

Suggested link of video lectures for Diploma (Computer Science) Students

Subject Name : Computer Network

Subject Code : 401

Topic	Details	Video URL Link
INTRODUCTION	Basics of Networks - Definition, Need, Uses and Advantages.	https://www.youtube.com/watch?v=I8JvM5ROB7c
	Types of Computer Networks-Local area Networks (LAN), Wide Area Networks(WAN) , Metropolitan	https://www.youtube.com/watch?v=I8JvM5ROB7c
	Network Architectures- Peer to Peer , Client-Server, Hybrid, Intranet, Internet and Extranet.	https://www.youtube.com/watch?v=Hf_fZTB5FbU
	Different Topologies – Bus, Ring, Star, Hybrid etc.	https://www.youtube.com/watch?v=RUTdK6y8Jn0
NETWORKING MODELS AND ADDRESSES	Detailed Layered architecture of OSI andTCP/IP Reference Model.	https://www.youtube.com/watch?v=JFF2vJaNOCw&list=PLxCzCOWd7aiGFBD2-2joCpWOLUrDLvVV
	Comparison Between OSI Vs. TCP/IP reference Model.	https://www.youtube.com/watch?v=MO1dJc3qz9s
	Introduction to various LAN and WAN Protocols.	https://www.youtube.com/watch?v=xw59J8Euq-l
	Network Address: Overview, Type of Addresses, Need, advantages and disadvantages.	https://www.youtube.com/watch?v=Kx6i9gwNS3w
	IP Addresses : Class Full Addressing Network ID, Host ID Special Addressing	https://www.youtube.com/watch?v=sYdW0CxM-sc
	Overview Subnetting and Supernetting, VLAN	https://www.youtube.com/watch?v=ilqTBjivYFQ
NETWORKING COMPONENTS AND NETWORK OPERATING SYSTEM	Networking Media – Coaxial, UTP, Shielded	https://www.youtube.com/watch?v=JFF2vJaNOCw&list=PLxCzCOWd7aiGFBD2-2joCpWOLUrDLvVV
	Twisted Pair, Fiber Optical Cable, and wireless media.	https://www.youtube.com/watch?v=2wXOHPxhUgc
	Networking Devices – NIC, Modem , Hub, Repeater, Switches, Bridge, Router, Gateway, Wi-	https://www.youtube.com/watch?v=tpUEEB1XSXA
	Structured cabling- Concept, advantages, racks, patch panel, crimping and punch tool, patch cords, RJ Connectors, Information Outlets (I/O Box) , Media Converter	https://www.youtube.com/watch?v=OKTKbTKsdR8
		https://www.youtube.com/watch?v=HpDgbGggcas

Suggested link of video lectures for Diploma (Computer Science) Students

	Types of Connectivity – Dial up, Digital Subscriber Link (DSL), Asynchronous Digital Subscriber Link Introduction to Network Operating System(NOS)	https://www.youtube.com/watch?v=9leT8rVVFNQ https://www.youtube.com/watch?v=StmIX6wVQrk
4	INTERNET PROTOCOL:	
	ARP/RARP: Resolution, Packet format mapping and encapsulation	https://www.youtube.com/watch?v=JFF2vJaNOCw&list=PLxCzCOWd7aiGFBD2-2joCpWOLUrDLvVV
	Internet protocol: Virtual network, Connectionless, unreliable, Packet Delivery System. Datagram	https://www.youtube.com/watch?v=Yf0b6yn5IGA
	ICMP and IGMP : Introduction and message format	https://www.youtube.com/watch?v=WtnVZtg4MC4
5	HOST TO HOST PROTOCOLS	
	UDP: Introduction to User Data gram Protocol, Format of UDP Message, Pseudo Header,	https://www.youtube.com/watch?v=JFF2vJaNOCw&list=PLxCzCOWd7aiGFBD2-2joCpWOLUrDLvVV
	TCP:Introduction to Transmission Control Protocol, Ports, Collections And Endpoints, TCP	https://www.youtube.com/watch?v=x5I5Z1j62iQ
APPLICATION LAYER PROTOCOL	Introduction to FTP, TELNET, NFS, SMTP, rlogin, SNMP DNS Applications: Concept of DNS, Mapping DNS resource record, DNS Resolution, DHCP , VPN, IPv6, ICMPv6	https://www.youtube.com/watch?v=JFF2vJaNOCw&list=PLxCzCOWd7aiGFBD2-2joCpWOLUrDLvVV https://www.youtube.com/watch?v=mpQZVYPuDGU https://www.youtube.com/watch?v=U3rGOTxwXAI https://www.youtube.com/watch?v=cCRgGgv_C0g
ROUTING AND MULTICASTING	Vector Distance & link state routing protocol Routing Information Protocol Open SPF Protocol Gateway to Gateway Protocol Hardware Broadcast, Hardware Multicast IP Multicast and Address Mapping IP Multicast to Ethernet Multicast	https://www.youtube.com/watch?v=JFF2vJaNOCw&list=PLxCzCOWd7aiGFBD2-2joCpWOLUrDLvVV https://www.youtube.com/watch?v=Zsf9f26rH8U https://www.youtube.com/watch?v=KaMXydaDJw4 https://www.youtube.com/watch?v=EcWhJbEWxHU https://www.youtube.com/watch?v=QNqx9UH9kGc

