



AMBEDKAR COLLEGE OF ARTS & SCIENCE, WANDOOR
 (Aided by Govt. of Kerala & Affiliated to University of Calicut)
 Wandoor (PO), Pin 679328, Ph: 04931-249666
acaswandoor@gmail.com, Website: www.ambedkarcollegewdr.in

COURSE PLAN

Course code and title	CSC4C04- DATA STRUCTURE USING C		
Class	BSC MATHEMATICS	Semester	FOUR
Regulation	2019	Academic year	2024-25
Course prerequisites	Background of the basic science at +2 level		
Course objectives	To introduce the concept of data structures		
	To make the students aware of various data structures		
	To equip the students implement fundamental datastructures		

COURSE OUTCOMES

At the end of the course the student would be able to...

CO1	Understand and describe fundamental data structures.
CO2	Apply C programming constructs to implement data structures.
CO3	Analyze the efficiency of data structure operations.
CO4	Evaluate arithmetic approaches for data structure manipulation.
CO5	Create and develop advanced data structure applications using C.

MAPPING OF PROGRAM OUTCOMES

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	✓							✓		
CO2	✓		✓	✓	✓		✓	✓		
CO3					✓			✓		
CO4			✓	✓	✓		✓	✓		
CO5			✓	✓	✓		✓	✓		



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PO1	Knowledge Acquisition	PO6	Ethics & Social Responsibility
PO2	Communication & Leadership	PO7	Research, Innovation & Entrepreneurship
PO3	Professional Skills	PO8	Lifelong Learning
PO4	Digital Intelligence	PO9	Global Perspective
PO5	Scientific awareness & Critical Thinking	PO10	Democratic Co-existence

PROGRAM SPECIFIC OUTCOMES

PSO1	Understand the theoretical and mathematical foundations of Computer Science
PSO2	Understand the concepts of system architecture, hardware, software and network configuration
PSO3	Acquire logical thinking and problem-solving skills to find solutions in the software domain
PSO4	Design, analyze and develop code-based solutions for the algorithms
PSO5	Address the industry demands and assimilate technical, logical and ethical skills needed for the industry
PSO6	Adapt to emerging trends and tackle the challenges in the software field.

MAPPING OF COURSE OUTCOMES TO PROGRAM EDUCATIONAL OUTCOMES

PROGRAM EDUCATIONAL OUTCOMES	COURSE OUTCOMES				
	CO1	CO2	CO3	CO4	CO5
PEO1: Development of Leadership Qualities. Graduates will demonstrate Leadership qualities by utilizing their full intellectual potential, engaging with their communities, and contributing to the social, cultural, and economic development of society.		✓		✓	✓
PEO2: Lifelong Learning and Societal Contribution. Graduates will be equipped with core values and intellectual capabilities enabling them to pursue lifelong learning and				✓	✓



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meaningfully contribute to societal well-being through innovative thinking and service.					
PEO3: Entrepreneurial and Global Competence. Graduates will possess entrepreneurial skills and a global perspective, promoting sustainable national growth through ethical leadership, innovative ventures, and responsible citizenship.					
TEXT BOOKS: 1. Seymour Lipschutz, "Data Structures", Tata McGraw Hill Publishing Company Limited, Schaum's Outlines, New Delhi. 2. Yedidyan Langsam, Moshe J. Augenstein, and Aaron M. Tenenbaum, "Data Structures Using C", Pearson Education, New Delhi. 3. Horowitz and Sahani, "Fundamentals of Data Structures", Galgotia Publication Pvt. Ltd., New Delhi.					
REFERENCES: 1. Trembley, J.P. And Sorenson P.G., "An Introduction to Data Structures With Applications", McGraw-Hill International Student Edition, New York 2. Mark Allen Weiss, "Data Structures and Algorithm Analysis in C", Addison-Wesley, (An Imprint of Pearson Education), Mexico City. Yashvant Kanetkar, Let us C, BPB publications					
e-learning resources	https://www.geeksforgeeks.org/data-structure/				
Mode of Evaluation	Internal Examination (20%) End Semester Examination (80%)				
Faculty	Jasmine MT , Assistant Professor/ Department of Computer Science				
e-mail id	Jasminefasil123@gmail.com				



