	CAPITAL SCHOOL OF ENGINEERING
PLOT NO. 1288, MAHATAPALLA, BAJAPUR, KHURDA,PIN-752060	
Session: 2023-2024	
Course Name: DIPLOMA	**Branch Name:** COMPUTER SCIENCE
Subject Name: TH 2 : Data Structure	**Theory/Practical:** Theory
Section: A	**Teacher Name:** DEBASISH MOHAPATRA
Semester: 3	

Credit '4' External Evaluation(Marked) '80' Internal Evaluation(Marked) '20'

Text Books:

Sl.No	Text Books
1	S.Lipschutz DataStructure
2	A.N.Kamthane IntroductiontoDataStructure inC

Reference books:

Sl.No	Reference books
1	Reema Thereja DataStructure using C

Course Outcomes:

Sl.No	Course Outcomes
1	INTRODUCTION
2	STRINGPROCESSING
3	ARRAYS
4	STACKS&QUEUES
5	LINKEDLIST
6	TREE

7	GRAPHS
8	SORTINGSEARCHING&MERGING

SL No.	Lecture No.	Module/Unit No.	Topic To Be Taught	Cos	Reference Material Links
1	1	1	Explain Data, Information, data types	Cos 1	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
2	1	1	Explain Data, Information, data types	Cos 1	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
3	1	1	Explain Data, Information, data types	Cos 1	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
4	1	1	Information, data types	Cos 1	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
5	1	1	Information, data types	Cos 1	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
6	1	1	REVISION	Cos 1	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
7	1	1	CLASS TEST -1	Cos 1	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
8	2	2	Basic Terminology, Storing Strings	Cos 2	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
9	2	2	Basic Terminology, Storing Strings	Cos 2	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
10	2	2	Basic Terminology, Storing Strings	Cos 2	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
11	2	2	Basic Terminology, Storing Strings	Cos 2	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
12	2	2	Basic Terminology, Storing Strings	Cos 2	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
13	2	2	Basic Terminology, Storing Strings	Cos 2	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj

14	2	2	REVISION	Cos 2	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
15	2	2	REVISION	Cos 2	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
16	2	2	CLASS TEST -2	Cos 2	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
17	3	3	about array,Discuss Linear arrays	Cos 3	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
18	3	3	about array,Discuss Linear arrays	Cos 3	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
19	3	3	about array,Discuss Linear arrays	Cos 3	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
20	3	3	about array,Discuss Linear arrays	Cos 3	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
21	3	3	about array,Discuss Linear arrays	Cos 3	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
22	3	3	about array,Discuss Linear arrays	Cos 3	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
23	3	3	REVISION	Cos 3	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
24	3	3	REVISION	Cos 3	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
25	3	3	CLASS TEST -3	Cos 3	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
26	4	4	Explain array representation of Stack	Cos 4	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
27	4	4	Explain array representation of Stack	Cos 4	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
28	4	4	Explain array representation of Stack	Cos 4	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
29	4	4	Explain array representation of Stack	Cos 4	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj

30	4	4	Explain array representation of Stack	Cos 4	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
31	4	4	Explain array representation of Stack	Cos 4	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
32	4	4	Explain array representation of Stack	Cos 4	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
33	4	4	Discuss application of stack, recursion	Cos 4	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
34	4	4	Revision	Cos 4	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
35	4	4	CLASS TEST -4	Cos 4	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
36	5	5	Explain representation of linked	Cos 5	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
37	5	5	Explain representation of linked	Cos 5	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
38	5	5	Explain representation of linked	Cos 5	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
39	5	5	Explain representation of linked	Cos 5	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
40	5	5	Explain representation of linked	Cos 5	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
41	5	5	Explain representation of linked	Cos 5	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
42	5	5	Explain representation of linked	Cos 5	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
43	5	5	Explain representation of linked	Cos 5	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
44	5	5	Revision	Cos 5	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
45	5	5	Revision	Cos 5	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj

46	5	5	CLASS TEST -5	Cos 5	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
47	6	6	Explain Basic terminology of Tree	Cos 6	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
48	6	6	Explain Basic terminology of Tree	Cos 6	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
49	6	6	Explain Basic terminology of Tree	Cos 6	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
50	6	6	Explain Basic terminology of Tree	Cos 6	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
51	6	6	Revision	Cos 6	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
52	6	6	CLASS TEST -6	Cos 6	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
53	7	7	ExplainAdjacencyMatrix,PathMatrix	Cos --Select--	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
54	7	7	ExplainAdjacencyMatrix,PathMatrix	Cos --Select--	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
55	7	7	ExplainAdjacencyMatrix,PathMatrix	Cos --Select--	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
56	7	7	Revision	Cos --Select--	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
57	8	8	Linear searching, Binary searching.	Cos --Select--	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
58	8	8	Linear searching, Binary searching.	Cos --Select--	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj
59	8	8	Revision	Cos --Select--	https://youtu.be/5_5oE5lgrhw?si=Sjbd5o7-hXq_Lubj

