

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

Subject Name :Artificial Intelligence	
Subject Code :CS 622	

Unit no.	Topic	Details	Video URL Link
1	INTRODUCTION TO AI	Meaning and definition of Artificial Intelligence	https://www.youtube.com/watch?v=J7LqggIEfQw&list=PL9zFgBale5fug7z_YID9M0x8gdZ7ziXen https://www.youtube.com/watch?v=cUjDwPTSjOo
		Characteristics of AI Problems	
		Scope and Future Expectation of AI	
		Application of AI	
2	PROBLEM SOLVING AND CONTROL STRATEGIES	State Space Representation	https://www.youtube.com/watch?v=Xm7lgyYHPj8 https://www.youtube.com/watch?v=aFludDTe-YQ https://www.youtube.com/watch?v=qul0f79gxG_s https://www.youtube.com/watch?v=B0ODfztCacl
		Problem Characteristics	
		Production System and its type	
		Characteristics of Production System	
		Breadth First Search and Depth First Search	
		Forward and Backward Chaining	
		Control Strategies and its Type	
	HEURISTIC SEARCH TECHNIQUES	Hill Climbing	https://www.youtube.com/watch?v=3SiWtAnUROS https://www.youtube.com/watch?v=japhjrVxJdg https://www.youtube.com/watch?v=tvAh0JZF2YE https://www.youtube.com/watch?v=u_TE42-uWDO
		Branch and Bound Technique	
		Best First Search Technique and algorithm	
		A* Algorithm and AO* Algorithm	
		Constraints Satisfaction and related numeric problems	

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4	KNOWLEDGE REPRESENTATION	Representation and Mapping	https://www.youtube.com/watch?v=9iN3O_oL2ac https://www.youtube.com/watch?v=6490tKrGEic https://www.youtube.com/watch?v=eaCVH8XWaPc
		Approaches to Knowledge Representation	
		Issues in Knowledge Representation	
		Knowledge Representation using Predicate Logic and Propositional Logic	
		Resolution and Refutation	
		Deduction, Theorem Proving	https://www.youtube.com/watch?v=-gl5hwqITU0 https://www.youtube.com/watch?v=9iN3O_oL2ac https://www.youtube.com/watch?v=JVclXaq00Pk https://www.youtube.com/watch?v=ccivrsjMsXw https://www.youtube.com/watch?v=y2HQMvqXON4 https://www.youtube.com/watch?v=oL8ApH82s6s
		Procedural Knowledge and Declarative Knowledge	
		Introduction to Reasoning	
		Various types of Reasoning methods like Forward, Backward, monotonic, non-monotonic, probabilistic	
		Baye's Theorem, Bayesian Network	
		Semantic Networks, Frames	
		Conceptual Dependency, Scripts	
5	LEARNING AND NATURAL LANGUAGE PROCESSING	Introduction to Learning	https://www.youtube.com/watch?v=lpBZ01g0pGE
		Types of Learning	https://www.youtube.com/watch?v=4dwsSz_fNSQ
		Learning in neural network	https://www.youtube.com/watch?v=nhMJX61oF9g https://www.youtube.com/watch?v=pHilwQk57dc https://www.youtube.com/watch?v=b4nbE-pG_TM
		Learning Processes :- Error Correction Learning, Memory based Learning, Hebbian Learning, Competitive Learning	
		Learning with teacher, Learning without teacher	
		Introduction to NLP and its different Phases	
		Parsing Techniques, Context Free Grammar	

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		Recursive Transition nets (RTN), Augmented Transition nets (ATN)	
		· CSE and Logic Grammars, Semantic Analysis	
6	GAME PLAYING	· Introduction to Game Playing	
		· Mini max Search Procedure	https://www.youtube.com/watch?v=FFzdXJ49KA
		· Alpha-Beta Cut offs	
7	EXPERT SYSTEM	· Definition and Characteristics of Expert System	
		· Rule Based System Architecture	https://www.youtube.com/watch?v=T3cOU_ljfr8
		· Non- Production System Architecture	
		· Knowledge Acquisition and Validation	
		· Expert System Life Cycle and Expert System Tools	
		· MYCIN and DENDRAL examples of Expert System	