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COURSE PLAN-CSC4C04- DATA STRUCTURE USING C

No of lecture hours	Planned Date	Topics to be covered	Reference/ Teaching aids and methods	Actual date	Weekly review
MODULE I - Primitive Data types and Abstract Data Types(ADT)					
1	09-12-2024	Primitive Data types	WB / T	01-01-25	
2	10-12-2024	Abstract Data Types(ADT)	WB / T	01-01-25	
3	11-12-2024	Introduction to data structures	WB / T	06-01-25	
4	12-12-2024	definition	WB / T	06-01-25	
5	13-12-2024	characteristics of data structures	WB / T	07-01-25	
6	16-12-2024	categories of data structures	WB / T	08-01-25	
7	17-12-2024	categories of data structures	WB / T	09-01-25	
8	18-12-2024	algorithm	WB / T	10-01-25	
9	19-12-2024	algorithm	WB / T	10-01-25	
10	30-12-2024	space complexity	WB / T	20-01-25	
11	31-12-2024	time complexity of an algorithm	WB / T	21-01-25	
Planned hours	Actual hours	Date	Sign of Faculty	Review by HoD	Review by Principal
11	11	01-01-25			
MODULE II - Arrays and Singly Linked Lists					
12	01-01-2025	Arrays	PPT / WB	22-01-25	
13	03-01-2025	One dimensional array	PPT / WB	22-01-25	
14	06-01-2025	Two dimensional array	PPT / WB	23-01-25	
15	08-01-2025	Multi dimensional array	PPT / WB	23-01-25	
16	10-01-2025	Operations on arrays	WB / T	24-01-25	
17	13-01-2025	Operations on arrays	WB / T	25-01-25	
18	15-01-2025	Sparse matrix Representation	WB / T	29-01-25	
Planned hours	Actual hours	Date	Sign of Faculty	Review by HoD	Review by Principal
7	7	29-01-25			
MODULE III - Lists					
19	17-01-2025	Linked List	WB / T	30-01-25	
20	20-01-2025	Definition	WB / T	30-01-25	
21	22-01-2025	Creation	WB / T	31-01-25	
22	24-01-2025	Operations	WB / T	3-02-25	
23	27-01-2025	Operations	T / WB	5-02-25	
24	29-01-2025	Operations	T / WB	7-02-25	



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25	31-01-2025	Basics of Doubly Linked List			T/Wg	10-2-24	
26	03-02-2025	Basics of Doubly Linked List			T/Wg	12-2-24	
27	05-02-2025	Circular Linked List			T/Wg	14-2-24	
Planned hours	Actual hours	Date	Sign of Faculty	Review by HoD	Review by Principal		
9	9	14-2-24	<i>[Signature]</i>	<i>[Signature]</i>	Asst. Professor In charge of Principal Ambedkar College of Arts & Science Wandoor		

MODULE IV - Stack and Queues

28	07-02-2025	Definition and Operations on stack			PPT/Wg	17-2-24	
29	10-02-2025	Implementation of Stack using arrays			PPT/Wg	19-2-24	
30	12-02-2025	Implementation of Stack using linked lists			PPT/Wg	21-2-24	
31	14-02-2025	Applications of Stacks			PPT	24-2-24	
32	17-02-2025	Polynomial Addition			Wg/T	25-2-24	
33	19-02-2025	Definition of queue			Wg/T	25-2-24	
34	21-02-2025	Implementations of queue using arrays			Wg/T	28-2-24	
35	24-02-2025	Implementations of queue using linked lists			Wg/T	3-3-24	
36	28-02-2025	basics of Circular queue			Wg/T	5-3-24	
37	03-03-2025	Deque			Wg/T	5-3-24	
38	05-03-2025	Applications of queues			PPT	7-3-24	
Planned hours	Actual hours	Date	Sign of Faculty	Review by HoD	Review by Principal		
11	11	7-3-24	<i>[Signature]</i>	<i>[Signature]</i>	Asst. Professor In charge of Principal Ambedkar College of Arts & Science Wandoor		

