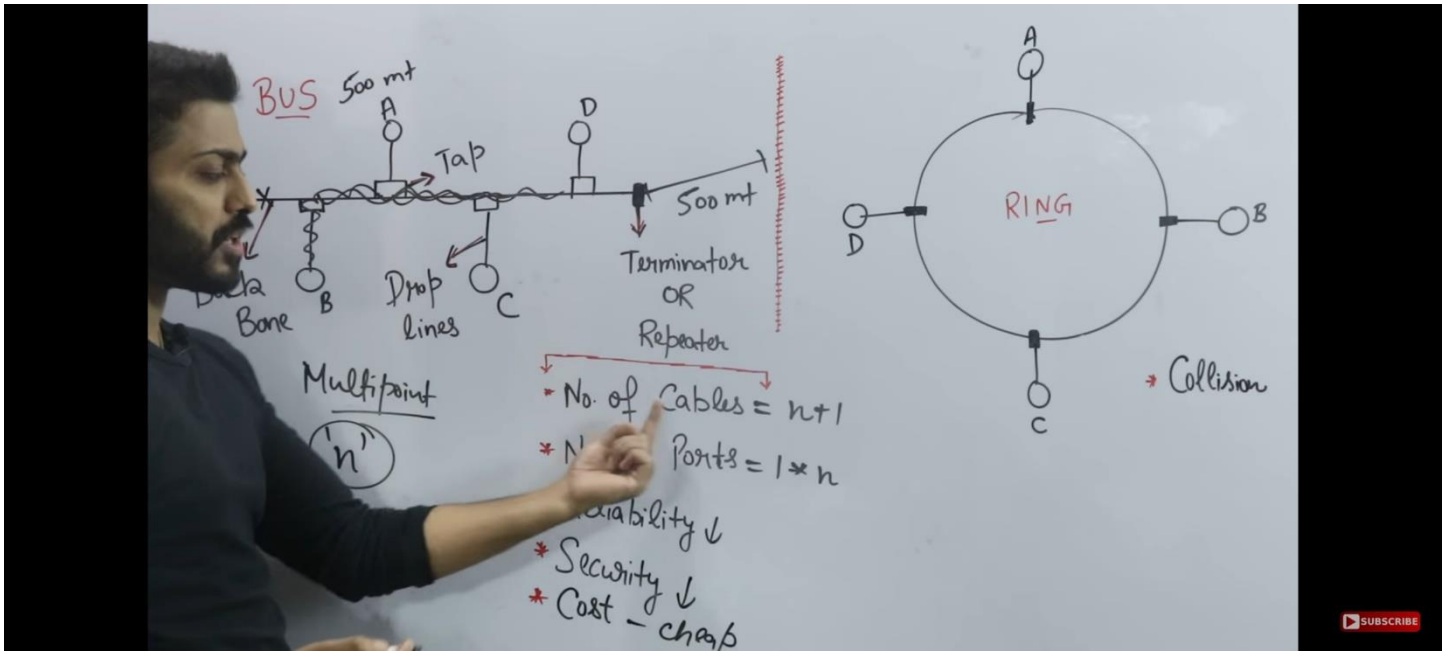
Lec-10: Repeaters in Computer Networks | Physical layer devi...

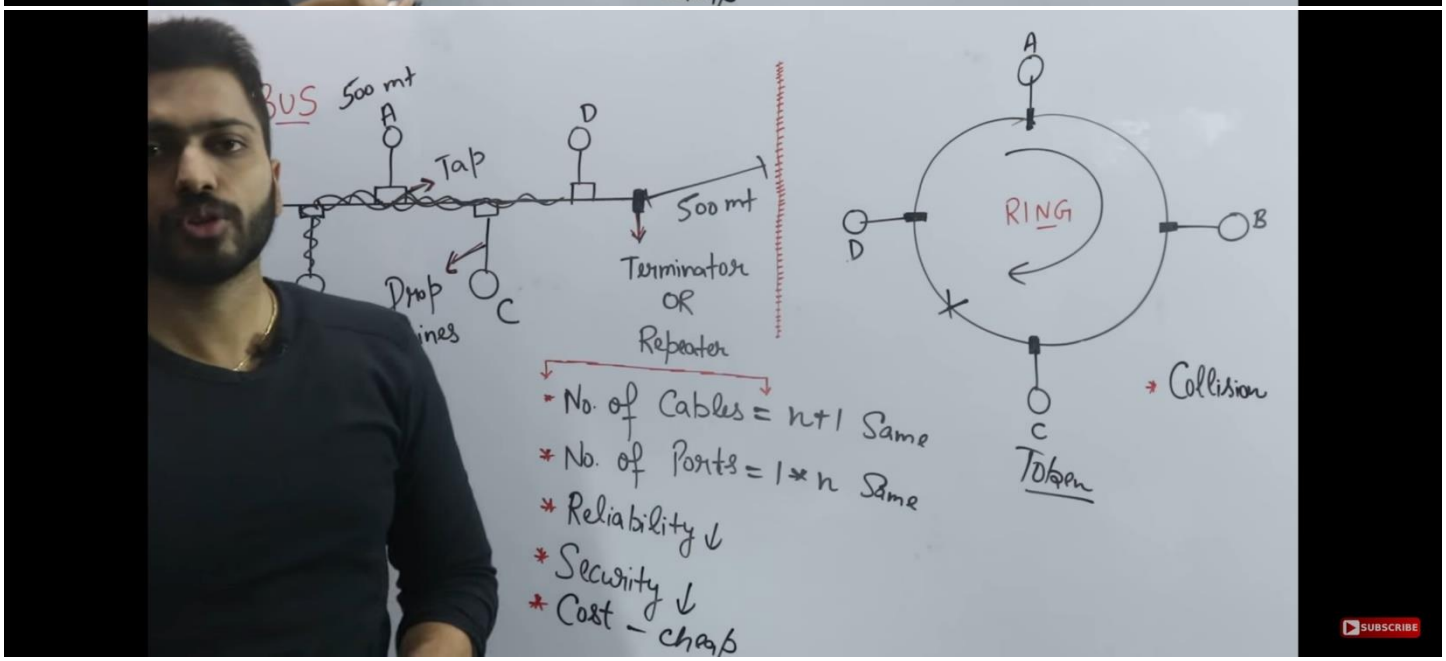
Lec-11: Hub in Computer Networks | Physical layer devi...

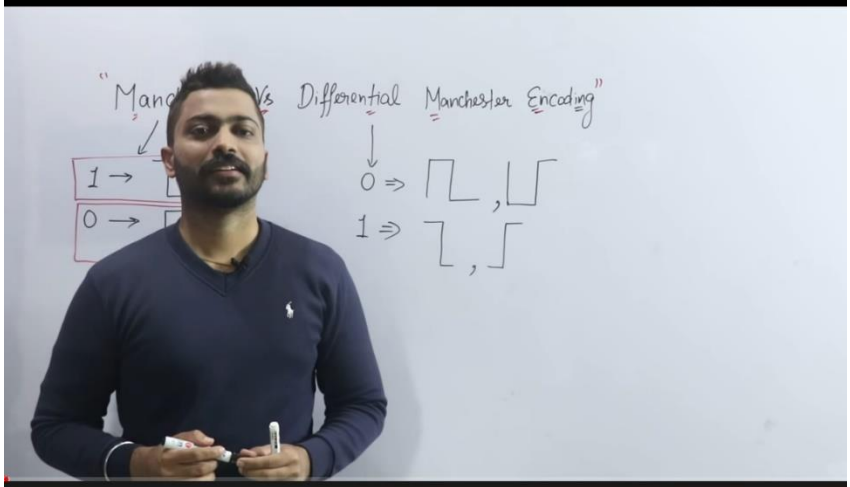
Lec-12: Bridges In Computer Networks | Physical and data li...


