LESSON PLAN

Type	Code	WEB TECHNOLOGY	L-T-P	Credits	Marks
	CC-11		3-1-0	4	100
Topic Objective		To learn the fundamentals of web designing. To design and develop standard and interactive web pages. To learn some popular web scripting languages.			
Prerequisites		Basic concepts of WWW and Internet.			
Lecture Scheme		Regular lectures (classroom/virtual class with computer/Smartphone) with use of ICT as and when required, lectures are planned to be interactive with focus on application.			

Evaluation Scheme

Internal Assessment			Written Assessment	Total
Assignment(s)	Unit Test	Mid-Term (Written)	End-Term	
0	0	15	60	75

University Syllabus

Unit No	Topics	Hours
Unit-1	Web Essentials: Clients, Servers and Communication: The Internet – Basic Internet protocols – The WWW, HTTP request message – response message, web clients web servers – case study. Introduction to HTML: HTML, HTML domains, basic structure of an HTML document – creating an HTML document, mark up tags, heading, paragraphs, line breaks, HTML tags. Elements of HTML, working with text, lists, tables and frames, working with hyperlink, images and multimedia, forms and controls.	10
Unit-2	Introduction to cascading style sheets: Concepts of CSS, creating style sheet, CSS properties, CSS styling (background, text format, controlling fonts), working with the block elements 25 and objects. Working who lists and tables, CSS ID and class. Box model (introduction, border properties, padding properties, margin properties), CSS colour, groping, Dimensions, display, positioning, floating, align, pseudo class, Navigation bar, image sprites.	10
Unit-3	Java scripts: Client side scripting, what is java script, simple java script, variables, functions, conditions, loops and repetitions. Java scripts and objects, java script own objects, the DOM and web browser environment, forms and validations. DHTML: Combining HTML, CSS, java scripts, events and buttons, controlling your browser.	10
Unit-4	PHP: Starting to script on server side, PHP basics, variables, data types, operators, expressions, constants, decisions and loop making decisions. Strings – creating, accessing strings, searching, replacing and formatting strings. Arrays: Creation, accessing array, multidimensional arrays, PHP with Database.	10
	Total (Hours)	40

Text Books:
TB1**:**	Web Technologies – Black Book – DreamTech Press,
Reference Books:
RB1:	HTML, XHTML and CSS Bible, 5ed, Willey India-Steven M. Schafer.

Online Resources:
OR1:	https://www.geeksforgeeks.org/html/
OR2:	https://www.tutorialspoint.com/html/index.htm
OR3:	https://www.javatpoint.com/javascript-tutorial
OR4:	https://www.w3schools.com/css/
OR5:	https://www.tutorialspoint.com/php/index.htm

Type	Code	**LESSON PLAN** **WEB TECHNOLOGY**	L-T-P	Credits	Marks
Lecture No	Unit No		3-1-2	4	60
Lecture 1	1	Basic concepts of webclient-server communication **Ref:** TB1(1.1-1.2, pg1-10); OR1			
Lecture 2	1	Basic concept of WWW and Internet protocol **Ref:** TB1(1.3, pg11-31); OR1			
Lecture 3	1	basic structure of an HTML document – creating an HTML document **Ref:** TB1(2.1, pg45-49); OR1			
Lecture 4	1	mark up tags, heading, paragraphs, line breaks, HTML tags, **Ref:** TB1(2.2, pg49-55); OR1			
Lecture 5	1	Elements of HTML **Ref:** TB1(2.3, pg56-65); OR1			
Lecture 6	1	working with text, lists **Ref:**TB1(2.4, pg66-79); OR1			
Lecture 7	1	Operators (Arithmetic, Logical and Bitwise) and Expressions **Ref:** TB1(3.1, pg85-99); OR1			
Lecture 8	1	tables and frames. **Ref:** TB1(3.2 pg100-115); OR1			
Lecture 9	1	working with hyperlink **Ref:** TB1(3.3, pg117-135); OR1			
Lecture 10	1	mages and multimedia, forms and controls **Ref:** TB1(3.4, pg137,156); OR1			
Lecture 11	2	Introduction to cascading style sheets. **Ref:** TB1(4.1, pg160-170); OR1			
Lecture 12	2	Concepts of CSS, creating style sheet **Ref:** TB1(4.1, pg171-175); OR1			
Lecture 13	2	CSS properties **Ref:** TB1(4.2, pg175-182); OR2			
Lecture 14	2	CSS styling (background, text format, controlling fonts) **Ref:** TB1(4.2, pg183-189); OR2			
Lecture 15	2	working with the block elements and objects. **Ref:** TB1(4.3, pg190-193); OR2			