MODULE V - Searching and Sorting

39	07-03-2025	Searching			PPT/T	10-3-24	
40	10-03-2025	Linear search			PPT/Wg	10-3-24	
41	12-03-2025	Binary search			PPT/Wg	12-3-24	
42	14-03-2025	Sorting, Linear sort			PPT/Wg	14-3-24	
43	17-03-2025	Bubble sort			PPT/Wg	17-3-24	
44	19-03-2025	Selection sort			Wg/T	18-3-24	
45	21-03-2025	Insertion sort			Wg/T	20-3-24	
46	24-03-2025	Quick sort			Wg/T	20-3-24	
47	26-03-2025	Merge sort			Wg/T	24-3-24	
48	28-03-2025	Comparisons and implementations			Wg/T	26-3-24	
Planned hours	Actual hours	Date	Sign of Faculty	Review by HoD	Review by Principal		
10	10	26-3-24	<i>[Signature]</i>	<i>[Signature]</i>	Asst. Professor In charge of Principal Ambedkar College of Arts & Science Wandoor		

FACULTY

[Signature]

HOD

[Signature]
SHARSHAD AMEERU
Asst. Professor
Department of Mathematics
Ambedkar College of Arts & Science
Wandoor, Malappuram Dt.

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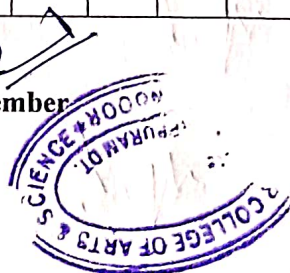
Course outcome –Program outcome Mapping Table

CSC4C04- DATA STRUCTURE USING C		Cognitive level	Program outcomes 1- Low Correlation 2- Moderate Correlation 3- High Correlation									
			PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
			DIRECT METHOD									
CO1	Understand and describe fundamental data structures.	Rememb er	3							2		
CO2	Apply C programming constructs to implement data structures.	Apply	3		2	2	3		1	1		
CO3	Analyze the efficiency of data structure operations.	Apply & Analyze					3			1		
CO4	Evaluate arithmetic approaches for data structure manipulation.	Create			1	3	2		1	1		
CO5	Create and develop advanced data structure applications using C.	Innovate			3	3	3		2	1		
INDIRECT METHOD												
Class Room contests		Analyze & Create	1		3	3	2		1			

Course Faculty

IQAC Member

HoD



SHARSHAD AMEERAJU
 Asst. Professor & Head
 Department of Mathematics
 Ambedkar College of Arts & Science
 Wandoor, Malappuram Dt.



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COURSE PRE-ANALYSIS

Dear Students,

Welcome back to class, I would like to thank all of you for sparing your time in filling up this Course Pre-Analysis survey for the effective conduct of Computer Aided Design and Manufacturing Course. As you know that this survey is meant for knowing the knowledge level of the students with respect to this course, please fill it very carefully. At this juncture, I am glad to welcome the suggestions from you all (if any).

Rate your prior knowledge about the topics mentioned below

Course Outcomes	Description	Rate your prior knowledge about the topics			
		Excellent (4)	Good (3)	Moderate (2)	Fair (1)
CO1	Understand and describe fundamental data structures.				✓
CO2	Apply C programming constructs to implement data structures.				✓
CO3	Analyze the efficiency of data structure operations.				✓
CO4	Evaluate arithmetic approaches for data structure manipulation.				✓
CO5	Create and develop advanced data structure applications using C.				✓

Name of the student:

Hanana. K

Signature of the student

Hanana



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Syllabus

Unit I [11 T+6L]

Primitive Data types and Abstract Data Types(ADT) - Introduction to data structures – definition - characteristics of data structures - categories of data structures – algorithm - space complexity and time complexity of an algorithm (concept only).

Unit II [7 T+6L]

Arrays and Singly Linked Lists - 1D, 2D and Multi-dimensional arrays – operations on arrays - Sparse matrix Representation

Unit III [9 T+7L]

Lists- Linked List- Definition –Creation- Operations, Basics of Doubly Linked List, Circular Linked List.

