



**SIRDA Polytechnic Sunder Nagar
Lesson Plan**

Branch : **Computer Engg.**
Subject : **Web Programming**

Session : **2023**
Sem : **4th**

SR.No.	Date	Total Lecture	Chapter	Topic	Remarks
1	2/14/2023	1	Unit-1 : Dynamic Websites Basics	Review of HTML5,	
2	2/16/2023	2		CSS and JavaScript;	
3	2/17/2023	3		HTTP, HTTP Request, HTTP Response,	
4	2/21/2023	4		URL, Working of Web Servers and Web Browsers,	
5	2/23/2023	5		Static Websites, Dynamic Websites,	
6	2/24/2023	6		Web Applications, Form Data Submission Methods - GET and POST,	
7	2/25/2023	7		HTTP Sessions,	
8	2/28/2023	8		HTTP Cookies.	
9	3/2/2023	9	Unit-2 : Introduction to PHP	Origin of PHP, Advantages of PHP,	
10	3/3/2023	10		Working of PHP, Embedding PHP Code in Webpages,	
11	3/4/2023	11		LAMP Stack, Install and Configure PHP Environment,	
12	3/9/2023	12		PHP Script, PHP Syntax, Statements, Comments,	
13	3/10/2023	13		Variables, Naming Variables, Variable Scope,	
14	3/14/2023	14		Constants, echo and print Statements,	
15	3/16/2023	15		PHP Data Types,	
16	3/17/2023	16		String Literals - Single and Double Quoted Strings, Operators, PHP Control Statements,	
17	3/18/2023	17		Class Test -1	
18	3/21/2023	18		PHP Arrays.	
19	3/23/2023	19	Unit-3 : PHP Functions	PHP Standard Library Functions: String Functions - html specialchars(),	
20	3/24/2023	20		ltrim(), rtrim(), trim(),	
21	3/25/2023	21		strtoupper(), strtolower(), explode(),	
22	3/28/2023	22		implode(), strlen(), strcmp(), strpos();	
23	3/31/2023	23		Math Functions - sqrt(), ceil(),	
24	4/1/2023	24		floor(), log(), pow(),	
25	4/6/2023	25		sin(), cos(), tan();	
26	4/11/2023	26		Class Test - 2	
27	4/13/2023	27	Unit-4 : PHP Form Processing	User-defined Functions.HTML Form Element, action and method Attributes,	
28	4/18/2023	28		submit and clear Buttons, Form Elements, name and id attributes,	
29	4/20/2023	29		Hidden Input, Client-side Form Validation	
30	4/21/2023	30		, PHP Superglobals - \$GLOBALS, \$_SERVER, \$_REQUEST,	
31	4/25/2023	31		\$_POST, \$_GET, \$_FILES, \$_ENV, \$_COOKIE, \$_SESSION;	
32	4/27/2023	32		Server-side Validation, Handling Uploaded Files.	
33	4/28/2023	33	Unit-5 : PHP Advanced Features	Handling Date and Time;	
34	4/29/2023	34		Dealing with Multiple PHP files :	
35	5/1/2023	35		include, require, include_once and require_once;	
36	5/4/2023	36		HTTP Sessions and Cookies, Error and Exception Handling in PHP, PHP Mail,	
37	5/6/2023	37		using HTTP Headers with header() Function, Cross-Site Scripting (XSS) ,Attack and its Prevention.	
38	5/8/2023	38	House Test week According to Academic Calendar (i.e. 2nd week of May 2023)		
39	5/11/2023				
40	5/12/2023				
41	5/15/2023	38	Unit-6 : Using MySQL Database in PHP	Basic Database Concepts - Database, Table,	
42	5/18/2023	39		Column Types, Constraints, Views,	
43	5/19/2023	40		Creating Database Users and Granting Privileges;	
44	5/20/2023	41		Connecting PHP to MySQL,	
45	5/25/2023	42		Executing Simple SQL Statements INSERT,	
46	5/26/2023	43		UPDATE, DELETE and SELECT,	
47	5/27/2023	44		Retrieving and Processing Query Results,	
48	5/29/2023	45		mysqli_real_escape_string() function,	
49	6/1/2023	46		Handling MySQL errors,	
50	6/2/2023	47		Handling SQL Injection.	
51	6/3/2023	48	Unit-7 : Using XML and AJAX with PHP	Role of XML, XML Syntax,	
52	6/6/2023	49		XML Tags, XML Elements,	
53	6/8/2023	50		XML Attributes, Manipulating XML in PHP;	
54	6/9/2023	51		Role of AJAX, Handling AJAX Requests in PHP.	
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SIRDA Polytechnic Sunder Nagar