Suggested link of video lectures for Diploma (Computer Science) Students

WIRELESS NETWORKING	Basics, hardware and Software Requirement for wireless network	https://www.youtube.com/watch?v=9y9RKA4vAcw
	Types of wireless network	https://www.youtube.com/watch?v=9y9RKA4vAcw
	Wireless technologies	
	Wireless networking standards Application of wireless network	https://www.youtube.com/watch?v=63kDsDnRNW0

Suggested link of video lectures for Diploma (Computer Science) Students

Subject Name : Database Management System

Subject Code:CS 402

Topic	Details	Video URL Link
DATABASE CONCEPTS	Introduction to database and databade management system, history of DBMS.	https://www.youtube.com/watch?v=eTiP-H9GQ30&list=PLmXKhU9FNesR1rSES7oLdJaNFgmuj0SYV
	Disadvantages of file system data management.	https://www.youtube.com/watch?v=SZ8nJp5nJMQ
	Database system applications.	https://www.youtube.com/watch?v=c6o1X3AIIb0&list=PLV8vl
	Advantages and disadvantages of DBMS.	https://www.youtube.com/watch?v=M9dDsaaAWXI
	Three level architecture: Mapping between views , data independence.	https://www.youtube.com/watch?v=xqzaM8AuyGY
	DBMS users and administrators, DBMS Architecture.	https://www.youtube.com/watch?v=QCBvFcRlZOO
	DML, DDL & DCL.	https://www.youtube.com/watch?v=bxVVoiFbPsc
DATA MODELS	Introduction to data models.	https://www.youtube.com/watch?v=eTiP-
	Entities, attributes & association, Relationship among entities, representation of association & relationship.	https://www.youtube.com/watch?v=ZWI0Xow304I
	Entity-Relationship model: Entity sets, relationship sets, constraints, E-R diagram, Entity- Relationship	
	Relational Model: Attributes and Domains, tuples, relations and their schemas, relation representation,	https://www.youtube.com/watch?v=hH4M5AIT1uU
	Codd's Relational database rules	https://www.youtube.com/watch?v=cK4QE5hPfGc
DATABASE DESIGN CONCEPTS & NORMALIZATION	Relational algebra: Basic operation, select, join, projection, additional relational algebra, queries.	https://www.youtube.com/watch?v=4YilEjKNPrQ&list=PLIFfebEkmp4ziUFonYW8gjqOaL5vt298x
	Functional dependency: Definition, inference axioms for functional dependency, closure, cover and equivalence of FD. Referential integrity	https://www.youtube.com/watch?v=71VTTWTdh84
	Normalization	https://www.youtube.com/watch?v=wRoABkgPoch https://www
	Introduction to Normalization.	
	1 NF, Data anomalies in 1 NF.	https://www.youtube.com/watch?v=wRoABkgPocl
	Partial dependency, 2 NF, Data anomalies in 2 NF.	https://www.youtube.com/watch?v=o7CH1dltJVU