Unit IV [11 T+7L]

Stack and Queues – Definition and Operations on stack - Implementation of Stack using arrays and linked lists - Applications of Stacks - Polynomial Addition Queues – Definition, Implementations of queue using arrays and linked lists – basics of Circular queue, Dequeue - Applications of queues.

Unit V [10 T+7L]

Searching and Sorting: Searching: Linear search & Binary search. Sorting – Linear sort - Bubble sort - Selection sort - Insertion sort - Quick sort - Merge sort – Comparisons and implementations.

Text books:

1. Seymour Lipschutz, "Data Structures", Tata McGraw Hill Publishing Company Limited, Schaum's Outlines, New Delhi.
2. Yedidyan Langsam, Moshe J. Augenstein, and Aaron M. Tenenbaum, "Data Structures Using C", Pearson Education, New Delhi.
3. Horowitz and Sahani, "Fundamentals of data Structures", Galgotia Publication Pvt. Ltd., New Delhi.

Reference books:

1. Trembley, J.P. And Sorenson P.G., "An Introduction to Data Structures With Applications", McGraw- Hill International Student Edition, New York.
2. Mark Allen Weiss, "Data Structures and Algorithm Analysis in C", Addison- Wesley, (An Imprint of Pearson Education), Mexico City.

HOD


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PRINCIPAL


Asst. Professor
in charge of Science
Ambedkar College of Arts & Science
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Course outcome –Program Specific outcome Mapping Table

Course outcomes	Program Specific outcomes					
	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	✓		✓		✓	
CO2	✓		✓	✓	✓	
CO3			✓	✓		
CO4	✓		✓	✓	✓	✓
CO5	✓		✓	✓	✓	✓

Course Faculty

IQAC Member



HoD

SHARSHAD AMEERA.U
Asst. Professor & Head
Department of Mathematics
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DIRECT ASSESSMENT OF COURSE OUTCOMES

INTERNAL ASSESSMENT TEST - 30 MARKS				
Objective	To Identify What Students Have Learned and also to identify students strength and weakness			
To file	Answer scripts	Frequency	1 time in a semester on dates specified by University	
Format	.			
Evaluation	Based on answer given in the scripts			
ASSIGNMENT: 3MARKS				
Objective	To enhance students understanding of a complex structural problems			
Product	Hand written assignment sheets			
Frequency	Semester			
Format	-			
Evaluation	Based on rubrics			
Criteria	No. of assignments: 1 Submit on or before the date of submission			
END SEMESTER EXAMINATION 100 MARKS (Reduced to 75Marks)				
Objective	To assess the each student's knowledge of the course			
Product	Result analysis			
Frequency	Semester			
Format	Part –A 12x 3=24 marks, Part –B 5 x 7 = 25 marks 10 x 1=10, Total marks = 60, Duration : 2 hours			
Evaluation	Based on answer given in the scripts			
Marks out of 100	0-50 (22-37)	51-70 (38- 52)	71-100 (53-75)	0-50 (0-37)
Levels of attainment	1	2	3	Counseling / Coaching classes.



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COURSE EXIT SURVEY

Dear Students,

We are seeking valuable feedback from you, to improve upon the course contents, coverage, methods of instruction and teaching learning methods of the course you have learned for the semester; kindly rate the process of delivering the syllabus from 1 – 5 scale (5 Excellent, 4-Very good, 3-Good 2-Average, 1-Below average)

Name		Hannu . K		Reg No		VFAXSM1026	
Course Code		CSC4C04		Name of Course		DATA STRUCTURE USING C	
Dept		MATHEMATICS		Semester		IV	
				Date		27-3-25	
Sl No	Questioners	1	2	3	4	5	
1.	Quality of the Course content				✓		
2.	Suitability of Contents beyond syllabus topics				✓		
3.	Relevance of the text& Reference books suggested			✓			
4.	Support of Library for the Course contents				✓		
5.	Course delivery methods by teacher			✓	-		
6.	Use of ICT tools in class				✓		
7.	Relevance of Syllabus topics for your placement			✓			
8.	Usefulness of the topics for life			✓	✓		
9.	Content stimulates intellectually				✓		
10.	Fairness of the internal evaluation system				✓		
11.	Assignments, competitive evaluation methods				✓		
12.	Topics covered supported by online resources & LMS				✓		
I am able to achieve the following (Relating to Course outcomes)							
CO1	Understand and describe fundamental data structures.			✓			
CO2	Apply C programming constructs to implement data structures.				✓		
CO3	Analyze the efficiency of data structure operations.				✓		
CO4	Evaluate arithmetic approaches for data structure manipulation.				✓		