BUS
A
D
Tap
Backbone
B
Drop lines
C
Terminator OR Repeater
* No. of Cables
* No. of Ports
* Reliability
* Security
* Cost
RING
A
B
C
D
* Collision
SUBSCRIBE


BUS
A
D
Tap
Drop lines
C
Terminator OR Repeater
No. of Cables = n+1
No. of Ports = 1 * n
* Reliability ↓
* Security ↓
* Cost - cheap
RING
A
B
C
D
* Collision
SUBSCRIBE

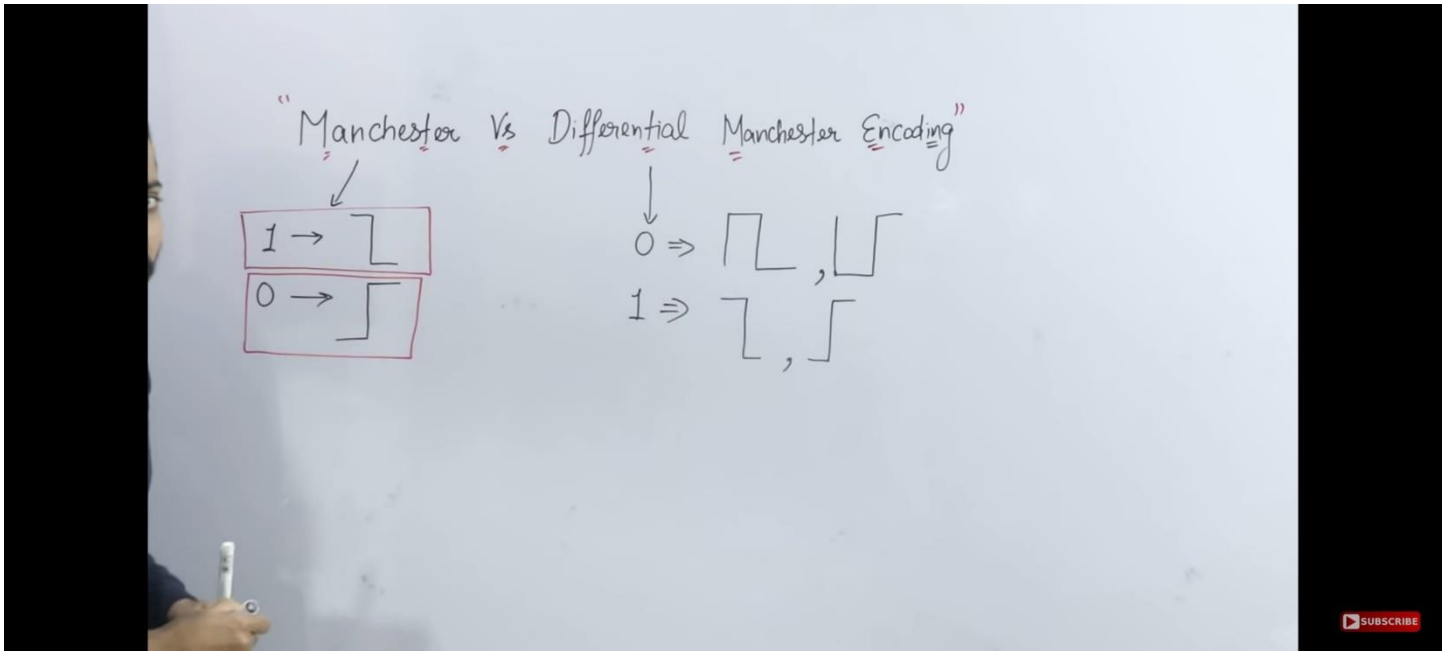

BUS
500 mt
A
D
Tap
500 mt
Terminator
OR
Repeater
Drop lines
C
B
Multipoint
'n'
No. of Cables = n+1
Ports = 1*n
Reliability ↓
Security ↓
Cost - cheap
RING
A
B
C
D
Collision
SUBSCRIBE

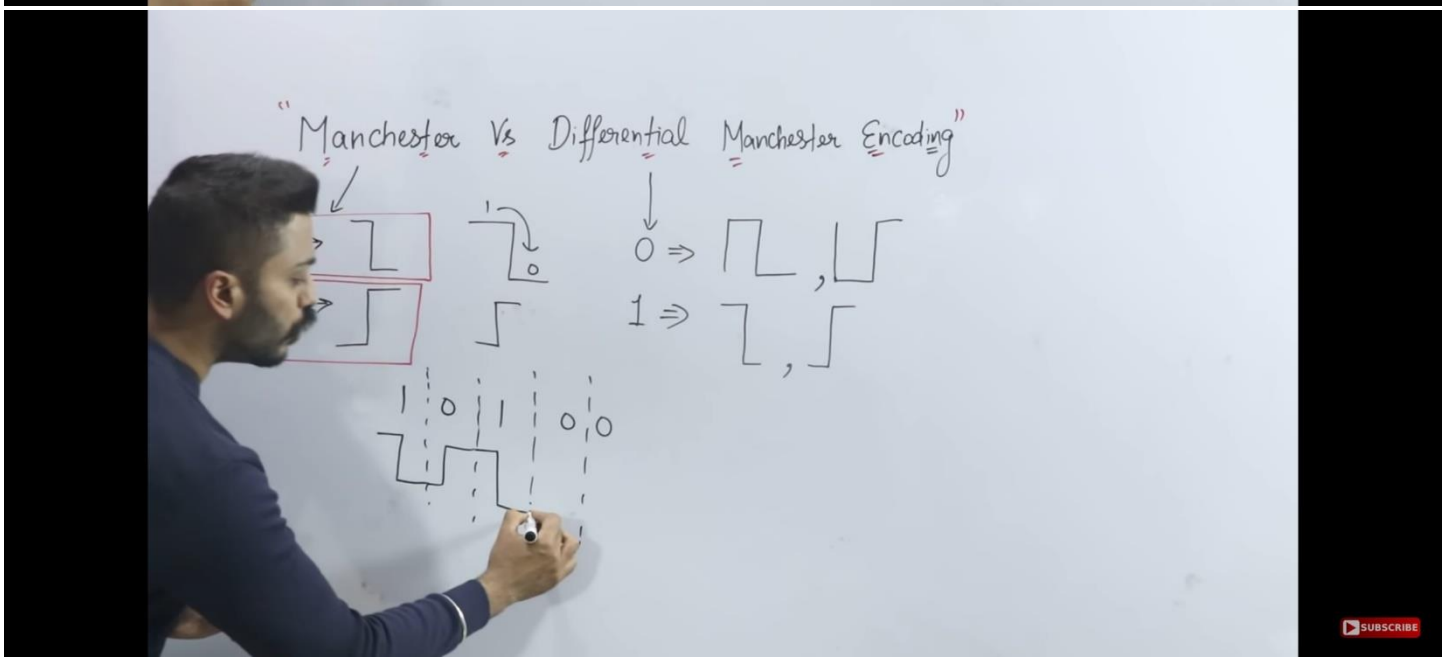

BUS
500 mt
A
D
Tap
500 mt
Terminator
OR
Repeater
C
No. of Cables = n+1 Same
No. of Ports = 1*n Same
Reliability ↓
Security ↓
Cost - cheap
RING
A
B
C
D
Collision
Token
SUBSCRIBE