Suggested link of video lectures for Diploma (Computer Science) Students

	Transitive Dependency, 3NF, Data anomalies in 3NF.	https://www.youtube.com/watch?v=Ka40x_w26O0
	Boyce-Codd Normal Form, Lossless or Lossy Decomposition.	https://www.youtube.com/watch?v=8E4tINE3Ve0
INTRODUCTI ON TO SQL	Introduction to SQL language.	https://www.youtube.com/watch?v=eTiP-
	Structure of SQL statements & SQL writing guidelines.	https://www.youtube.com/watch?v=eOKg2ZCLPLw&list=PLV8vIYTIdSnb7av5opUF2p3Xv9CLwOfbq
	Data Definition commands, describing the structure of a table.	https://www.youtube.com/watch?v=AY5tcd46AxQ
	Data manipulation commands.	https://www.youtube.com/watch?v=XiKB5FHXsqw
	Basic structure of SQL queries	https://www.youtube.com/watch?v=eOKg2ZCLPLw&list=PLV8vIYTIdSnb7av5opUF2p3Xv9CLwOfbq
ADVANCED IN SQL	SQL query structure for selection & join operators, defining primary keys, foreign keys in a table, CHECK	https://www.youtube.com/watch?v=eTiP-H9GQ30&list=PLmXKhU9FNesR1rSES7oLdJaNFgmuj0SYV
	SQL functions: SUM(), AVG(), MAX(), MIN(), COUNT().	https://www.youtube.com/watch?v=gGErRBYDzCs
	Introduction to Triggers, stored procedures & views	
ADVANCE DATABASE CONCEPTS	Introduction to transactions.	https://www.youtube.com/watch?v=eTiP-
	Introduction to concurrency control.	https://www.youtube.com/watch?v=i7LNUio7kvw
	Data mining & Data Warehousing.	https://www.youtube.com/watch?v=rRkeoiA-4WI&list=PLV8vIYTIdSnb4H0JvSTt3PyCNFGGIO78u
	Distributes & Object based database.	https://www.youtube.com/watch?v=Q1RlpXS7IPc
	Introduction to Cloud based database.	https://www.youtube.com/watch?v=RmuVkB3siYY&list=PLV8vIYTIdSnaKSisGvJf2QquSN4IEzGob

Suggested link of video lectures for Diploma (Computer Science) Students

Subject Name : Linux and shell Programming		
Subject Code:CS 403		
Topic	Details	Video URL Link
INTRODUCTION	Linux Ideas and History	
	Understanding Open Source, Linux Origins, Distributions, Linux Principles	https://www.youtube.com/watch?v=i0HYDy2ZRDg&list=PLR98OfUmrTc4FSPwyuVf2mYKOKcPGBYnt
	Linux Usage and Basics	https://www.youtube.com/watch?v=tCY-c-sPZc
	Logging in to a Linux System, Switching between virtual consoles and the graphical environment,	https://www.youtube.com/watch?v=g-UmXWHsNZU
LINUX BASICS & FILE SYSTEM	Running Commands and Getting Help	https://www.youtube.com/watch?v=XKS0bu4niTY
	Running Commands, Some Simple commands, Getting Help, The whatis command, The – help	https://www.youtube.com/watch?v=E2HbFD5kNNk
	File System	
	Linux File Hierarchy Concepts, Some Important Directories, Current Working Directory, File and	https://www.youtube.com/watch?v=ywWPul7VAwM
	The Linux File System In-depth	
	Partitions and File system, I-nodes, Directories, Hard Links, Symbolic (or soft) Links, The Seven	https://www.youtube.com/watch?v=XKS0bu4niTY
TEXT PROCESSING & STANDARD I/O	Text Processing	https://www.youtube.com/watch?v=Bzd7XfApxLI
	Vi: Opening, Modifying, saving and exiting vi text editor, mode of vi.	https://www.youtube.com/watch?v=pU2k776i2Zw
	Viewing file contents, sorting text, Eliminating Duplicate lines, Comparing files, Compressing the	https://www.youtube.com/watch?v=9Z6Z3_YqAZ8
	Standard I/O and Pipes	
	Standard Input and Output, Redirecting Output to a File, Redirecting STDOUT to a Program(Piping),	https://www.youtube.com/watch?v=icuv2CR3Ghg
SHELL PROGRAMMING & PROCESS USING & CONFIGURING THE BASH SHELL	Introduction of Bash shell, Bash Features, Command Line, Command Line Expansion, and Editing. gnome-terminal.	https://www.youtube.com/watch?v=dWlg8rfcQhE https://youtu.be/YHFzr-akOas?list=PLS1QulWo1RIb9WVQJ_vh-RQusbZgO_As
	Shell Programming	
	Scripting Basics, Creating Shell Scripts, Handling Input/ Output, Control Structures, Conditional	https://www.youtube.com/watch?v=YI3nUraDk9k&list=PL_OdF9Z6GmVYOINTG45tGE3wNG-KvRMJa