Signature of the Student
Hannu

Class Advisor
Hannu

HoD
Ameera
SHARSHAD AMEERA.U
Asst. Professor & Head
Department of Mathematics
Ambedkar College of Arts & Science
Wandoor, Malappuram Dt.

CO5	Create and develop advanced data structure applications using C.					
<i>Inclusions</i>		<i>Suggestions for</i>				
		<i>Deletion of topics</i>				

Signature of the Student

Hani

Class Advisor

HoD

Amey

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Wandoor, Malappuram Dt.

Attainment Levels of COs

Course Name: CSC4C04- DATA STRUCTURE USING C				
Assessment Methods	Target-Attainment Levels			Attainment
	Level 1	50% of students scoring more than 35% marks in internal assessment tools		
	Level 2	60% of students scoring more than 35% marks in internal assessment tools		
	Level 3	70% of students scoring more than 35% marks in internal assessment tools		
LEVEL 03				
Assessment Methods	Target-Attainment Levels			Attainment
	Level 1	50% of students scoring more than 35% marks in UE assessment tools		
	Level 2	60% of students scoring more than 35% marks in UE assessment tools		
	Level 3	70% of students scoring more than 35% marks in UE assessment tools		
LEVEL 03				



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DEPARTMENT OF MATHEMATICS
CO ATTAINMENT - IA TEST MARKS (EVEN SEM. 2024-2025)

Semester: IV

Course: CSC4C04- DATA STRUCTURE USING C

Name of the faculty member: JASMINE MT

Sl. No.	Name of the student	REG NO	IA TEST	COURSE OUTCOMES	
			Q1 TO Q14	IA TEST	
			CO1 TO CO5	CO1 TO CO5	
		Max. Marks	30	%age	Y/N
1	ANEENA.K.P	UFAXSMT001	30	100	Y
2	ASNA SHERIN V T	UFAXSMT002	30	100	Y
3	AYISHA HANNA C K	UFAXSMT003	28	93	Y
4	FATHIMA FIDHA K	UFAXSMT004	27	90	Y
5	FATHIMA MINNATH K	UFAXSMT005	30	100	Y
6	FATHIMA NASNA V T.	UFAXSMT006	9	30	N
7	FATHIMA SHIFA. M.K	UFAXSMT007	29	97	Y
8	FATHIMA THAMJEEDA	UFAXSMT008	30	100	Y
9	FIDA PK	UFAXSMT009	26	87	Y
10	FIDHA V	UFAXSMT010	28	93	Y
11	HAFLA. T. K	UFAXSMT011	26	87	Y
12	MUFEEDA SHIFA. M.P	UFAXSMT012	26	87	Y
13	NUBLA SHANA . P	UFAXSMT013	27	90	Y
14	RABEEBA K P	UFAXSMT014	28	93	Y
15	RASHA JALEEL P	UFAXSMT015	27	90	Y
16	RISHWANA E K	UFAXSMT016	29	97	Y
17	ABOBACKER NAFIH T T	UFAXSMT017	21	70	Y
18	JAMSHEEDALI.C.P	UFAXSMT018	30	100	Y
19	MOHAMMED AMALSHAN T	UFAXSMT019	9	30	N
20	MUHAMMAD RISHWAN K	UFAXSMT020	26	87	Y
21	MUHAMMED ANSHIF . T	UFAXSMT021	23	77	Y
22	MUHAMMED SHAHID.V	UFAXSMT022	27	90	Y
23	ANAYA UP	UFAXSMT023	27	90	Y
24	ANJIMA SHAJI	UFAXSMT024	27	90	Y
25	ARYA VS	UFAXSMT025	30	100	Y