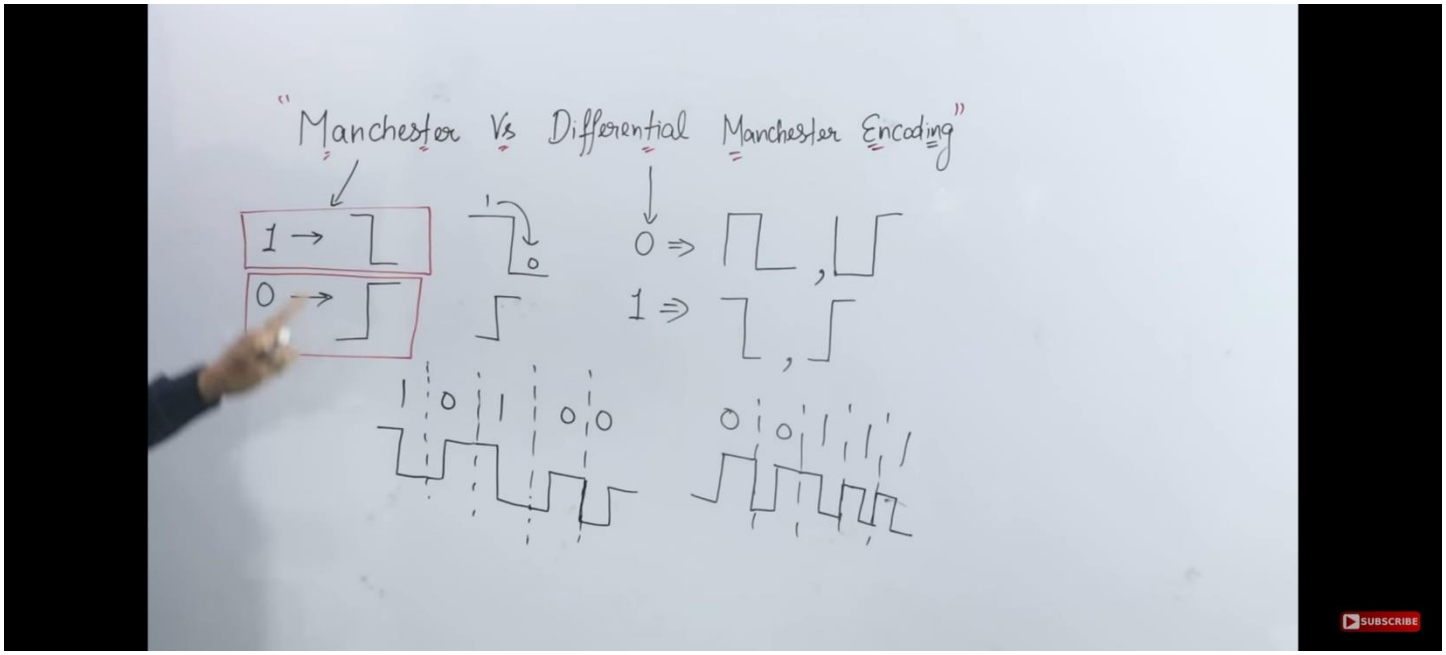


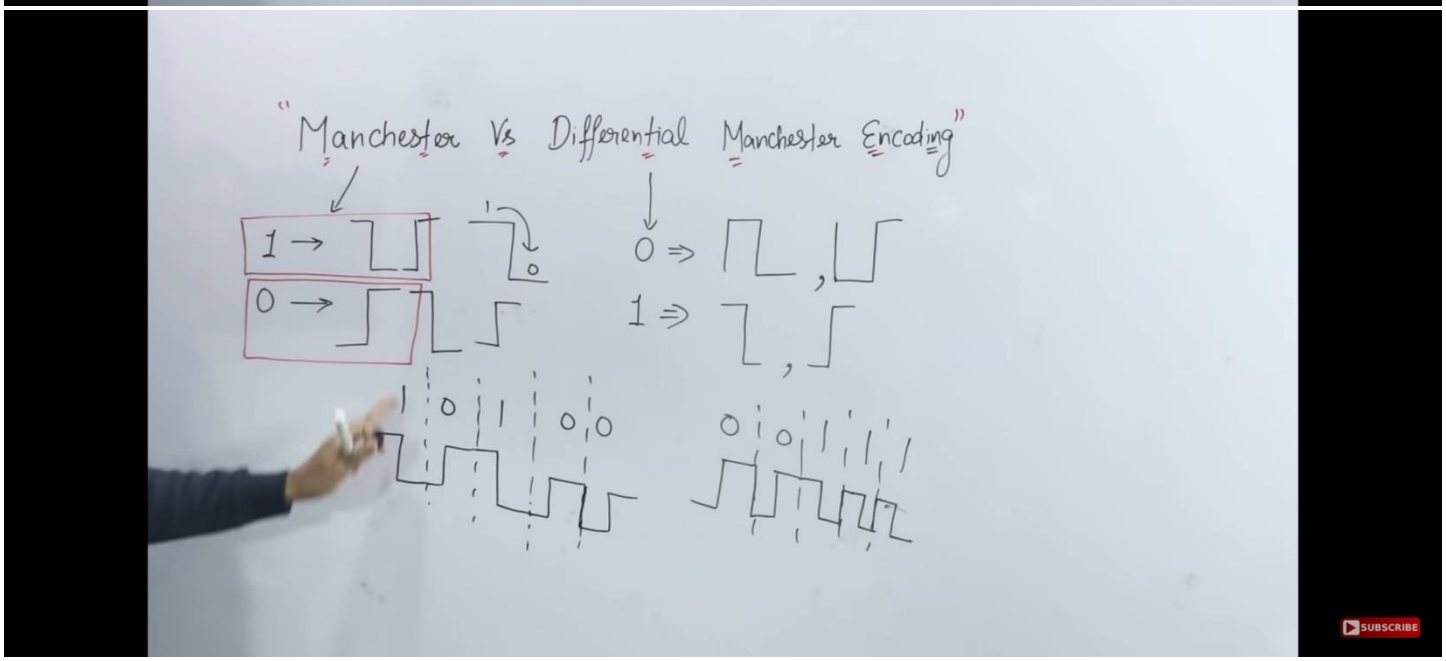
Computer Networks (Complete Playlist)