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Subject Name :Computer Graphics & Multimedia			
Subject Code :CS 601			
S. No.	Topic	Course Content	Video URL Link
1	Introduction to Computer Graphics	○ Definition of Computer Graphics	https://youtu.be/228oQA2xAEs
		○ Application of Computer Graphics	https://www.youtube.com/watch?v=5c7YhIElxFw
		○ Graphics Hardware	https://www.youtube.com/watch?v=0H DU9hRkIMA
		○ Input and Output Devices	
		○ Display Devices	
		○ Refreshing Display Devices	
		● Raster-Scan	https://www.youtube.com/watch?v=HEDo3an36T4
		● Random-Scan	
2	Graphics Primitives	○ Points and Lines	https://www.youtube.com/watch?v=k8r_Fo4Ot5A https://www.youtube.com/watch?v=ndIjiWFAMSk https://www.youtube.com/watch?v=iqzmnrks7xE
		○ Line-drawing Algorithms	https://www.youtube.com/watch?v=k8r_Fo4Ot5A https://www.youtube.com/watch?v=ndIjiWFAMSk https://www.youtube.com/watch?v=iqzmnrks7xE
		▪ DDA Algorithm	https://www.youtube.com/watch?v=k8r_Fo4Ot5A https://www.youtube.com/watch?v=ndIjiWFAMSk https://www.youtube.com/watch?v=iqzmnrks7xE
		▪ Bresenham’s line Algorithm	https://www.youtube.com/watch?v=cn_tqL5ZK-Q
		○ Circle-generating Algorithm	https://www.youtube.com/watch?v=S_BwLHhlaPs
		▪ Midpoint Circle of Algorithm	
		○ Polygon Filling Algorithm: Scan-Line	https://www.youtube.com/watch?v=rjENsOmoVUg

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3	Transformation, 2-D Viewing and Clipping	<ul style="list-style-type: none"> • Basic Transformations (2D and 3D) 	https://www.youtube.com/watch?v=dp1Vr0odIM4 https://www.youtube.com/watch?v=yuYcrlbAdfl
		○ Translation	
		○ Rotation	
		○ Scaling	
		○ Shear	
		○ Reflection	
		<ul style="list-style-type: none"> • Composite Transformations 	https://www.youtube.com/watch?v=W8Sod3zkQiQ
		○ Rotations about a point	
		○ Reflection about a line	
		○ Homogeneous Coordinate Systems	
		<ul style="list-style-type: none"> • Clipping 	https://www.youtube.com/watch?v=MX4PFR69HwE
		Point Clipping	
4	Projection	Line Clipping -Cohen-Sutherland Clipping algorithm.	https://www.youtube.com/watch?v=d2kuhzeKWss
		Polygon Clipping: Sutherland Hodgeman Algorithm	https://www.youtube.com/watch?v=E7h9ugiQ_il
	Shading,	Windowing Transformation	https://www.youtube.com/watch?v=d9uvWOnVRuk
		<ul style="list-style-type: none"> • Parallel Projection: Orthographic, Axonometric, Oblique 	https://www.youtube.com/watch?v=7prZ5aZt9Ow&list=PLrP-pAdcAQnunuZCS1OAWTWCDHJqjk6Gk
		<ul style="list-style-type: none"> • Perspective Projection: Standard Perspective Projection General Perspective Projection, Vanishing Points 	
		<ul style="list-style-type: none"> • Chromaticity diagram- RGB, CMY, HSV, HLS, CIE models- 	

