LESSON PLAN: Object Oriented Programming using Java

Discipline : Computer Engineering

Faculty : Pooja

Semester : 4th

Duration : 16 WEEKS (20 Jan 2025 to 15 May 2025)

Lecture: 02 Lecture per week			**Practical: 04 (G1) + 04 (G2) hours Lab per week**	
Week	**Week Day**	**Theory**	**Week Day**	**Practical (Group: G1, G2)**
1st	1	Fundamentals of object-oriented programming	1st	Practice Creating Classes andObject functions.
	2	Procedure-oriented programming Vs. Object—Oriented Programming.	2nd	Practice Creating Classes andObject functions.
	3	Object oriented programming concepts –Classes, object reference...		
2nd	4	Object oriented programming concepts – abstraction…	1st	Practice Creating Classes andObject functions
	5	Encapsulation, inheritance, Polymorphism.	2nd	Practice Creating Classes andObject Functions
	6	Introduction of eclipse (IDE) for development programs in Java.		
3rd	7	Review of constructs of C used in JAVA: variables…	1st	Practice Creating Classes and Object functions
	8	Types and type declarations data types...	2nd	Practice Creating Classes and Object functions
	9	if then else clause, Pointers, Functions, Structure and unions		
4th	10	Increment and decrement operators…	1st	Practice Creating Classes and Object functions
	11	Relational and logical operators conditional expressions.	2nd	Practice Creating Classes and Object functions
	12	Input using scanner class and output statement		
5th	13	Loops, switch case arrays, methods	1st	Practice
	14	**Assignment-1**		
	15	**Revision/ Sessional -1**	2nd	Practice
6th	16	Creation Class members.	1st	Practice Classes and Objects
	17	Accessing classmembers.		
	18	Private data members and functions, Public data members and functions	2nd	Practice Classes and Objects

7th	19	Protected data members and functions.	1st	Experiment 2 of Practical List
	20	Defaultdata members and functions.		
	21	Comparison: Private Vs Public Vs Protected Vs Default	2nd	Experiment 2 of Practical List
8th	22	Constructors Object.	1st	Experiment 3 of PracticalList
	23	Object Reference.		
	24	Definition of inheritance, Inheritance types, protected data	2nd	Experiment 3 of PracticalList
9th	25	Private data, public data.	1st	Practice Inheritance examples Experiment 4
	26	Constructor chaining.		
	27	Order of invocation of constructors.	2nd	Practice Inheritance examples Experiment 4
10th	28	Revision	1st	Experiment 6
	29	**Assignment-2**		
	30	**Revision/ Sessional-2**	2nd	Experiment 6
11th	31	Types of inheritance, single inheritance multilevel inheritance,	1st	Experiment 7
	32	Hierarchical inheritance, hybrid inheritance		
	33	Class test of Inheritance Introduction to Polymorphism, its types.	2nd	Experiment 7
12th	34	Uses of Polymorphism.	1st	Experiment 8
	35	Method & constructor overloading.		
	36	Method overriding, up-casting and down-casting.	2nd	Experiment 8
13th	37	Key points of Abstract class and Interface, difference between an abstract class &interface	1st	Experiment 9
	38	implementation of multiple inheritance through interface		
	39	Definition of exception handling implementation of keywords like try.	2nd	Experiment 9
14th	40	Importance of exception handling in practical catch Implementation of finally, throw & throws	1st	Experiment 10
	41			
	42	Implementation of live projects	2nd	Experiment 10

15th	43	**Assignment-3**	1st	Experiment 10: Practice Exception handlingprograms
	44	**Revision**		
	45	**Sessional-3**	2nd	Experiment 10: Practice Exception handlingprograms
16th	46	Students Interaction Question/ Answer	1st	Lab Practice
	47	Seminar		
	48	Students Interaction Question/ Answer	2nd	Lab Practice