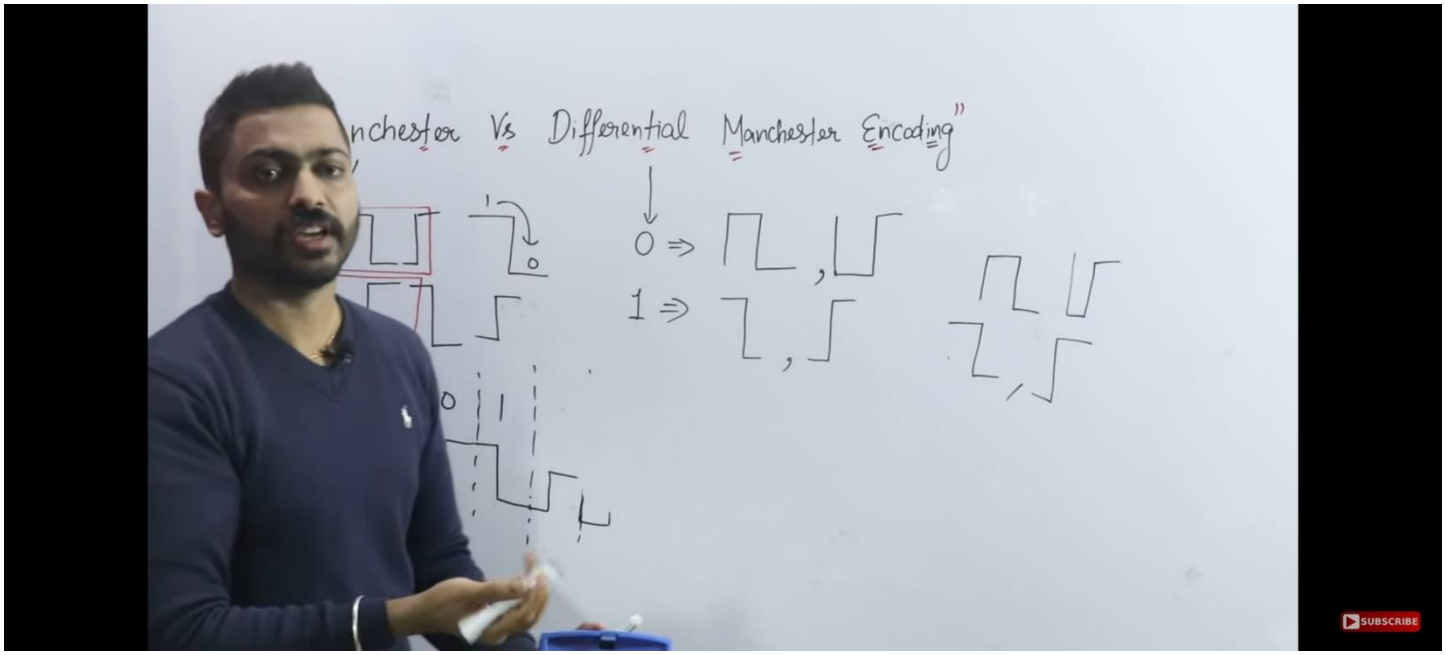
94 videos · Gate Smashers

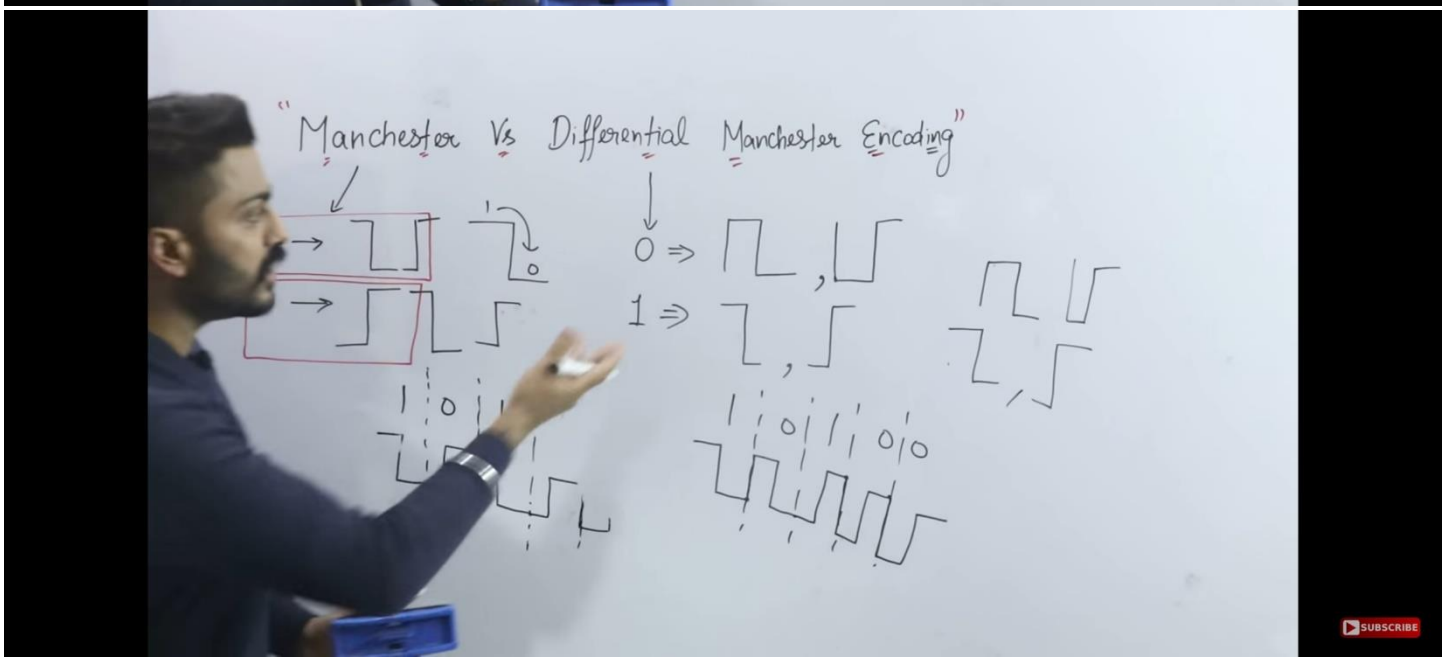

"Manchester Vs Differential Manchester Encoding"
1 →
0 →
0 ⇒
1 ⇒
SUBSCRIBE

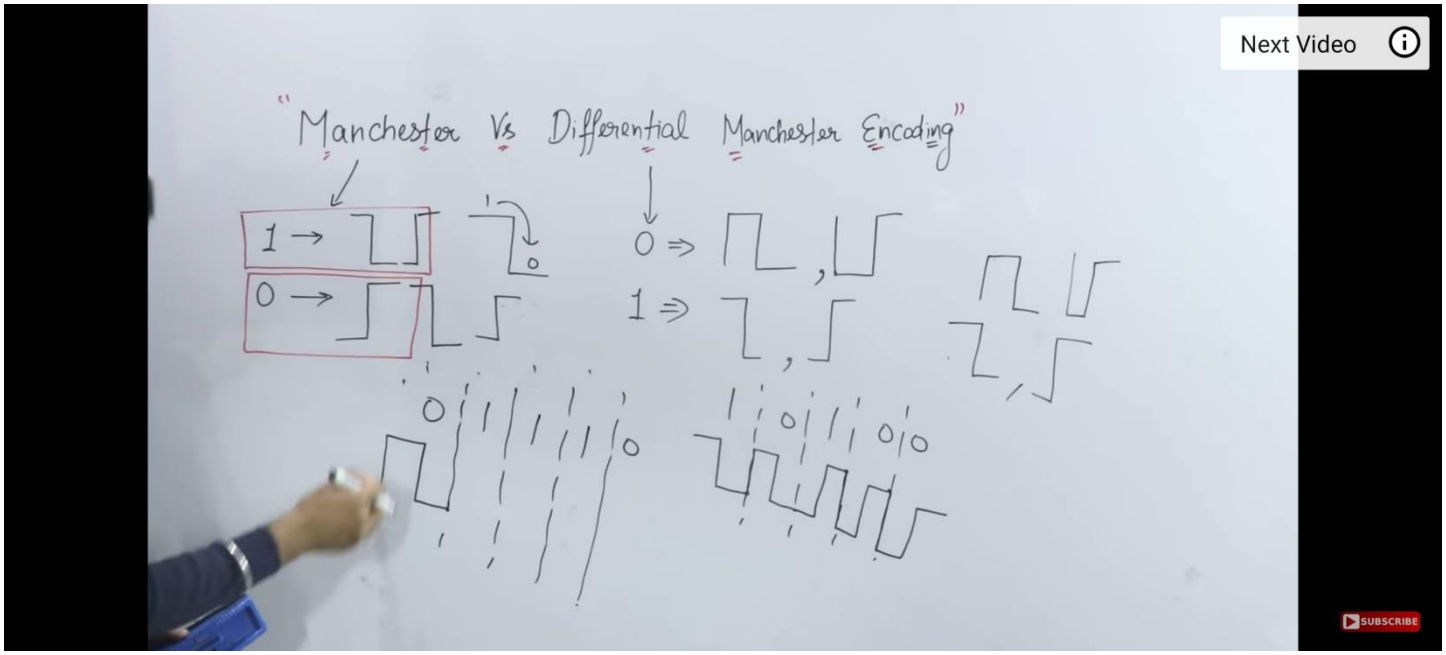

"Manchester Vs Differential Manchester Encoding"
0 ⇒
1 ⇒
1 0 1 0 0
SUBSCRIBE

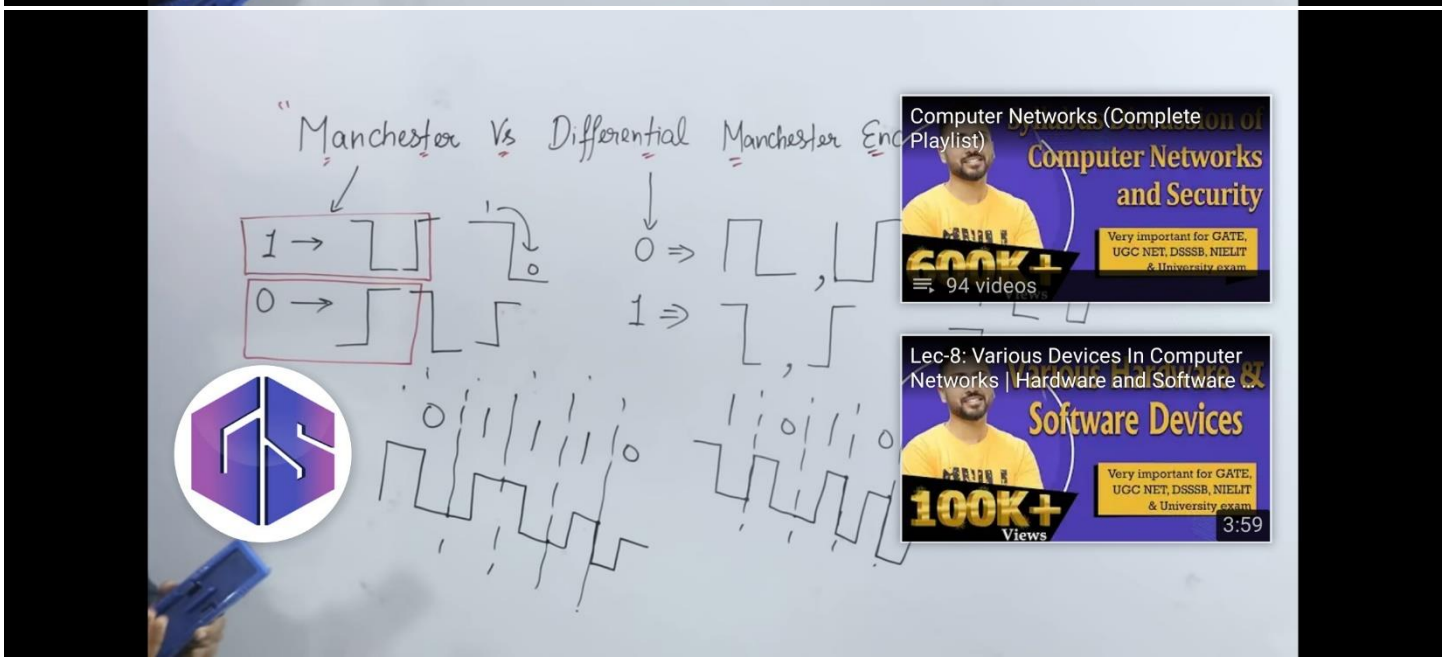

"Manchester Vs Differential Manchester Encoding"
1 →
0 →
0 ⇒
1 ⇒
SUBSCRIBE

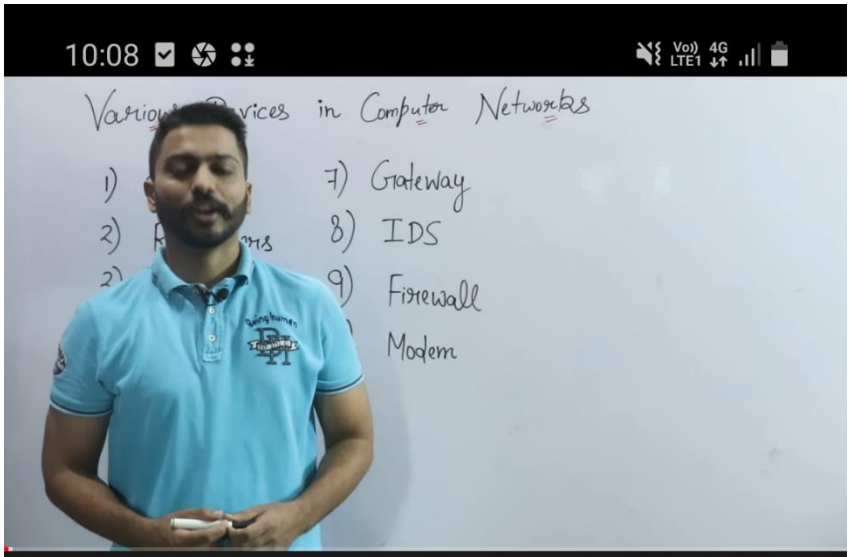

"Manchester Vs Differential Manchester Encoding"
1 →
0 →
0 ⇒
1 ⇒
SUBSCRIBE


nchester Vs Differential Manchester Encoding"
0 ⇒
1 ⇒
SUBSCRIBE


"Manchester Vs Differential Manchester Encoding"
0 ⇒
1 ⇒
SUBSCRIBE


Next Video
"Manchester Vs Differential Manchester Encoding"
1 →
0 →
0 ⇒
1 ⇒
SUBSCRIBE


"Manchester Vs Differential Manchester Enc
1 →
0 →
0 ⇒
1 ⇒
Computer Networks (Complete Playlist)
Computer Networks and Security
Very important for GATE, UGC NET, DSSSB, NIELIT & University exam
94 videos
Lec-8: Various Devices In Computer Networks | Hardware and Software ...
Software Devices
Very important for GATE, UGC NET, DSSSB, NIELIT & University exam
100K+ Views
3:59



Computer Networks (Complete Playlist)

94 videos · Gate Smashers

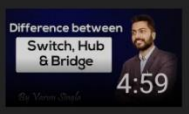
Lec-8: Various Devices In Computer Networks | Hardwar...