Lecture 16	2	Working who lists and tables, CSS ID and class. **Ref:** TB1(4.4, pg194-201); OR2
Lecture 17	2	Box model (introduction, border properties **Ref:** TB1(4.5, pg2.5-212); OR2
Lecture 18	2	padding properties, margin properties), CSS colour, **Ref:** TB1(4.6, pg213-219); OR2
Lecture 19	2	groping, Dimensions, display **Ref:** TB1(4.7, pg220); OR2
Lecture 20	2	positioning, floating, align, pseudo class, Navigation bar, image sprites **Ref:** TB1(5.1, pg222=231); OR2
Lecture 21	3	Java scripts: Client side scripting, what is java script. **Ref:** TB1(5.2, pg235-246); OR2
Lecture 22	3	simple java script, variables **Ref:** TB1(5.3, pg247-255); OR2
Lecture 23	3	Functions of javascript **Ref:** TB1(5.4, pg257-264); OR2
Lecture 24	3	conditions, loops and repetitions **Ref:** TB1(5.5, pg265-272); OR2
Lecture 25	3	Java scripts and objects, java script own objects, **Ref:** TB1(5.6, pg274-283); OR3
Lecture 26	3	the DOM and web browser environment **Ref:** TB1(5.7, pg284-292); OR3
Lecture 27	3	forms and validations **Ref:** TB1(5.8, pg295-302); OR3
Lecture 28	3	Combining HTML, CSS, java scripts **Ref:** TB1(5.9, pg305-313); OR3
Lecture 29	3	events and buttons. **Ref:** TB1(6.1, pg315-325); OR3
Lecture 30	3	controlling your browser. **Ref:** TB1(6.2, pg327-339); OR3
Lecture 31	4	Starting to script on server side, PHP basics **Ref:** TB1(6.3, pg340=355); OR4
Lecture 32	4	variables, data types. **Ref:** TB1(6.4, pg360-371); OR4
Lecture 33	4	operators, expressions **Ref:** TB1(6.5, pg381-391); OR4
Lecture 34	4	constants, decisions and loop making decisions **Ref:** TB1(6.6, pg401-408); OR4
Lecture 35	4	Strings – creating, accessing strings. **Ref:** TB1(6.7, pg410-424); OR4
Lecture 36	4	searching, replacing and formatting strings. Ref: TB1(6.8, pg430-439); OR4
Lecture 37	4	suspending/resuming threads Ref: TB1(6.9, pg441-460); OR4
Lecture 38	4	Arrays: Creation. accessing array **Ref:** TB1(6.10, pg465-475); OR4
Lecture 39	4	multidimensional arrays.

		Ref: TB1(6.11, pg477-485); OR4
Lecture 40	4	PHP with Database **Ref:** TB1(6.12, pg491-501); OR5

Type	Code	SOFTWARE ENGINEERING	L-T-P	Credits	Marks
	CC-12		3-1-0	4	100
Topic Objective		To learn the way of developing software with high quality and the relevant techniques. To introduce software engineering principles for industry standard. To focus on Project management domain and Software risks management.			
Prerequisites		Basic knowledge of computer,program.			
Lecture Scheme		Regular lectures (classroom/virtual class with computer/Smartphone) with use of ICT as and when required, lectures are planned to be interactive with focus on application.			