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5	Colour model and Illumination	<ul style="list-style-type: none"> Realism in rendering, Image manipulation: Illumination models, shading models for polygons, Gouraud and Phong shading , shadows, Transparency, Image Filtering, image processing, geometric Transformation of images. 	https://www.youtube.com/watch?v=7prZ5aZt9Ow&list=PLrP-pAdcAQnunuZCS1OAWTWCDHJqjk6Gk https://www.youtube.com/watch?v=HaVAANeXb0A
6	Basics of Multimedia Technology	<ul style="list-style-type: none"> Concepts of Multimedia: Types, Data Streams, Hardware and Software Requirements and Applications, Multimedia Authoring. Digital Audio: Audio Sampling, Recording Digital Audio, Audio Standards for Multimedia Applications, MIDI File Formats, MIDI Hardware and Software. Image Compression Standards: Types. Video Compression and Standards: Compression Standards, MPEG Compression Basics, MPEG-1, MPEG-2, and MPEG-4 Hypertext and Hypermedia 	https://www.youtube.com/watch?v=7prZ5aZt9Ow&list=PLrP-pAdcAQnunuZCS1OAWTWCDHJqjk6Gk https://www.youtube.com/watch?v=JNtCBmF6-SY https://www.youtube.com/watch?v=NPQW-UwR6vQ https://www.youtube.com/watch?v=dRKm1WqvgAA https://www.youtube.com/watch?v=fwvQexpnzNM https://www.youtube.com/watch?v=RDJuQoDZSWg https://www.youtube.com/watch?v=nH-65RkvMug
7	Graphics Image File Formats	<ul style="list-style-type: none"> Raster Format, Bitmap (BMP) Format, Graphics Interchange Format (GIF), Joint Photographic Experts Group (JPEG), Tagged Image File Format (TIFF), Portable Network Graphics (PNG) and their differences. 	https://www.youtube.com/watch?v=7prZ5aZt9Ow&list=PLrP-pAdcAQnunuZCS1OAWTWCDHJqjk6Gk
		<ul style="list-style-type: none"> Development of Animations: Non Computer and Computer Based Animations, Different Types of 	https://www.youtube.com/watch?v=7prZ5aZt9Ow&list=PLrP-pAdcAQnunuZCS1OAWTWCDHJqjk6Gk

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8	Computer Animation	<ul style="list-style-type: none">Flash Basics: Flash Work Flow, Animation Using Flash.	https://www.youtube.com/watch?v=zUD1fW94f3Q
		<ul style="list-style-type: none">The Flash Work Environment: The Stage and the Time Line, Symbols and Instances, Symbols and	https://www.youtube.com/watch?v=JTI_zrNePdI
		<ul style="list-style-type: none">Panels, Using Context Menus, Moving the Play Head,	https://www.youtube.com/watch?v=nKSD_V02x1A
		<ul style="list-style-type: none">Working the Frames using time line.	
		<ul style="list-style-type: none">Drawing Overview: Flash Drawing and Painting Tools, Working With Color, Using Imported Art	
		<ul style="list-style-type: none">Using Layers: Adding and Deleting Layers, Viewing Layers.	
		<ul style="list-style-type: none">Creating Text Boxes for User input.	
		<ul style="list-style-type: none">Creating Animations: Creating Key Frames, Layers in Animations, Frame Rates, Frame Rates,	

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Advance Web Technology		
Subject Code :CS 613		

S. No.	Topic	Details	Video URL Link
1	INTRODUCTION	History, Current and Future Versions of MySQL and PHP, How to Get MySQL, Installing MySQL on Windows, Trouble Shooting your Installation, Basic Security Guidelines, Building PHP on Windows with Apache, Windows php.ini Basics	https://www.youtube.com/watch?v=nQwtCLsYJnU&list=PLTgRM_OcmRb3PW33bf3jQytBjd04tdAOXR
		The Basics of PHP scripts. The Building blocks of PHP: Variables, Data Types, Operators and Expressions, Constants.	https://www.youtube.com/watch?v=EdK9K77dwzE
		Flow Control Functions in PHP: Switching Flow, Loops, Code Blocks and Browser Output.	https://www.youtube.com/watch?v=PICltxHUMx0
2	BASIC WORKING	Working with Functions: What is function?, Calling functions, Defining Functions, Returning the values from User-Defined Functions, Variable Scope, Saving state between Function calls with the static statement, more about arguments. Working with Arrays: What are Arrays, Creating Arrays, Some Array-Related Functions	
		Working with Objects: Creating Objects, Object Instance Working with Strings, Dates and Time: Formatting strings with PHP, Investigating Strings with PHP, Manipulating Strings with PHP, Using Date and Time Functions in PHP.	https://www.youtube.com/watch?v=LksaX3Hfdhw
		Working with Forms: Creating Forms, Accessing Form Input with User defined Arrays, Combining HTML and PHP code on a single Page, Using Hidden Fields to save state, Redirecting the user.	https://www.youtube.com/watch?v=mekEGxcFyNo&list=PLbGuiZYuhiaWMoOK7LXB0GeLsYCiyz5
		Sending Mail on Form Submission, Working with File Uploads.	https://www.youtube.com/watch?v=dvRRAWsA9JU