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DEPARTMENT OF MATHEMATICS

DEPARTMENT OF MATHEMATICS					
26	HANEENA K	UFAXSMT026	29	97	Y
27	KRISHNENDHU K	UFAXSMT027	26	87	Y
28	RIYA . P	UFAXSMT028	27	90	Y
29	SWATHIKRISHNA A K	UFAXSMT029	26	87	Y
30	SHAMSIYA PARWEEN	UFAXSMT032	22	73	Y
31	BISLA.KT		28	93	Y
				28	
				90.32	
				FOR LAL (CSC4C04)	
				CO1 to CO5	
TARGET: 50% OF STUDENTS WILL SCORE 35% OF MARKS			90.3		



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DEPARTMENT OF MATHEMATICS

CO ATTAINMENT - ASSIGNMENT(EVEN SEM. 2024-2025)

Semester: IV

Course: CSC4C04 DATA STRUCTURE USING C

Name of the faculty member: JASMINE MT

Sl. No.	Name of the student	REG NO	Max. Marks	ASSIGNMENT CO1 to CO5	SEMINAR CO1 to CO5	ATTENDANCE	COURSE OUTCOMES				ATTENDANCE	
							CO1 - 5	CO1 - 5	CO1 - 5	CO1 - 5	%age	Y/N
1	ANEENA K.P	UFAXSMT001		3	3	3	%age	Y/N	%age	Y/N	%age	Y/N
2	ASNA SHERIN V T	UFAXSMT002		3	3	3	100	Y	100	Y	100	Y
3	AYISHA HANNA C K	UFAXSMT003		3	3	3	100	Y	100	Y	100	Y
4	FATHIMA FIDHA K	UFAXSMT004		3	3	3	100	Y	100	Y	100	Y
5	FATHIMA MINNATH K	UFAXSMT005		3	3	3	100	Y	100	Y	100	Y
6	FATHIMA NASNA V T.	UFAXSMT006		3	3	3	100	Y	100	Y	100	Y
7	FATHIMA SHIFA. M.K	UFAXSMT007		3	3	3	100	Y	100	Y	100	Y
8	FATHIMA THAMJEEDA	UFAXSMT008		3	3	3	100	Y	100	Y	100	Y
9	FIDA PK	UFAXSMT009		3	3	2	100	Y	100	Y	66.6667	Y
10	FIDHA V	UFAXSMT010		3	3	3	100	Y	100	Y	100	Y
11	HAFLA. T. K	UFAXSMT011		3	3	3	100	Y	100	Y	100	Y
12	MUFEEDA SHIFA. M.P	UFAXSMT012		3	3	2	100	Y	100	Y	66.6667	Y
13	NUBLA SHANA . P	UFAXSMT013		3	3	3	100	Y	100	Y	100	Y
14	RABEEBA K P	UFAXSMT014		3	3	3	100	Y	100	Y	100	Y
15	RASHA JALEEL P	UFAXSMT015		3	3	3	100	Y	100	Y	100	Y
16	RISHWANA E K	UFAXSMT016		3	3	3	100	Y	100	Y	100	Y

17	ABOBACKER NAFIH T T	UFAXSMT017	3	3	2	100	Y	100	Y	66.6667	Y
18	JAMSHEEDALI C.P	UFAXSMT018	3	3	3	100	Y	100	Y	100	Y
19	MOHAMMED AMALSHAN T	UFAXSMT019	3	3	2	100	Y	100	Y	66.6667	Y
20	MUHAMMAD RISHWAN K	UFAXSMT020	3	3	2	100	Y	100	Y	66.6667	Y
21	MUHAMMED ANSHIF . T	UFAXSMT021	3	3	2	100	Y	100	Y	66.6667	Y
22	MUHAMMED SHAHID.V	UFAXSMT022	3	3	3	100	Y	100	Y	100	Y
23	ANAYA U P	UFAXSMT023	3	3	3	100	Y	100	Y	100	Y
24	ANJIMA SHAJI	UFAXSMT024	3	3	3	100	Y	100	Y	100	Y
25	ARYA VS	UFAXSMT025	3	3	3	100	Y	100	Y	100	Y
26	HANEENA K	UFAXSMT026	3	3	3	100	Y	100	Y	100	Y
27	KRISHNENDHU K	UFAXSMT027	3	3	3	100	Y	100	Y	100	Y
28	RIYA . P	UFAXSMT028	3	3	3	100	Y	100	Y	100	Y
29	SWATHIKRISHNA A K	UFAXSMT029	3	3	3	100	Y	100	Y	100	Y
30	SHAMSIYA PARWEEN	UFAXSMT032	3	3	3	100	Y	100	Y	100	Y
31	BISLA.KT		3	3	3	100	Y	100	Y	100	Y
						31	31	100.00	100.00	100.00	
											31
											100.00