Evaluation Scheme

Internal Assessment			Written Assessment	Total
Assignment(s)	Unit Test	Mid-Term (Written)	End-Term	
0	0	15	60	75

University Syllabus

Unit No	Topics	Hours
Unit-1	Introduction: Evolution of Software to an Engineering Discipline, Software Development Projects, Exploratory Style of Software Development, Emergence of Software Engineering, Changes in Software Development Practices, Computer Systems Engineering. Software Lifecycle Models: Waterfall Model and its Extensions, Rapid Application Development (RAD), Agile Development Models, Spiral Model.	10
Unit-2	Software Project Management: Software Project Management Complexities, Responsibilities of a Software Project Manager, Project Planning, Metrics for Project Size Estimation, Project Estimation Techniques, Empirical Estimation Techniques, COCOMO, Halstead"s Software Science, Staffing Level Estimation, Scheduling, Organization and Team Structures, Staffing, Risk Management, Software Configuration Management.	10
Unit-3	Requirement Analysis and Specification: Requirements Gathering and Analysis, Software Requirement Specifications, Formal System Specification Axiomatic Specification, Algebraic Specification, Executable Specification and 4GL. Software Design: Design Process, Characterize a Good Software Design, Cohesion and Coupling, Layered Arrangements of Modules, Approaches to Software Design (Function Oriented & Object-Oriented).	10
Unit-4	Coding and Testing: Coding: Code Review, Software Documentation, Testing, Unit Testing, Black Box and White Box Testing, Debugging, Program Analysis Tools, Integration Testing, System Testing, Software Maintenance.	10
	Total (Hours)	40

Text Books:
TB1**:**   1. Fundamental of Software Engineering, Rajib Mall, Fifth Edition, PHI Publication, India.

Reference Books:
RB1:   1. Software Engineering– Ian Sommerville, 10/Ed, Pearson.

Online Resources:
OR1:   https://www.geeksforgeeks.org/html/
OR2:   https://www.tutorialspoint.com/html/index.htm
OR3:   https://www.javatpoint.com/javascript-tutorial
OR4:   https://www.w3schools.com/css/
OR5:   https://www.tutorialspoint.com/php/index.htm

Type	Code	LESSON PLAN SOFTWARE ENGINEERING	L-T-P	Credits	Marks
Lecture No	Unit No		3-1-2	4	60
Lecture 1	1	Evolution of Software to an Engineering Discipline **Ref:** TB1(1.1, pg1-4); OR1			
Lecture 2	1	Software Development Projects **Ref:** TB1(1.2, pg5); OR1			
Lecture 3	1	Exploratory Style of Software Development, **Ref:** TB1(1.3, pg 6); OR1			
Lecture 4	1	Emergence of Software Engineering,, **Ref:** TB1(1.4, pg 6-11); OR1			
Lecture 5	1	Changes in Software Development Practices **Ref:** TB1(1.5, pg12); OR1			
Lecture 6	1	, Computer Systems Engineering **Ref:**TB1(1.6, pg 13); OR1			
Lecture 7	1	Software Lifecycle Models **Ref:** TB1(2.1, pg17-19); OR1			
Lecture 8	1	Waterfall Model and its Extensions. **Ref:** TB1(2.2 pg19-26); OR1			
Lecture 9	1	Rapid Application Development (RAD) **Ref:** TB1(2.3-2.4, pg26-28); OR1			
Lecture 10	1	Agile Development Models, Spiral Model. **Ref:** TB1(2.5-2.6, pg30-33); OR1			
Lecture 11	2	Software Project Management: Software Project Management Complexities. **Ref:** TB1(3.1, 38-39); OR1			
Lecture 12	2	Responsibilities of a Software Project Manager **Ref:** TB1(3.1, pg38-39); OR1			
Lecture 13	2	Project Planning, Metrics for Project Size Estimation. **Ref:** TB1(3.2-3.3, pg39-44); OR2			
Lecture 14	2	Project Estimation Techniques. **Ref:** TB1(3.4, pg45-47); OR2			
Lecture 15	2	Empirical Estimation Techniques, COCOMO, Halstead"s Software Science. **Ref:** TB1(3.5-3.6, pg47 -53); OR2			
Lecture 16	2	Staffing Level Estimation, Scheduling. **Ref:** TB1(3.9, pg61-66); OR2			