Suggested link of video lectures for Diploma (Computer Science) Students

BASH SHELL	Investigating and Managing Process	
	Process, Listing Processes, Finding Processes, Signals Sending, Signals to Processes, Scheduling	https://www.youtube.com/watch?v=oU_JKi5tVM&list=PLK73SZ5kBqGcK3GBpXJifsyubpAQ4h4nP
SYSTEM ADMINISTRATION	Common Administrative tasks, identifying administrative files – configuration and log files,	https://www.youtube.com/watch?v=NyLWHtXkwdQ
	Getting system information – host name, disk partitions & sizes, users, kernel.	https://www.youtube.com/watch?v=PrXyMHIXllo
	Backup and restore files, linuxconf. Utility in GUI, reconfiguration hardware with kudzu.	https://www.youtube.com/watch?v=IIRK_Dujr0c
NETWORKING SERVICES ON LINUX	Server –side setup, configuration, and basic administration of common networking services: Sambha, DNS, NIS, Apache, SMB, DHCP, Sendmail, FTP Other common services: tftp, pppd, proxd	https://www.youtube.com/watch?v=BuAGkEieG7s https://www.youtube.com/watch?v=qk0wgaj50bg https://www.youtube.com/watch?v=JBxIOaDis8s

Suggested link of video lectures for Diploma (Computer Science) Students

Subject Name : Microprocessor and Interfacing

Subject Code:CS 404

Topic	Details	Video URL Link
Microprocessor, Microcomputer & Assembly Language	Microprocessor as programmable device, memory, input, output, microprocessor as CPU, Organization of microprocessor based system, working of microprocessor. Microprocessor instruction set and computer languages, m/c language, assembly language, high-level language.	https://www.youtube.com/watch?v=oNKqRPv8c9M https://www.youtube.com/watch?v=t4IE-EVvyKng&list=PLZQgf2pQtimluJ6B1y8bZ9CZDQjyXya9M&index=2
Microprocessor architecture & microcomputer systems	Microprocessor architecture, Memory map & addresses, input & output device, peripherals mapped I/O & memory mapped I/O. Pin out details and the function of each pin. Microprocessor communication & bus timings. 8085 m/c cycle & bus timings, control signals, memory read & writes. Memory interfacing, basic concepts, address decoding, interfacing of 8155-memory section	https://www.youtube.com/watch?v=UWekjor55pc https://youtu.be/6XwifGfsETc https://www.youtube.com/watch?v=4G7N5G5RXZE
Assembly language program	Instruction classification, instruction format, 1,2,3 byte instructions, addressing modes, data transfer, arithmetic, logical, branch, input/output, m/c controls operation. Writing & executing assembly language programs.	https://www.youtube.com/watch?v=axhrtmOaIF4 https://www.youtube.com/watch?v=qulaPfpTq70 https://www.youtube.com/watch?v=47N4i-lMls0 https://www.youtube.com/watch?v=SI-
Programming Techniques	Looping, counting, indexing, rotate, compare, 16-bit instruction, counters, time delays, stacks & subroutines. Interrupts: EI, DI instructions, RST instructions, Vectored interrupts & priorities.	https://www.youtube.com/watch?v=UcFgRzCtVSk&list=PLfzBO7vcQZ1KO4mGVA3M8n1x2QDN0lkz1 https://www.youtube.com/watch?v=79icCUmqyPc https://www.youtube.com/watch?v=HicZcgdGxZY https://www.youtube.com/watch?v=zQPr5VZ
Peripheral chips & Interfacing	Functional block diagram, pin configuration & modes of operation IC chips 8255, 8275, 8279,8237.	https://www.youtube.com/watch?v=UcFgRzCtVSk&list=PLfzBO7vcQZ1KO4mGVA3M8n1x2QDN0lkz1

Suggested link of video lectures for Diploma (Computer Science) Students

Microprocessor application	Interfacing multiplexed displays, interfacing to a matrix keyboard, A/D converter, D/A converter ,stepper motor control	https://www.youtube.com/watch?v=UcFgRzCtVSk&list=PLfzBO7vcQZ1KO4mGVA3M8n1x2QDN0lkz1 https://www.youtube.com/watch?v=HicZcgdGxZY
Comparison of 8085 to other	Comparison of 8085 to 8086,80186,80286,80386 and 80486, multicore technology.	https://www.youtube.com/watch?v=Wo-Y6GifwCE