FOR LAL (CSC4C04)	CO1 TO 3	CO4 TO 5	ATTENDANCE
	100.00	100.00	100.00

TARGET: 1) 90% OF STUDENTS WILL SCORE 35% OF MARKS IN ASSIGNMENT



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DEPARTMENT OF MATHEMATICS

DIRECT ASSESSMENT METHOD - CO ATTAINMENT (EVEN SEM . 2024-2025)

Semester: IV

Course: CSC4C04-DATA STRUCTURE USING C

Name of the faculty member: JASMINE MT

TARGET: 60% ATTAINMENT

COs	CO1 to CO5
IA MARKS ATTAINMENT	90
ASSIGNMENT	100
SEMINAR	100
ATTENDANCE	100
AVERAGE	98





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DEPARTMENT OF MATHEMATICS

COURSE EXIT SURVEY RESPONSES (EVEN SEM . 2023-2024)

Course: CSC4C04-DATA STRUCTURE USING C

Semester: IV

Name of the faculty member: JASMINE MT

Sl. No.	NAME OF THE STUDENT	REG NO	Are you able to understand and describe fundamental data structures.	Are you able to apply C programming constructs to implement data structures.	Are you able to analyze the efficiency of data structure operations.	Are you able to evaluate arithmetic structure manipulation.	Are you able to create and develop advanced data structure applications using C.
COURSE OUTCOMES							
			CO1	CO2	CO3	CO4	CO5
1	ANEENA K.P	UFAXSMT001	5 (EXCELLENT)	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	4 (Very Good)
2	ASNA SHERIN V T	UFAXSMT002	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	4 (Very Good)	4 (Very Good)
3	AYISHA HANNA C K	UFAXSMT003	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	5 (EXCELLENT)	4 (Very Good)
4	FATHIMA FIDHA K	UFAXSMT004	4 (Very Good)	4 (Very Good)	4 (Very Good)	4 (Very Good)	4 (Very Good)
5	FATHIMA MINNATH K	UFAXSMT005	5 (EXCELLENT)	5 (EXCELLENT)	5 (EXCELLENT)	5 (EXCELLENT)	5 (EXCELLENT)
6	FATHIMA NASNA V T.	UFAXSMT006	5 (EXCELLENT)	4 (Very Good)	4 (Very Good)	4 (Very Good)	4 (Very Good)
7	FATHIMA SHIFA. M.K	UFAXSMT007	5 (EXCELLENT)	5 (EXCELLENT)	5 (EXCELLENT)	5 (EXCELLENT)	5 (EXCELLENT)
8	FATHIMA THAMJEEDA	UFAXSMT008	5 (EXCELLENT)	4 (Very Good)	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)
9	FIDA PK	UFAXSMT009	5 (EXCELLENT)	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	5 (EXCELLENT)
10	FIDHA V	UFAXSMT010	4 (Very Good)	5 (EXCELLENT)	4 (Very Good)	4 (Very Good)	4 (Very Good)
11	HAFLA. T. K	UFAXSMT011	5 (EXCELLENT)	4 (Very Good)	5 (EXCELLENT)	4 (Very Good)	4 (Very Good)
12	MUFEEDA SHIFA. M.P	UFAXSMT012	4 (Very Good)	4 (Very Good)	4 (Very Good)	4 (Very Good)	4 (Very Good)