Lecture 17	2	Organization and Team Structures. **Ref:** TB1(3.10, pg66-66-71); OR2
Lecture 18	2	Staffing, Risk Management, **Ref:** TB1(3.11, pg71-75); OR2
Lecture 19	2	Software Configuration Management **Ref:** TB1(3.13, pg75-77); OR2
Lecture 20	2	SCM **Ref:** TB1(3.13, pg77-78); OR2
Lecture 21	3	Requirement Analysis and Specification: Requirements Gathering and Analysis. **Ref:** TB1(4.1, pg86-87); OR2
Lecture 22	3	Software Requirement Specifications. **Ref:** TB1(4.2, pg88-98); OR2
Lecture 23	3	Formal System Specification Axiomatic Specification. **Ref:** TB1(4.3, pg99-102); OR2
Lecture 24	3	Algebraic Specification. **Ref:** TB1(4.4-4.5, pg103-108); OR2
Lecture 25	3	Executable Specification and 4GL. **Ref:** TB1(4.6, 109-110); OR3
Lecture 26	3	Software Design: Design Process. **Ref:** TB1(5.1, pg115-116); OR3
Lecture 27	3	Characterize a Good Software Design. **Ref:** TB1(5.1, pg116-117); OR3
Lecture 28	3	Cohesion and Coupling. **Ref:** TB1(5.2, pg 118-119); OR3
Lecture 29	3	Layered Arrangements of Modules. **Ref:** TB1(5.3, pg119-120); OR3
Lecture 30	3	Approaches to Software Design (Function Oriented & Object-Oriented).. **Ref:** TB1(5.4, pg121-122); OR3
Lecture 31	4	Coding and Testing fundamentals. **Ref:** TB1(10.1, pg248-250); OR4
Lecture 32	4	Coding: Code Review. **Ref:** TB1(10.2, pg251-253); OR4
Lecture 33	4	Software Documentation. **Ref:** TB1(10.2, pg253); OR4
Lecture 34	4	Testing, Unit Testing. **Ref:** TB1(10.3-10.5, pg254-256); OR4
Lecture 35	4	Black Box and White Box Testing. **Ref:** TB1(10.6-10.7, pg257-264); OR4
Lecture 36	4	Debugging, Program Analysis Tools. Ref: TB1(10.8-10.9, pg265-267); OR4
Lecture 37	4	Integration Testing. Ref: TB1(10.10, pg267-269); OR4
Lecture 38	4	System Testing. **Ref:** TB1(10.11, pg269-271); OR4
Lecture 39	4	Software Maintenance. **Ref:** TB1(13.1, pg310-317); OR4
Lecture 40	4	Software project and software reuse

		Ref: TB1(14.1-14.3, pg318-327); OR5

LESSON PLAN

Semester-V

Type	Code	UNIX PROGRAMMING	L-T-P	Credits	Marks
CS	DSE-1		3-1-2	4	100
Topic Objective		The objective of this course is to learn the basics of UNIX OS, UNIX commands and File system. To familiarize students with the Linux environment. To learn fundamentals of shell is scripting and shell programming. To be able to write simple programs using UNIX.			
Prerequisites		Basic concepts of OS concepts.			
Lecture Scheme		Regular lectures (classroom/virtual class with computer/Smartphone) with use of ICT as and when required, lectures are planned to be interactive with focus on application.			

Evaluation Scheme

Internal Assessment			Written Assessment	Total
Assignment(s)	Unit Test	Mid-Term (Written)	End-Term	
0	0	15	60	75

University Syllabus

Unit No	Topics	Hours
Unit-1	Introduction: Unix Operating systems, Difference between Unix and other operating systems, Features and Architecture, Installation, Booting and shutdown process, System processes (an overview), External and internal commands, Creation of partitions in OS, Processes and its creation phases – Fork, Exec, wait, exit	10
Unit-2	User Management and the File System: Types of Users, Creating users, Granting rights, User management commands, File quota and various file systems available, File System Management and Layout, File permissions, Login process, Managing Disk Quotas, Links (hard links, symbolic links)	10
Unit-3	Shell introduction and Shell Scripting: Shell and various type of shell, Various editors present in Unix, Different modes of operation in vi editor, Shell script, Writing and executing the shell script, Shell variable (user defined and system variables), System calls, Using system calls, Pipes and Filters.	10
Unit-4	Unix Control Structures and Utilities: Decision making in Shell Scripts (If else, switch), Loops in shell, Functions, Utility programs (cut, paste, join, tr, uniq utilities), Pattern matching utility (grep).	10
	Total (Hours)	40

Text Books:
TB1: Sumitabha Das, Unix Concepts And Applications, Tata McGraw-Hill Education, 2017, 4/Ed.