Faculty Member

HOD

Principal

	CAPITAL SCHOOL OF ENGINEERING
PLOT NO. 1288, MAHATAPALLA, BAJAPUR, KHURDA,PIN-752060	
Session: 2023-2024	
Course Name: DIPLOMA	**Branch Name:** COMPUTER SCIENCE
Subject Name: TH 4 : Object Oriented Methodology	**Theory/Practical:** Theory
Section: A	**Teacher Name:** ASWINI KUMAR POTHAL
Semester: 3	

Credit '4' External Evaluation(Marked) '' Internal Evaluation(Marked) ''

Text Books:

Sl.No	Text Books
1	Programming With Java A Primer by E. Balagurusami
2	JavaTM 2: The Complete Reference by Patric Naughton Herbert Schild

Reference books:

Sl.No	Reference books
1	Core Java Volume I - Fundamentals by Cay S. Horstmann
2	Core Java For Beginners by Rashmi Kanta Das

Course Outcomes:

Sl.No	Course Outcomes
1	Understand the concepts of OOPs, their advantages and applications
2	Comprehend the features of Java
3	Know the concepts and advantages of overloading methods and type conversions
4	Appreciate the concepts of inheritance and the various types of inheritance.
5	Use the various operations of files to perform file operations
6	Understand the concept of managing errors and exceptions

SL No.	Lecture No.	Module/Unit No.	Topic To Be Taught	Cos	Reference Material Links
1	1	I	OOPS concepts and terminology	Cos 1	
2	2	I	Application of OOPS	Cos 1	
3	3	I	REVISION	Cos 1	
4	4	I	ASSIGNMENT-1	Cos 1	
5	5	I	CLASS TEST-1	Cos 1	
6	6	II	Execution Model of Java	Cos 1	
7	7	II	Variables and Data types	Cos 1	
8	8	II	Operators and Expressions	Cos 1	
9	9	II	Control Flow Statements	Cos 1	
10	10	II	REVISION	Cos 1	
11	11	II	ASSIGNMENT-2	Cos 1	
12	12	II	CLASS TEST-1CLASS TEST-2	Cos 1	
13	13	III	Defining a Class	Cos 2	
14	14	III	Instance Data and Class Data	Cos 2	
15	15	III	Constructors	Cos 2	
16	16	III	Access Contro	Cos 2	
17	17	III	REVISION	Cos 2	
18	18	III	ASSIGNMENT-3	Cos 2	
19	19	III	CLASS TEST-1CLASS TEST-3	Cos 2	
20	20	IV	String Builder and String Bu	Cos 3	
21	21	IV	Methods and Messages	Cos 3	
22	22	IV	Parameter Passing	Cos 3	
23	23	IV	Comparing and Identifying Objects	Cos 3	
24	24	IV	REVISION	Cos 3	
25	25	IV	ASSIGNMENT-4	Cos 3	
26	26	IV	CLASS TEST-1CLASS TEST-4	Cos 3	
27	27	V	Inheritance	Cos 4	
28	28	V	Use of Inheritance	Cos 4	
29	29	V	Types of Inheritance	Cos 4	
30	30	V	REVISION	Cos 4	
31	31	V	ASSIGNMENT-5	Cos 4	

32	32	V	CLASS TEST-1CLASS TEST-5	Cos 4	
33	33	VI	Types of Polymorphism	Cos 5	
34	34	VI	REVISION	Cos 5	
35	35	VI	ASSIGNMENT-6	Cos 5	
36	36	VI	CLASS TEST-1CLASS TEST-6	Cos 5	
37	37	VII	Java API Packages	Cos 5	
38	38	VII	Naming Convention	Cos 5	
39	39	VII	Adding a Class to Package	Cos 5	
40	40	VII	REVISION	Cos 5	
41	41	VII	ASSIGNMENT-6	Cos 5	
42	42	VII	CLASS TEST-1CLASS TEST-6	Cos 5	
43	43	VIII	What is a stream	Cos 6	
44	44	VIII	Reading and writing to files	Cos 6	
45	45	VIII	Opening and Closing Streams	Cos 6	
46	46	VIII	Predefined streams	Cos 6	
47	47	VIII	REVISION	Cos 6	
48	48	VIII	ASSIGNMENT-8	Cos 6	
49	49	VIII	CLASS TEST-1CLASS TEST-8	Cos 6	
50	50	IX	Exceptions Overview	Cos 6	
51	51	IX	Exception Keywords	Cos 6	
52	52	IX	Exception Methods	Cos 6	
53	53	IX	Declaring Exceptions	Cos 6	
54	54	IX	Declaring Exceptions	Cos 6	
55	55	IX	Using Finally Statement	Cos 6	
56	56	IX	Errors and Runtime Exceptions	Cos 6	
57	57	IX	REVISION	Cos 6	
58	58	IX	REVISION	Cos 6	
59	59	IX	ASSIGNMENT-9	Cos 6	
60	60	IX	CLASS TEST-1CLASS TEST-9	Cos 6	