Lesson Plan

Branch : Computer Engg.

Session : 2023

Subject : Relational Database Management System

Sem : 4th

SR.No.	Date	Total Lecture	Chapter	Topic	Remarks	
1	2/14/2023	1	Unit-1 : Introduction to Database Systems	Database Systems, Database and its Purpose,		
2	2/15/2023	2		Comparison of Database Approach with File-based and Traditional Record Keeping Approaches		
3	2/16/2023	3		Advantages and Disadvantages of Database Approach,		
4	2/17/2023	4		Classification of Database Users, Role of DBA.		
5	2/21/2023	5	Unit-2 : Database System Concepts and Architecture	Data Models,		
6	2/22/2023	6		Schemas, and Instances;		
7	2/23/2023	7		ANSI/SPARC Architecture of a Database System,		
8	2/24/2023	8		External Level, Conceptual Level, Internal Level,		
9	2/28/2023	9		Mappings; Data Independence, Logical Data Independence,		
10	3/1/2023	10	Physical Data Independence.			
11	3/2/2023	11	Unit-3 : Relational Model	Relational Database Model,		
12	3/3/2023	12		Relations, Attributes, Tuples, Domains; Key - Primary Key,		
13	3/9/2023	13		Candidate Keys, Alternate Keys,		
14	3/10/2023	14		Superkey, Secondary Key, Foreign Keys;		
15	3/14/2023	15		Database Constraints.		
16	3/15/2023	16		Class Test -1		
17	3/16/2023	17	Unit-4 : Entity Relationship Model	Entity, Entity Sets, Strong and Weak Entities,		
18	3/17/2023	18		Attributes, and Keys;		
19	3/21/2023	19		Association, Relationship, Roles, and		
20	3/22/2023	20		Structural Constraints, ER Diagrams.		
21	3/23/2023	21	Unit-5 : Structure Query Language (SQL) using MySQL	Object Naming Conventions,		
22	3/24/2023	22		Keywords, Database, Table,		
23	3/28/2023	23		View, Index, Alias;		
24	3/29/2023	24		Data Types - Numeric, Date and Time, String Types;		
25	3/31/2023	25		Data Definition Language(DDL): CREATE, DROP, ALTER, RENAME,		
26	4/4/2023	26		Data Definition Language(DDL): CREATE, DROP, ALTER, RENAME,		
27	4/5/2023	27		Data Manipulation Language(DML): INSERT, UPDATE , DELETE,		