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3	MYSQL BASICS	Understanding the database design process: The Importance of Good Database Design, Types of Table Relationships, Understanding Normalization.	https://www.youtube.com/watch?v=dG4ntXJI05Y&list=PLV8viYTI dSnaLvX1qGjOnYOb989ThPdU0
		Learning basic SQL Commands: Learning the MySQL Data types, Learning the Table Creation Syntax, Using Insert Command, Using SELECT Command, Using WHERE in your Queries, Selecting from Multiple Tables, Using the UPDATE command to modify records, Using the DELETE Command, Frequently used string functions in MySQL, Using Date and Time Functions in MySQL	https://www.youtube.com/watch?v=eOKg2ZCLPLw&list=PLV8viYTI dSnb7av5opUF2p3Xv9CLwOfbg
4	PHP WITH MYSQL	Interacting with MySQL using PHP: MySQL Versus MySQLi Functions, Connecting to MySQL with PHP, Working with MySQL Data.	
		Creating an Online Address Book: Planning and Creating Database Tables, Creating Menu, Creating Record Addition Mechanism, Viewing Records, Creating the Record Deletion Mechanism, Adding Sub-entities to a Record	

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Subject Name :DataMining &Warehousing

Subject Code :CS 621

Unit No.	Topic	Details	Video URL Link
1	FUNDAMENALS OF DATA MINING	Data mining	https://www.youtube.com/watch?v=Dq5qeXkSIHQ
		The history of the data mining	https://www.youtube.com/watch?v=G6J2WzI5ukg
		Data Mining strategies	https://www.youtube.com/watch?v=DIRj93t8Iyo
		Popular data mining techniques	
		Data mining applications	
		Challenges of data mining	https://www.youtube.com/watch?v=I0DanOCgcjE
		The future of data mining	
	DATA PROCESSING AND DATA WAREHOUSING	Data, information and knowledge	https://www.youtube.com/watch?v=5-C0zRlz46Y
		Types of data	https://www.youtube.com/watch?v=KgJUsie5UWQ&list=PLUs3O6GslI5fiiVR545m7Iu0CkσGIi07fkN
		Data warehouses	
		Data cleaning	
		Data de-normalization	https://www.youtube.com/watch?v=p8pdxLU1zMI
		Data transformation	https://www.youtube.com/watch?v=peyFnD33uXc
		Data quality measure	https://www.youtube.com/watch?v=RQ0I1u-q8N8
		OLAP(Online Analytical Processing)	https://www.youtube.com/watch?v=50gD4GTdv7U
		Data Sampling	https://www.youtube.com/watch?v=zbfi5CIQ08I
3	WEKA AN ATTRACTIVE DATA MINING TOOL	Introduction	https://www.youtube.com/watch?v=sFS-AGnGSKQ
		Installing Weka	
		Weka data file format	
		Starting Weka	
		Data Visualization	https://www.youtube.com/watch?v=leXt9btuyEY
		Data filtering	