Reference Books:
RB1: Nemeth Synder& Hein, Linux Administration Handbook, Pearson Education, 2010, 2/Ed.

Online Resources:
OR1:   https://www.geeksforgeeks.org/
OR2:   https://www.tutorialspoint.com/
OR3:   https://www.javatpoint.com/
OR4:   https://faculty.cs.niu.edu/
OR5:   https://www.educba.com/

Type	Code	UNIX PROGRAMMING	L-T-P	Credits	Marks
Lecture No	Unit No		3-1-2	4	75
Lecture 1	1	What is OS? Types of OS, Multiuser, multitasking, multiprogramming, introduction to UNIX operating system. Ref: TB1(1.1-1.3, pg4-7); OR1			
Lecture 2	1	Basic difference between Unix and other operating systems. Ref: TB1(1.4-1.6, pg7-18); OR1			
Lecture 3	1	Features and Architecture of UNIX operating system. Ref: TB1(2.1-2.2, pg22-27); OR1			
Lecture 4	1	The installation process of UNIX operating system Ref: TB1(2.3, pg27-28); OR1			
Lecture 5	1	Booting and shutdown process of UNIX operating system Ref: TB1(1.5, pg15-17); OR1			
Lecture 6	1	An overview of UNIX System processes. Ref: TB1(9.1-9.3, pg174-178); OR1			
Lecture 7	1	External commands of UNIX operating system Ref: TB1(2.5-2.11, pg-29-40); OR1			
Lecture 8	1	Internal commands Ref: TB1(2.5-2.11, pg-29-40); OR1			
Lecture 9	1	How to create partitions in Operating System Ref: TB1(1.3, pg6); OR1			
Lecture 10	1	Processes and its creation phases using Fork, Exec, wait, exit system calls. Ref: TB1(9.4, pg179,180); OR1			
Lecture 11	2	Different types of Users in UNIX operating system. Ref: TB1(15.4, pg311-315); OR1			
Lecture 12	2	Creating users in UNIX operating system Ref: TB1(15.4, pg311-315); OR1			
Lecture 13	2	Granting rights to the users of UNIX operating system. Ref: TB1(15.4, pg311-315); OR2			
Lecture 14	2	User management commands Ref: TB1(15.4, pg311-315); OR2			
Lecture 15	2	File quota and various file systems available Ref: TB1(4.1-4.3, pg65-67); OR2			
Lecture 16	2	File System Management and Layout Ref: TB1(6.1-6.3, pg106-109); OR2			
Lecture 17	2	File permissions Ref: TB1(6.4, pg109-110); OR2			
Lecture 18	2	Login process of UNIX operating system Ref: TB1(15.5, pg313-315); OR2			
Lecture 19	2	How to manage Disk Quotas Ref: TB1(15.6, pg315-317); OR2			
Lecture 20	2	Links (hard links, symbolic links) Ref: TB1(11.2-11.3, pg212-215); OR2			
Lecture 21	3	Shell and various types of shell in UNIX operating system Ref: TB1(10.1, pg194); OR2			
Lecture 22	3	Various editors present in Unix Ref: TB1(7.1, pg121); OR2			

Lecture 23	3	Different modes of operation in vi editor Ref: TB1(7.2-7.5, pg124-134); OR2
Lecture 24	3	Shell script Ref: TB1(14.1, pg271); OR2
Lecture 25	3	Writing and executing the shell script Ref: TB1(14.1, pg271); OR3
Lecture 26	3	Shell variable (user defined and system variables) Ref: TB1(10.2-10.3, pg194-198); OR3
Lecture 27	3	System calls Ref: TB1(23.1, pg493); OR3
Lecture 28	3	Using system calls Ref: TB1(23.2-23.4, pg495-504); OR3
Lecture 29	3	Pipes and Filters Ref: TB1(24.11, pg597); OR3
Lecture 30	3	Pipes and Filters Ref: TB1(24.11, pg597); OR3
Lecture 31	4	Decision making in Shell Scripts (If else, switch) Ref: TB1(14.6-14.8, pg277-284); OR4
Lecture 32	4	Loops in shell Ref: TB1(14.11,14.12, pg289,293); OR4
Lecture 33	4	Functions Ref: TB1(18.12, pg393); OR4
Lecture 34	4	Utility programs (cut) Ref: TB1(12.5, pg231); OR4
Lecture 35	4	Utility programs (paste) Ref: TB1(12.6, pg233); OR4
Lecture 36	4	Utility programs (join) Ref: TB1(12.7, pg234); OR4
Lecture 37	4	Utility programs (tr) Ref: TB1(12.9, pg239); OR4
Lecture 38	4	Utility programs (uniq) Ref: TB1(12.8, pg238); OR4
Lecture 39	4	Pattern matching utility (grep) Ref: TB1(13.1-13.3, pg246-254); OR4
Lecture 40	4	Pattern matching utility (grep) Ref: TB1(13.1-13.3, pg246-254); OR4