28	4/6/2023	28		SELECT, SELECT Clauses: FROM, WHERE,ORDER BY,		
29	4/11/2023	29			Class Test - 2	
30	4/12/2023	30		GROUP BY, HAVING, Operators: Arithmetic, Logical, Relational,		
31	4/13/2023	31		String; Joins: Inner, Left,		
32	4/18/2023	32		Right and Outer Joins;		
33	4/19/2023	33		Subqueries,		
34	4/20/2023	34	Set Operations: Union,			
35	4/21/2023	35	Intersect, Minus,			
36	4/25/2023	36	Data Control Language(DCL): GRANT, REVOKE;			
37	4/26/2023	37	Data Control Language(DCL): GRANT, REVOKE;			
38	4/27/2023	38	Transaction Control Language(TCL): COMMIT, ROLLBACK, SAVEPOINT			
39	4/28/2023	39	Transaction Control Language(TCL): COMMIT, ROLLBACK, SAVEPOINT			
40	5/2/2023	40	Transaction Control Language(TCL): COMMIT, ROLLBACK, SAVEPOINT			
41	5/3/2023	41	Unit-6 : Dependencies and Normalization	Prime and Non-Prime Attributes,		
42	5/4/2023	42		Functional Dependencies, Trivial and Non-trivial Dependencies,		
43	5/9/2023		House Test week According to Academic Calendar (i.e. 2nd week of May 2023)			
44	5/10/2023					
45	5/11/2023					
46	5/12/2023					
47	5/16/2023	43	Unit-6 : Dependencies and Normalization	Non-Loss Decomposition,		
48	5/17/2023	44		Normalization, First, Second and		
49	5/18/2023	45		Third Normal Forms,		
50	5/19/2023	46		Boyce/Codd Normal Form.		
51	5/23/2023	47	Unit-7 : Functions in SQL	Numeric: ABS, ROUND		
52	5/24/2023	48		, FLOOR, CEIL, SQRT,		
53	5/25/2023	49		POWER, TRUNCATE, LOG;		
54	5/26/2023	50		Date and Time Functions : NOW, DATE, TIME, CURDATE,		
55	5/30/2023	51		CURTIME, DAY , MONTH, YEAR, DATEDIFF,		
56	5/31/2023	52		DATE_SUB, DATE_ADD, DATE_FORMAT;		
57	6/1/2023	53		String Functions : CONCAT, LENGTH, UPPER, LOWER, LEFT, RIGHT,		
58	6/2/2023	54		LTRIM, RTRIM; Aggregate Functions: MAX, MIN, SUM, AVG, COUNT;		
59	6/6/2023	55		Data Conversion Functions: CAST, STR_TO_DATE;		
60	6/7/2023	56		User Defined Procedures and Functions (Introduction only)		