Lec-9: Types Of Cables in Computer Networks | Coaxial, ...

Lec-10: Repeaters in Computer Networks | Physical layer devi...

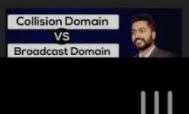
Lec-11: Hub in Computer Networks | Physical layer devi...

Lec-12: Bridges In Computer Networks | Physical and data li...

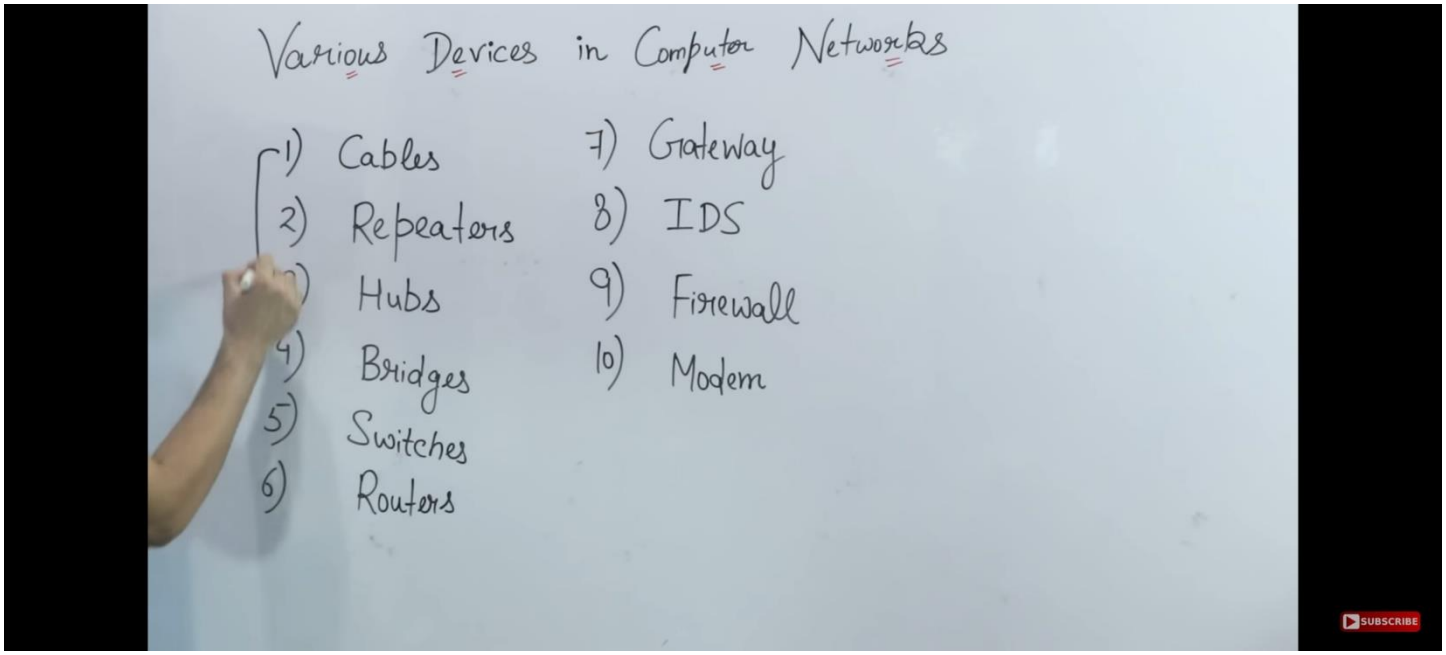


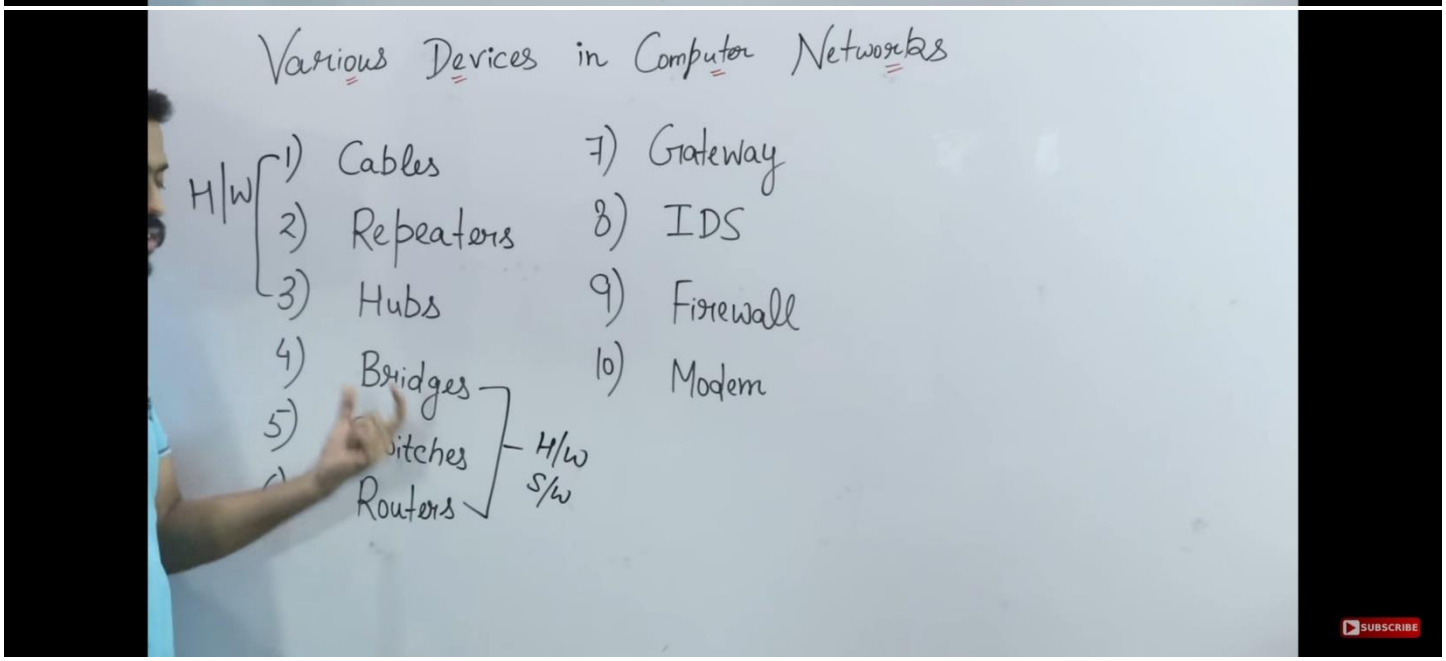
Lec-13: Switch, Hub & Bridge Explained - What's the differen...