LESSON PLAN

Type	Code	Data Mining	L-T-P	Credits	Marks
	DSE-2		3-1-0	4	60
Topic Objective		To introduce the basic concepts of data warehousing, data mining, Issues, and Implication. To learn the core topics like Association rules, Classification & Prediction and Clustering techniques. To make a study on the Applications and Trends in Data Mining.			
Prerequisites		Data warehouse and data mining			
Lecture Scheme		Regular lectures (classroom/virtual class with computer/Smartphone) with use of ICT as and when required, lectures are planned to be interactive with focus on application.			

Evaluation Scheme

Internal Assessment			Written Assessment	Total
Assignment(s)	Unit Test	Mid-Term (Written)	End-Term	
0	0	15	60	75

University Syllabus

Unit No	Topics	Hours
Unit-1	Introduction to Data Warehouse, OLTP Systems, OLAP, Differences between OLTP and OLAP, Characteristics of Data Warehouse, Functionality of Data Warehouse, Advantages and Applications of Data Warehouse, 32 Advantages, Applications, Top-Down and Bottom-Up Development Methodology, Tools for Data warehouse development, Data Warehouse Types, Data cubes	10
Unit-2	Data mining, Functionalities, Data Preprocessing: Preprocessing the Data, Data cleaning, Data Integration and Transformation, Data reduction, Discretization and Concept hierarchies.	10
Unit-3	Basics Concepts – Single Dimensional Boolean Association Rules from Transaction Databases, Multilevel Association Rules from transaction databases, Multi dimension Association Rules from Relational Database and Data Warehouses. Apriori Algorithm, FP-Tree algorithm	10
Unit-4	Introduction, Issues, Decision Tree Induction, Naïve Bayesian Classification, Classification based on Concepts from Association Rule Mining, Classifier Accuracy.	10
	Total (Hours)	40

Text Books:
TB1: J. Han and M. Kamber, Data Mining Concepts and Techniques, Elsevier, 2011
Reference Books:
RB1:   K.P. Soman ,Shyam Diwakar, V.Ajay ,2006, Insight into Data Mining Theory and Practice, Prentice
Hall of India Pvt. Ltd - New Delhi. RB2: Data Mining Techniques, Arun K. Pujari, Universities Press, 2006

RB3: Modern Approaches of Data Mining: Theory & Practice, M. Panda, S. Dehuri, M. R. Patra, Narosa Publishing House, 2018..

Online Resources:
OR1:   https://www.geeksforgeeks.org/data mining -basics/
OR2:   https://www.tutorialspoint.com/data mining/index.htm
OR3:   https://www.javatpoint.com/data mining
OR4:   https://www.simplilearn.com