SIRDA Polytechnic Sunder Nagar

Lesson Plan

Branch : Computer Engg.

Session : 2023

Subject : Data Structure using C

Sem : 4th

SR.No.	Date	Total Lecture	Chapter	Topic	Remarks	
1	2/14/2023	1	Unit-1 : Introduction	Data Types		
2	2/16/2023	2		Data Structures - Linear and Non-Linear Data Structures,		
3	2/17/2023	3		Pointers,		
4	2/21/2023	4		Dynamic Memory Allocation (malloc(),		
5	2/23/2023	5		Dynamic Memory Allocation (calloc() and free())		
6	2/24/2023	6	Unit-2 : Arrays and Structures	One-Dimensional Arrays - Representation in Memory, Declaration, Initialization,		
7	2/25/2023	7		Operations on Arrays - Traversing, Searching,		
8	2/28/2023	8		Insertion, Deletion and Sorting		
9	3/2/2023	9		Insertion, Deletion and Sorting		
10	3/3/2023	10		Two-Dimensional Arrays - Representation in Memory (Row-major and Column-major Order), Declaration, Initialization,		
11	3/4/2023	11		Structures - Declaration, Typedef Declarations, Initialization of Structures,		
12	3/9/2023	12		accessing the Members of a Structure, Nested Structures,		
13	3/10/2023	13		Arrays of Structures, Passing Structures as Function Parameters,		
14	3/14/2023	14		Passing Structures as Function Parameters,		
15	3/16/2023	15			Class Test -1	
16	3/17/2023	16	Unit-3 : Stacks and Queue	Stack, Representation of stacks, Implementation of stacks (using arrays)		
17	3/18/2023	17		Operations on Stacks - Push, Pop, Peek;		
18	3/21/2023	18		Operations on Stacks - Push, Pop, Peek;		
19	3/23/2023	19		Applications of Stacks;		
20	3/24/2023	20		Queues,		
21	3/25/2023	21		Operations on Queues		
22	3/28/2023	22		Applications of Queues,		
23	3/31/2023	23		Circular Queues,		
24	4/1/2023	24		Double-Ended Queues.		
25	4/6/2023	25	Unit-4 : Linked Lists	Linked List,		
26	4/11/2023	26		Representation of Linked Lists in Memory, Linked Lists versus Arrays,		
27	4/13/2023	27			Class Test - 2	
28	4/18/2023	28		Operations on Linked List - Insertion,		
29	4/20/2023	29		Deletion,		
30	4/21/2023	30		Traversing,		
31	4/25/2023	31		Searching;		
32	4/27/2023	32		Application of Linked Lists;		
33	4/28/2023	33		Doubly Linked Lists, Operations on Doubly Linked Lists - Insertion		
34	4/29/2023	34		Deletion,		
35	5/1/2023	35		Traversing,		
36	5/4/2023	36	Circular Linked Lists			
37	5/6/2023	37	Unit-5 : Trees	Basic Concept of Trees - Node, Root, Parent, Children, Sibling, Leaves;		
38	5/8/2023	38	House Test week According to Academic Calendar (i.e. 2nd week of May 2023)			
39	5/11/2023					
40	5/12/2023					
41	5/15/2023	38	Unit-5 : Trees	Binary Tree,		
42	5/18/2023	39		Traversing		
43	5/19/2023	40		Binary Trees (Pre order, Post order and in order)		
44	5/20/2023	41		Binary Trees (Pre order, Post order and in order)		
45	5/25/2023	42		Binary Trees (Pre order, Post order and in order)		
46	5/26/2023	43		Applications of Trees.		
47	5/27/2023	44		Searching		
48	5/29/2023	45	Search algorithm (Linear)			
49	6/1/2023	46	Search algorithm (Binary),			
50	6/2/2023	47	Unit-6 : Sorting and Searching	Sorting, Sorting Algorithms Bubble Sort		
51	6/3/2023	48		Sorting Algorithms Bubble Sort		
52	6/6/2023	49		Selection Sort,		
53	6/8/2023	50		Merge Sort		
54	6/9/2023	51		comparisons		
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SIRDA Polytechnic Sunder Nagar

Lesson Plan

Branch : Computer Engg.