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		Selecting Attributes	
		Data Mining with Weka	
4	ASSOCIATION RULE MINING	Transaction data	https://www.youtube.com/watch?v=npFoagWd8_s
		Concepts of association rules	
		Relevance of association rule mining	
		Functions of association rule mining	
		Improvement and share	
		The problem of large datasets	
		Apriority algorithm	
		Strengthens and weakness of Association Rule Mining	
		Application of Association Rule Mining	
5	THE CLUSTERING TASK	Introduction	https://www.youtube.com/watch?v=qPL-7O7m9tA
		Distance Measure	
		Types of clustering	https://www.youtube.com/watch?v=_p1dyplSvtY
		Clustering through Weka: K-Means algorithms	https://www.youtube.com/watch?v=vYUDYLBIVBE
		Clustering Validation	
		Strengthens and weakness of Clustering algorithms	
		5.6 Applications of Clustering algorithms	https://www.youtube.com/watch?v=ppES5WxNrCI
6	THE ESTIMATION TASK	Introduction	https://www.youtube.com/watch?v=Cc7INYdQE3Q
		Scatter plots and correlation	
		Linear regression Models	https://www.youtube.com/watch?v=lzGKRSvs5HM
		Logistic regression	
		Regression analysis	
		Strengthens and weakness of estimation	https://www.youtube.com/watch?v=Cc7INYdQE3Q
		Application of estimation	

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7	MINING OF TIME SERIES	Introduction	https://www.youtube.com/watch?v=N73gCVsdJhg
		Fundamental of times series analysis	
		Time Series models	https://www.youtube.com/watch?v=N73gCVsdJhg
		Regression Model	https://www.youtube.com/watch?v=GK9XdZaQMpl
		Periodic Model	https://youtu.be/N73gCVsdJhg
		Strengthens and weakness of times series analysis	
		Application of times series analysis	

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Subject Name :Dot Net technology

Subject Code :CS 611

Unit 1	Topic	Details	Video URL Link
1	Introduction to .NET	Introduction to Microsoft.Net Framework, Building blocks in .Net, Drawback of previous languages, Understand .Net, Common language runtime (CLR), Common type system (CTS), Difference between ASP and ASP. Net, Introduction to IIS, web application and it's usage, ASP.Net IDE Visual studio .Net, Creation of web forms, Using web form controls.	https://www.youtube.com/watch?v=TFBQaJ27Rwl&list=PLpwfQS03DDEJNMnapD5VWkFf_2ziq0D9X https://www.youtube.com/watch?v=1KCZh5G7zrQ
2	ASP.Net Objects and components	Response object, Server object, Application object, Session object, ASP.Net scope, state, view state, post back and configuration, Object Creation: Scripting, Drive, Folder, File, Use of object, Server Components: Ad Rotator, Content Linker, Browser Capabilities	https://www.youtube.com/watch?v=h6MYJYEReLE https://www.youtube.com/watch?v=o-8vjQu6Sml
		Use and Creation of global.asa file, Application object: Events, Methods and collections, Example, Session object: Enabling and disabling of session, Event, Properties. Method. Collection.	https://www.youtube.com/watch?v=TFBQaJ27Rwl&list=PLpwfQS03DDEJNMnapD5VWkFf_2ziq0D9X
3	ADO.Net	ADO.Net in ASP. Net: Connection, Dataset and data reader, Data table and data row, Web.config introduction, Binding data with data grid, Accessing	https://www.youtube.com/watch?v=TFBQaJ27Rwl&list=PLpwfQS03DDEJNMnapD5VWkFf_2ziq0D9X
4	ASP Transactions and e-mail	Transactions, Transaction db design, CDONTS object, Email sending web page creation	https://www.youtube.com/watch?v=TFBQaJ27Rwl&list=PLpwfQS03DDEJNMnapD5VWkFf_2ziq0D9X

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5	Working with XML in ASP.NET	<p>Basics of XML, XML support in .NET, XML Validation Overview, XML Parsing API's in .NET, Parsing XML with the XmlTextReader, Parsing XML using DOM Objects, Generating XML with the XmlTextWriter, Introduction to XSLT, Transforming XML using .NET's XSLT classes, Viewing relational data as XML, Dataset XML Properties and Methods, Using the XmlDataDocument Class Syncing between DataSets and XmlDataDocuments.</p>	<p>https://www.youtube.com/watch?v=k9owEd7es10t=PLpwfQS03DDEJNMnapD5VWkFf_2ziq0D9X</p> <p>https://www.youtube.com/watch?v=SGVL_SiYIGA</p>
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<https://www.youtube.com/watch?v=o-8vjQu6Sml>