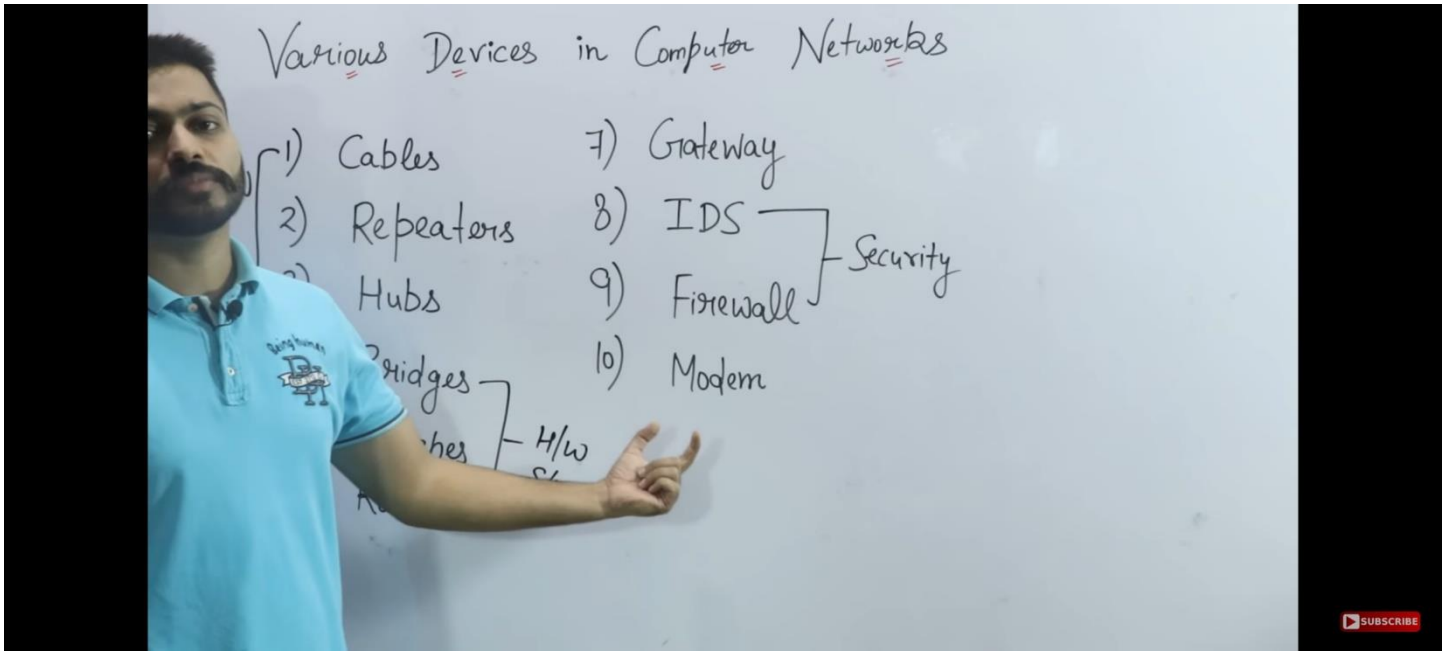
Lec-14: Routers in Computer Networks | Physical, data link ...