Session : 2023

Subject : Computer Organization & Architecture

Sem : 4th

SR.No.	Date	Total Lecture	Chapter	Topic	Remarks	
1	2/15/2023	1	Unit-1 : Introduction	Brief history of computers		
2	2/16/2023	2		Block Diagram of Digital Computers,		
3	2/17/2023	3		Computer Organization,		
4	2/22/2023	4		Computer Design		
5	2/23/2023	5		Computer Architecture		
6	2/24/2023	6		Von Neumann Architecture.		
7	2/27/2023	7	Unit-2 : Computer Arithmetic	Addition and Subtraction with Signed-Magnitude Data - Hardware Implementation and Algorithm.		
8	3/1/2023	8		Addition and Subtraction with Signed-Magnitude Data - Hardware Implementation and Algorithm.		
9	3/2/2023	9		Addition and Subtraction with 2's Complements Data - Hardware for 2's complement addition and subtraction,		
10	3/3/2023	10		Addition and Subtraction with 2's Complements Data - Hardware for 2's complement addition and subtraction,		
11	3/6/2023	11		algorithm for adding and subtracting numbers in 2's complement representation.		
12	3/9/2023	12		algorithm for adding and subtracting numbers in 2's complement representation.		
13	3/10/2023	13		Multiplication Algorithms - Hardware Implementation for Signed-Magnitude Data,		
14	3/13/2023	14		Multiplication Algorithms - Hardware Implementation for Signed-Magnitude Data,		
15	3/15/2023	15		Booth Multiplication Algorithm		
16	3/16/2023	16		Booth Multiplication Algorithm, Components of CPU,		
17	3/17/2023	17		Class Test -1		
18	3/20/2023	18	Unit-3 : Central Processing Unit	General Register Organization,		
19	3/22/2023	19		Stack Organization - Register and Memory Stack,		
20	3/23/2023	20		Reverse Polish Notation and Evaluation of Arithmetic Expressions;		
21	3/24/2023	21		Instruction formats Three Address Instructions, Two Address Instructions, One Address Instructions, Zero Address Instructions		
22	3/27/2023	22		Instruction formats Three Address Instructions, Two Address Instructions, One Address Instructions, Zero Address Instructions		
23	3/29/2023	23		Instruction formats Three Address Instructions, Two Address Instructions, One Address Instructions, Zero Address Instructions		
24	3/31/2023	24		Brief Introduction to RISC and CISC		
25	4/3/2023	25		Brief Introduction to RISC and CISC;		
26	4/5/2023	26	Microprogrammed Vs Hardwired Control Units.			
27	4/6/2023	27	Unit-4 : Memory Organization	Memory Device Characteristics,		
28	4/10/2023	28		Memory Hierarchy, Main Memory (RAM & ROM)		
29	4/12/2023	29			Class Test - 2	
30	4/13/2023	30		Introduction to Associative Memory,		
31	4/17/2023	31	Cache Memory - Locality of Reference,			
32	4/19/2023	32	Hit Ratio,			
33	4/20/2023	33	Writing into Cache - Write Through			
34	4/21/2023	34	Writing into Cache -Write Back;			
35	4/24/2023	35	Unit-5 : Input-Output Organization	Peripheral Devices.		
36	4/26/2023	36		Input-Output Interface - I/O Versus Memory Bus,		
37	4/27/2023	37		Isolated versus Memory-Mapped I/O;		
38	4/28/2023	38		Isolated versus Memory-Mapped I/O;		
39	5/1/2023	39		Modes of Transfer		
40	5/3/2023	40		Programmed I/O		
41	5/4/2023	41	Interrupt-Initiated I/O ,DMA.			
42	5/8/2023		House Test week According to Academic Calendar (i.e. 2nd week of May 2023)			
43	5/10/2023					
44	5/11/2023					
45	5/12/2023					
46	5/15/2023	42	Unit-6 : 8085 Microprocessor	Address Bus, Data Bus,		
47	5/17/2023	43		Interrupts,		
48	5/18/2023	44		Addressing Modes,		
49	5/19/2023	45		Instruction Set (Introduction only),		
50	5/24/2023	46	Memory and I/O Interfacing.			
51	5/25/2023	47	Unit-7 : Overview of Advanced Microprocessor Technologies	Parallel Processing,		
52	5/26/2023	48		Parallel Processing,		
53	5/29/2023	49		Pipelining,		
54	5/31/2023	50		Vector Processing,		
55	6/5/2023	51		Vector Processing,		
56	6/7/2023	52		Hyper Threading		
	6/8/2023	53				
	6/9/2023	54				



SIRDA Polytechnic Sunder Nagar

Lesson Plan

Branch : Computer Engg.