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

Subject Name :Network Security & Mgmt

Subject Code :CS 612

S. No.	Topic	Course Content	Video URL Link
1	Introduction	Security overview, Computer security, network security, Key principles of Network security-Confidentially, Integrity, Availability.	https://www.youtube.com/watch?v=6Jubl1UnJTE
		Threats to security need of security, types of security, Security issues.	https://www.youtube.com/watch?v=FXhE3ck5iFg
2	Information System Security Management	Security Policies, Security Awareness, security control - Physical Controls, Procedural Controls, Technical Controls and Legal and liability.	https://www.youtube.com/watch?v=9X1rSWLFhLY&list=PL9FuOtXibFjV77w2eyil4Xzp8eooqsPp8
		Identification and Authentication- Password, Biometrics, Single Sign On.	https://www.youtube.com/watch?v=Kyqbl429ekY
3	Secrete Communication	Introduction to secrete communication, Basics of Cryptography – Substitution cipher, Cryptographic primitives.	https://www.youtube.com/watch?v=trHox1bN5es https://www.youtube.com/watch?v=RVeU_iLzao
		Encryption, Symmetric Encryption- Stream cipher, Block cipher, Sharing Keys.	https://www.youtube.com/watch?v=v1JwSaAqVNY
		Asymmetric Encryption- Using Certificate Authority, Digital signature, SSL (Secure Socket Layer), TLS (Transport Secure Layer), Hashing algorithms	https://www.youtube.com/watch?v=RVeU_iLzao
4	Network management	Definition need and advantages.	https://www.youtube.com/watch?v=DTms3HIt44M
		Windows NT Networking Architecture, Windows NT Operating System Design and Basics, Open Systems and Industry Standards,	https://www.youtube.com/watch?v=9X1rSWLFhLY&list=PL9FuOtXibFjV77w2eyil4Xzp8eooqsPp8
		Client/Server Computing, Interoperating with Other Networks, Remote Access Service-Point to point protocol,	
		Network Security and Domain Planning- Security Model Architecture,	https://www.youtube.com/watch?v=V0d5VdTIz_c
		Controlling Access- User Accounts, User Rights.	

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5	Network Services	Enterprise Level- Installing and Configuring TCP/IP, Configuring TCP/IP	https://www.youtube.com/watch?v=9IdUM3vbF2A
		Dynamic IP Addressing Configuring DHCP, Accessing the DHCP	https://www.youtube.com/watch?v=FhezqYWp2r4
		Manager, Managing DHCP Scopes	https://www.youtube.com/watch?v=9X1rSWLFhLY&list=PL9FuOtXibFjV77w2eyil4Xzp8eooqsPp8
		Reserving IP addresses	
		Installing and Configuring WINS, Installing DNS Service	https://www.youtube.com/watch?v=BuAGkEieG7s
6	Simple Network Management Protocol (SNMP) for Network Management	Overview of SNMP, SNMP Registry, Management Information Base, Object Identifiers,	https://www.youtube.com/watch?v=PLizgYyTQOs
		SNMP Installation, Starting and Stopping the SNMP Service	
		Troubleshooting SNMP	
7	Troubleshooting Tools and Strategies-	Overview of TCP/IP Troubleshooting Tools, Identify the TCP/IP	https://www.youtube.com/watch?v=wbe-BaeYDXU
		Configuration by Using IPConfig ,Test Connection to the TCP/IP Network	
		by Using Ping, Understanding Address and Name Resolution Test IP - address-to- MA C-address Resolution by Using ARP	
		Understanding IP Routing for Windows NT - The Route Table, Display	https://www.youtube.com/watch?v=g8eP4fhrx3I
		Current TCP/ IP Connections and Statistics by Using Netstat, Using Performance Monitor,Troubleshooting Other Connection Problems – Error	https://www.youtube.com/watch?v=utY7-9PUoQ4
		53, Cannot Connect to a Specific Server ,Troubleshooting Telnet.	