Faculty Name

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PLOT NO. 1288, MAHATAPALLA, BAJAPUR, KHURDA,PIN-752060	
Session: 2023-2024	
Course Name: DIPLOMA	Branch Name: COMPUTER SCIENCE
Subject Name: TH 1 : Computer System Architecture	Theory/Practical: Theory
Section: A	Teacher Name: BIJAYA KUMAR ROUT
Semester: 3	

Credit '4' External Evaluation(Marked) '' Internal Evaluation(Marked) ''

Text Books:

Sl.No	Text Books
1	Computer System Architecture BY Moris Mano

Reference books:

Sl.No	Reference books
1	Computer Architecture and Organisation BY Er. Rajeev Chopra

Course Outcomes:

Sl.No	Course Outcomes
1	Understand the basic structure of a computer with instructions
2	Learn about machine instructions and program execution.
3	Learn about the internal functional units of a processor and how they are interconnected
4	Understand how I/O transfer is performed
5	Learn about basic memory circuit, organization and secondary storage.
6	Understand concept of parallel processing.

SL No.	Lecture No.	Module/Unit No.	Topic To Be Taught	Cos	Reference Material Links
1	1	I	Basic Structure of computer hardware	Cos 1	
2	2	I	Functional Units	Cos 1	
3	3	I	Computer components	Cos 1	
4	4	I	Performance measures	Cos 1	
5	5	I	Memory addressing & Operations	Cos 1	
6	6	I	REVISION	Cos 1	
7	7	I	ASSIGNMENT-1	Cos 1	
8	8	I	CLASS TEST-1	Cos 1	
9	9	II	Operands	Cos 2	
10	10	II	Op Codes	Cos 2	
11	11	II	Instruction formats	Cos 2	
12	12	II	Addressing Modes	Cos 2	
13	13	II	REVISION	Cos 2	
14	14	II	ASSIGNMENT-2	Cos 2	
15	15	II	CLASS TEST-2	Cos 2	
16	16	III	Register Files	Cos 3	
17	17	III	Complete instruction execution	Cos 3	
18	18	III	Hardware control	Cos 3	
19	19	III	Micro program control	Cos 3	
20	20	III	REVISION	Cos 3	
21	21	III	ASSIGNMENT-3	Cos 3	
22	22	III	CLASS TEST-3	Cos 3	
23	23	IV	Memory characteristics	Cos 4	
24	24	IV	Memory hierarchy	Cos 4	
25	25	IV	RAM and ROM organization	Cos 4	
26	26	IV	Interleaved Memory	Cos 4	
27	27	IV	Cache memory	Cos 4	
28	28	IV	Virtual memory	Cos 4	
29	29	IV	REVISION	Cos 4	
30	30	IV	ASSIGNMENT-4	Cos 4	

31	31	IV	CLASS TEST-4	Cos 4	
32	32	V	Input - Output Interface	Cos 5	
33	33	V	Modes of Data transfer	Cos 5	
34	34	V	Programmed I/O Transfer	Cos 5	
35	35	V	Interrupt driven I/O	Cos 5	
36	36	V	DMA	Cos 5	
37	37	V	REVISION	Cos 5	
38	38	V	ASSIGNMENT-5	Cos 5	
39	39	V	CLASS TEST-5	Cos 5	
40	40	VI	Bus and System Bus	Cos 6	
41	41	VI	Types of System Bus	Cos 6	
42	42	VI	Data	Cos 6	
43	43	VI	Address	Cos 6	
44	44	VI	Control	Cos 6	
45	45	VI	Bus Structure	Cos 6	
46	46	VI	Basic Parameters of Bus design	Cos 6	
47	47	VI	SCSI	Cos 6	
48	48	VI	USB	Cos 6	
49	49	VI	REVISION	Cos 6	
50	50	VI	ASSIGNMENT-6	Cos 6	
51	51	VI	CLASS TEST-6	Cos 6	
52	52	VII	Parallel Processing	Cos 6	
53	53	VII	Parallel Processing	Cos 6	
54	54	VII	Multiprocessor	Cos 6	
55	55	VII	Flynnâ€Ys Classification	Cos 6	
56	56	VII	Flynnâ€Ys Classification	Cos 6	
57	57	VII	REVISION	Cos 6	
58	58	VII	REVISION	Cos 6	
59	59	VII	ASSIGNMENT-7	Cos 6	
60	60	VII	CLASS TEST-7	Cos 6	

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