Session : 2023

Subject : Software Engineering

Sem : 4th

SR.No.	Date	Total Lecture	Chapter	Topic	Remarks
1	2/14/2023	1	Unit-1 : Introduction to Software Engineering	Software Overview: Definition, Characteristics,	
2	2/16/2023	2		Software Evolution; Software Paradigms: Software Development Paradigm,	
3	2/20/2023	3		Software Design Paradigm and Programming Paradigm.	
4	2/21/2023	4		Software Engineering: Definition, Need of Software Engineering,	
5	2/23/2023	5		Emergence of Software Engineering and	
6	2/25/2023	6		Notable Changes in Software Development Practices.	
7	2/27/2023	7	Unit-2 : Software Development Life Cycle and Models	Software Development Life Cycle Activities: Communication,	
8	2/28/2023	8		Requirement Gathering, Feasibility Study,	
9	3/2/2023	9		System Analysis, Software Design,	
10	3/4/2023	10		Coding, Testing, Integration,	
11	3/6/2023	11		Implementation and Operation and Maintenance;	
12	3/9/2023	12		Software Development Life Cycle Models:	
13	3/13/2023	13		Classical Waterfall Model, Prototype Model,Rapid Application Model,	
14	3/14/2023	14		Class Test -1	
15	3/16/2023	15		Spiral Model, Comparison of Different Life Cycle Models,	
16	3/18/2023	16		Selection Criteria of an Appropriate Life Cycle Model for a Project.	
17	3/20/2023	17	Unit-3 : Software Cost Estimation	Metrics used for Project Size Estimation,	
18	3/21/2023	18		Metrics used for Project Size Estimation,	
19	3/23/2023	19		Project Estimation Techniques,	
20	3/25/2023	20		Project Estimation Techniques,	
21	3/27/2023	21		Empirical and	
22	3/28/2023	22		COCOMO Estimation Techniques.	
23	4/1/2023	23		COCOMO Estimation Techniques.	
24	4/3/2023	24	COCOMO Estimation Techniques.		
25	4/4/2023	25	Unit-4 : Software Requirement Analysis and Specification	Software Requirements: Goal of the Requirements Analysis and Specification Phase,	
26	4/6/2023	26		Types of Requirements - Functional Requirements, Non-Functional Requirements and	
27	4/10/2023	27		User Interface Requirements; Requirement Elicitation Process: Requirements Elicitation,	
28	4/11/2023	28		Organizing Requirements, Negotiation,	
29	4/13/2023	29		Discussion and Documentation; Requirement Elicitation Techniques: Interviews,	
30	4/17/2023	30		Class Test -2	
31	4/18/2023	31		Surveys, Questionnaires, Brainstorming, Requirements Analysis,	
32	4/20/2023	32		Software Requirements Specification (SRS) Document,	
33	4/24/2023	33		User of SRS Document,	
34	4/25/2023	34		Characteristics of a Good SRS Document.	
35	4/27/2023	35	Unit-5 : Software Design	Software Design Overview: Goals and Outcome of Software Design Phase,	
36	4/29/2023	36		Characteristics of a Good Software Design,	
37	5/1/2023	37		Cohesion and Coupling; Software Design Levels: Architectural Design,	
38	5/2/2023	38		High-level Design and Detailed Design; Software Analysis and Design Tools (Introduction Only): Data Flow Diagram,	
39	5/4/2023	39		Structure Charts. Software Design Strategies:Structured Design, Function Oriented Design,	
40	5/6/2023	40		Software Design Approaches: Top Down Design, Bottom Up Design.	
41	5/8/2023	House Test week According to Academic Calendar (i.e. 2nd week of May 2023)			
42	5/9/2023				
43	5/11/2023				
44	5/15/2023	41	Unit-6 :Software Coding	Software Coding Overview: Goal of Software Coding Phase, Coding Standards and Guidelines. Code Reviews: Code Walkthrough,	
45	5/16/2023	42		Code Inspection and Clean Room Testing	
46	5/18/2023	43		Software Documentation: Internal Software Documentation and	
47	5/20/2023	44		Software Documentation: Internal Software Documentation and	
48	5/23/2023	45	External Software Documentation		
49	5/25/2023	46	Unit-7 : Software Testing	Software Testing Overview: Goal of Software Testing Phase,	
50	5/27/2023	47		Software Verification versus Software Validation and Testing Activities,	
51	5/29/2023	48		Software Testing Approach: Black Box Testing Approach and White Box Testing Approach.	
52	5/30/2023	49		Software Testing Approach: Black Box Testing Approach and White Box Testing Approach.	
53	6/1/2023	50		Software Testing Techniques: Unit Testing Technique,	
54	5/3/2023	51		Integration Testing Technique and	
55	5/5/2023	52		Integration Testing Technique and	
56	5/6/2023	53		System Testing Technique.	
57	5/8/2023	54		System Testing Technique.	