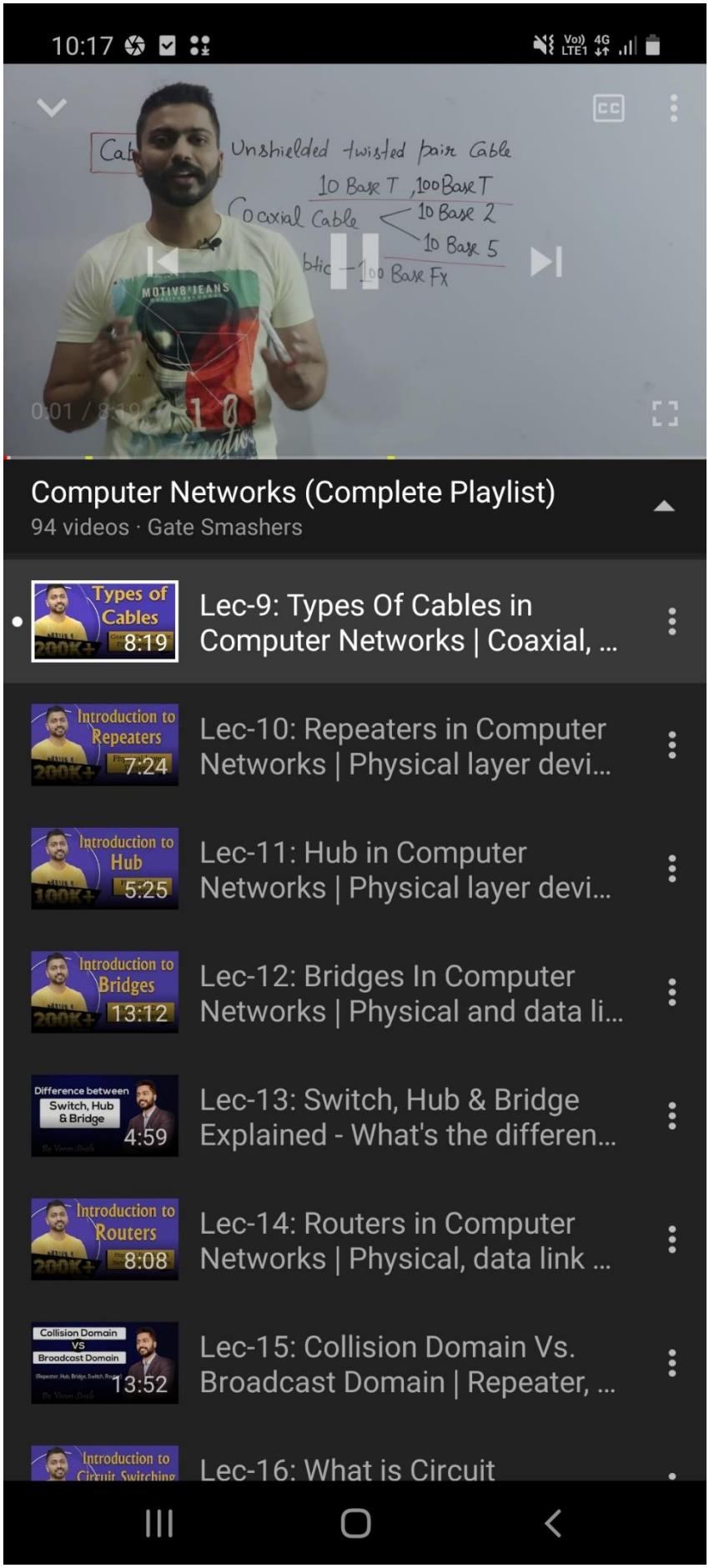


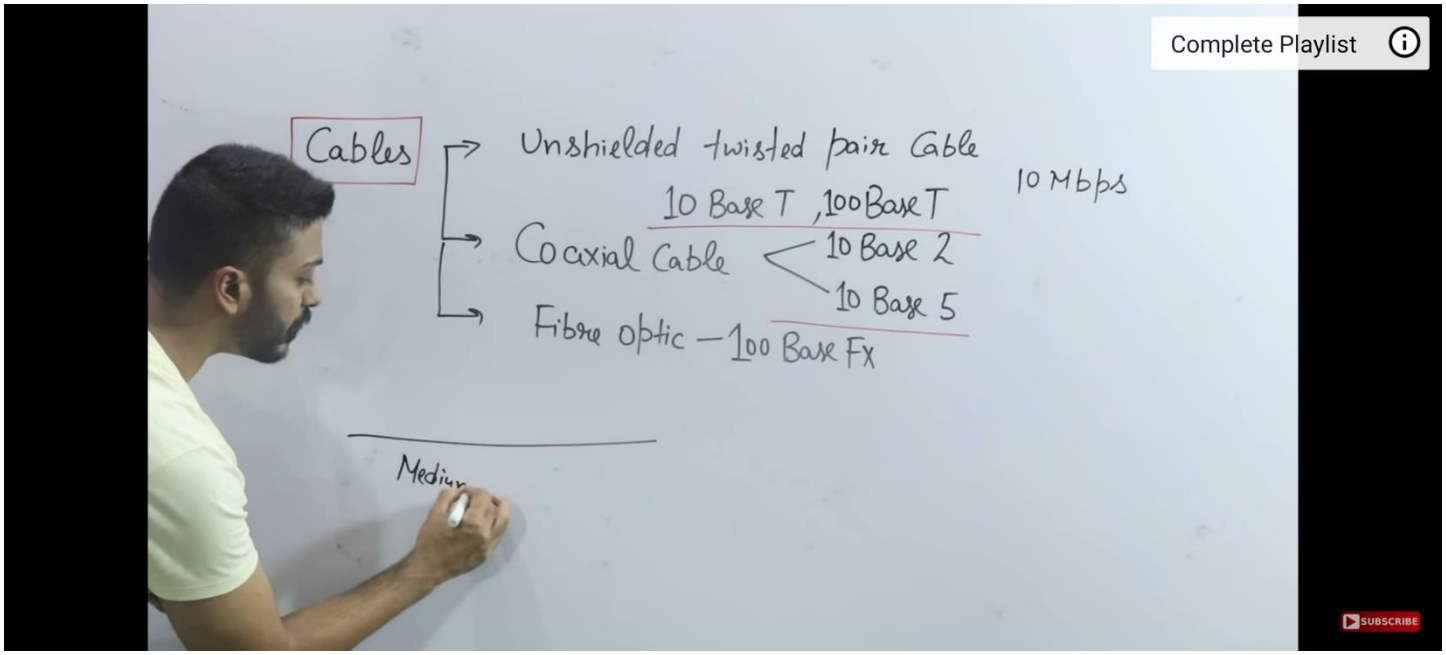
Lec-15: Collision Domain Vs.

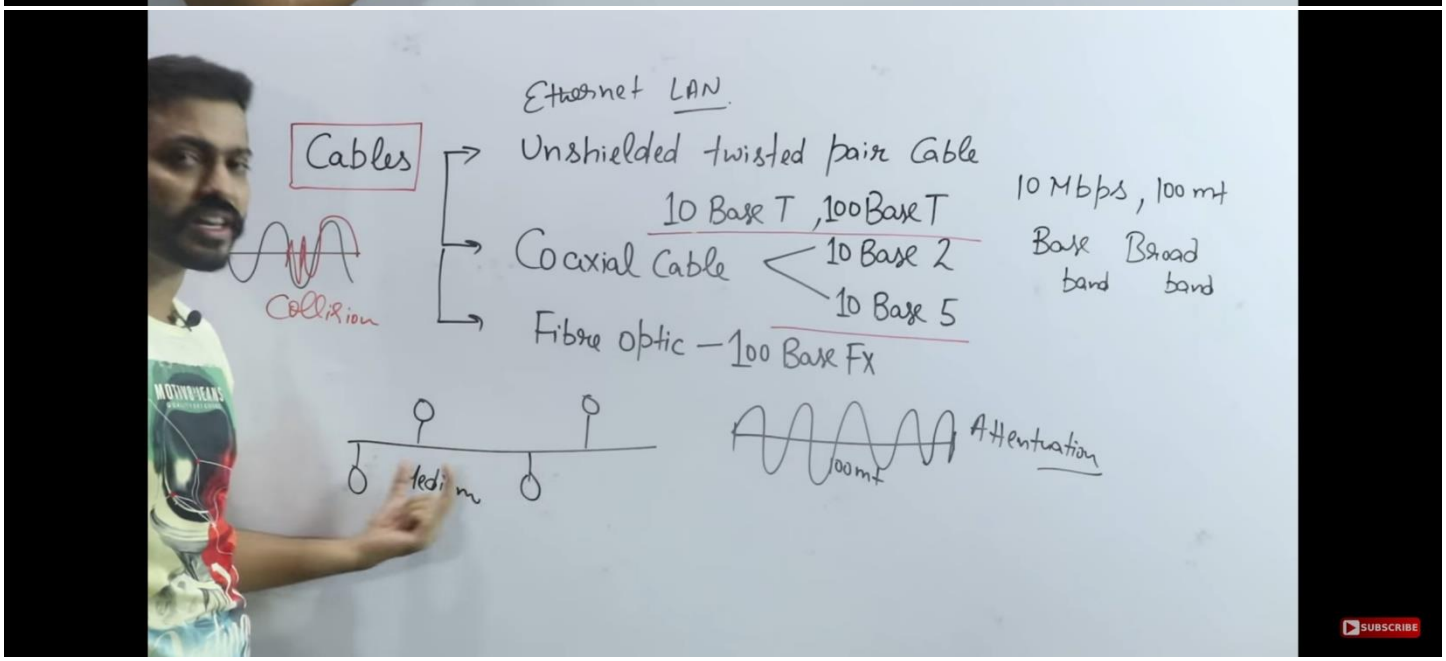

Various Devices in Computer Networks
1) Cables
2) Repeaters
3) Hubs
4) Bridges
5) Switches
6) Routers
7) Gateway
8) IDS
9) Firewall
10) Modem
SUBSCRIBE


Various Devices in Computer Networks
H/W
1) Cables
2) Repeaters
3) Hubs
4) Bridges
5) Switches
Routers
H/W
S/W
7) Gateway
8) IDS
9) Firewall
10) Modem
SUBSCRIBE


Various Devices in Computer Networks
1) Cables
2) Repeaters
Hubs
Bridges
H/w
7) Gateway
8) IDS
9) Firewall
Security
10) Modem
SUBSCRIBE


10:17
Unshielded twisted pair Cable
10 Base T , 100 Base T
Coaxial Cable
10 Base 2
10 Base 5
100 Base Fx
0:01 / 8:19
Computer Networks (Complete Playlist)
94 videos · Gate Smashers
Types of Cables
8:19
Lec-9: Types Of Cables in Computer Networks | Coaxial, ...
Introduction to Repeaters
7:24
Lec-10: Repeaters in Computer Networks | Physical layer devi...
Introduction to Hub
5:25
Lec-11: Hub in Computer Networks | Physical layer devi...
Introduction to Bridges
13:12
Lec-12: Bridges In Computer Networks | Physical and data li...
Difference between Switch, Hub & Bridge
4:59
Lec-13: Switch, Hub & Bridge Explained - What's the differen...
Introduction to Routers
8:08
Lec-14: Routers in Computer Networks | Physical, data link ...
Collision Domain VS Broadcast Domain
13:52
Lec-15: Collision Domain Vs. Broadcast Domain | Repeater, ...
Introduction to Circuit Switching
Lec-16: What is Circuit


Complete Playlist
Cables
Unshielded twisted pair Cable
10 Base T , 100 Base T
10 Mbps
Coaxial Cable
10 Base 2
10 Base 5
Fibre optic – 100 Base Fx
Medium
SUBSCRIBE


Ethernet LAN
Cables
Unshielded twisted pair Cable
10 Base T , 100 Base T
10 Mbps , 100 mt
Base band
Broad band
Coaxial Cable
10 Base 2
10 Base 5
Fibre optic – 100 Base Fx
Collision
Medium
100 mt
Attentuation
SUBSCRIBE