Type	Code	LESSON PLAN DATA MINING	L-T-P	Credits	Marks
Lecture No	Unit No		3-1-2	4	70
Lecture 1	1	Introduction to Data Warehouse **Ref:**TB1(1.1-1.1.1,pg1-2);OR1			
Lecture 2	1	OLTP Systems **Ref:**TB1(1.2-1.2.1,pg2-3);OR1			
Lecture 3	1	OLAP **Ref:**TB1(1.3-1.3.1,pg4-5);OR1			
Lecture 4	1	Differences between OLTP and OLAP **Ref:**TB1(1.4,pg5-7);OR1			
Lecture 5	1	Characteristics of Data Warehouse **Ref:**TB1(1.5,pg7-8);OR1			
Lecture 6	1	Functionality of Data Warehouse **Ref:**TB1(1.6,pg8);OR1			
Lecture 7	1	Advantages and Applications of Data Warehouse **Ref:**TB1(1.7,pg8-12);OR1			
Lecture 8	1	Advantages, Applications **Ref:**TB1(1.7,pg8-12);OR1			
Lecture 9	1	Top- Down and Bottom-Up Development Methodology Buffered Reader class. **Ref:**TB1(1.8,pg12-13);OR1			
Lecture 10	1	Tools for Data warehouse development, Data Warehouse Types, Data cubes **Ref:**TB1(1.9-1.11,pg13-17);OR1			
Lecture 11	2	Data mining **Ref:**TB1(2.1-2.1.1,pg18-19);OR1			
Lecture 12	2	Functionalities **Ref:**TB1(2.2,pg19-20);OR1			
Lecture 13	2	Mining Techniques **Ref:**TB1(2.2,pg19-20);OR1			
Lecture 14	2	Issues **Ref:**TB1(2.2,pg19-20);OR1			
Lecture 15	2	Preprocessing the Data **Ref:**TB1(2.3,pg21-22);OR1			
Lecture 16	2	Data cleaning **Ref:**TB1(2.4,pg22-27);OR1			
Lecture 17	2	Data Transformation **Ref:**TB1(2.4,pg26-27);OR1			
Lecture 18	2	Data integration			

		Ref:TB1(2.5,pg26-27);OR1
Lecture 19	2	Data reduction **Ref:**TB1(2.5,pg30-36);OR1
Lecture 20	2	Discretization and Concept hierarchies. Data Transformation **Ref:**TB1(2.6,pg36-38);OR1
Lecture 21	3	Mining Association Rules -Basics Concepts Data Transformation **Ref:**TB1(3.1,pg39-40);OR1
Lecture 22	3	Single Dimensional Boolean Association Rules from Transaction Databases Data Transformation **Ref:**TB1(3.2,pg40);OR1
Lecture 23	3	Single Dimensional Boolean Association Rules from Transaction Databases **Ref:**TB1(3.2,pg40);OR1
Lecture 24	3	Single Dimensional Boolean Association Rules from Transaction Databases **Ref:**TB1(3.2,pg40);OR1
Lecture 25	3	Multilevel Association Rules from transaction databases **Ref:**TB1(3.3,pg40-43);OR1
Lecture 26	3	Multilevel Association Rules from transaction databases **Ref:**TB1(3.3,pg40-43);OR1
Lecture 27	3	Multi dimension Association Rules from Relational Database and Data Warehouses **Ref:**TB1(3.3,pg40-43);OR1
Lecture 28	3	Multi dimension Association Rules from Relational Database and Data Warehouses **Ref:**TB1(3.3,pg40-43);OR1
Lecture 29	3	Apriori Algorithm **Ref:**TB1(3.5,pg43-47);OR1
Lecture 30	3	FP-Tree algorithm **Ref:**TB1(3.6,pg47-49);OR1
Lecture 31	4	Classification and Prediction: Introduction **Ref:**TB1(4.1,pg50-51);OR1
Lecture 32	4	Issues **Ref:**TB1(4.2,pg52-53);OR1
Lecture 33	4	Decision Tree Induction **Ref:**TB1(4.3,pg53-55);OR1
Lecture 34	4	Naïve Bayesian Classification **Ref:**TB1(4.4.2,pg55-56);OR1
Lecture 35	4	Naïve Bayesian Classification **Ref:**TB1(4.4.2,pg55-56);OR1
Lecture 36	4	Classification based on Concepts from Association Rule Mining **Ref:**TB1(4.5,pg55-57);OR1
Lecture 37	4	Classification based on Concepts from Association Rule Mining **Ref:**TB1(4.5,pg55-57);OR1
Lecture 38	4	Classification based on Concepts from Association Rule Mining **Ref:**TB1(4.5,pg55-57);OR1
Lecture 39	4	Classifier Accuracy.

		Ref:TB1(4.6,pg57);OR1
Lecture 40	4	Classifier Accuracy.
		Ref:TB1(4.6,pg57);OR1