13	NUBLA SHANA . P	UFAXSMT013	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	4 (Very Good)	4 (Very Good)
14	RABEEBA K.P	UFAXSMT014	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	5 (EXCELLENT)	5 (EXCELLENT)
15	RASHA JALEEL P	UFAXSMT015	4 (Very Good)	5 (EXCELLENT)	4 (Very Good)	4 (Very Good)	4 (Very Good)
16	RISHWANA E K	UFAXSMT016	5 (EXCELLENT)	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	5 (EXCELLENT)
17	ABOBACKER NAFIH T T	UFAXSMT017	4 (Very Good)	4 (Very Good)	3 (Good)	3 (Good)	3 (Good)
18	JAMSHEEDALI C.P	UFAXSMT018	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	5 (EXCELLENT)	5 (EXCELLENT)
19	MOHAMMED AMALSHAN T	UFAXSMT019	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	3 (Good)	4 (Very Good)
20	MUHAMMAD RISHWAN K	UFAXSMT020	3 (Good)	2 (Very Fair)	3 (Good)	3 (Good)	3 (Good)
21	MUHAMMED ANSHIF . T	UFAXSMT021	5 (EXCELLENT)	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	4 (Very Good)
22	MUHAMMED SHAHID V	UFAXSMT022	5 (EXCELLENT)	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	4 (Very Good)
23	ANAYA U P	UFAXSMT023	4 (Very Good)	4 (Very Good)	4 (Very Good)	5 (EXCELLENT)	4 (Very Good)
24	ANJUMA SHAJI	UFAXSMT024	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	4 (Very Good)	4 (Very Good)
25	ARYA VS	UFAXSMT025	4 (Very Good)	4 (Very Good)	4 (Very Good)	4 (Very Good)	5 (EXCELLENT)
26	HANEENA K	UFAXSMT026	5 (EXCELLENT)	5 (EXCELLENT)	4 (Very Good)	5 (EXCELLENT)	4 (Very Good)
27	KRISHNENDHU K	UFAXSMT027	4 (Very Good)	4 (Very Good)	4 (Very Good)	3 (Good)	2 (Very Fair)
28	RIYA . P	UFAXSMT028	5 (EXCELLENT)	4 (Very Good)	4 (Very Good)	4 (Very Good)	5 (EXCELLENT)
29	SWATHIKRISHNA A K	UFAXSMT029	5 (EXCELLENT)	4 (Very Good)	4 (Very Good)	4 (Very Good)	3 (Good)
30	SHAMSIYA PARWEEN	UFAXSMT032	4 (Very Good)	4 (Very Good)	4 (Very Good)	3 (Good)	3 (Good)
31	BISLA.KT		4 (Very Good)	4 (Very Good)	4 (Very Good)	4 (Very Good)	3 (Good)
		No. of graded "0"	0	0	0	0	0
		No. of graded "1"	0	0	0	0	0
		No. of graded "2"	0	1	0	0	0
		No. of graded "3"	1	0	2	1	2
		No. of graded "4"	10	14	20	18	17
		No. of graded "5"	20	16	9	8	8



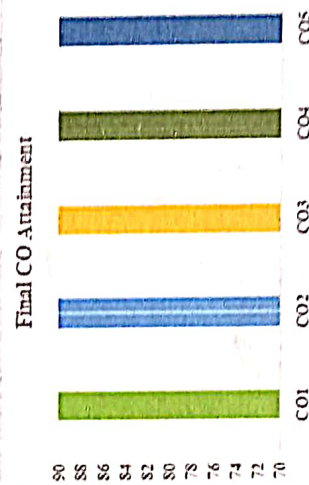
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DEPARTMENT OF MATHEMATICS

COURSE EXIT SURVEY RESPONSES (EVEN SEM., 2024-2025)

Semester: IV		Course: CSC404-DATA STRUCTURE USING C									
Name of the faculty member: JASMIN MT											
CO No.	CO description	Course Exit Survey Questions					No. of students given the ratings				
		0	1	2	3	4	5	Total Responses	Weighted Average	CC Max. Count	%age CO attainment
CO1	Understand and describe fundamental data structures.	0	0	0	1	10	20	31	3.76	5	75.25
CO2	Apply C programming constructs to implement data structures.	0	0	1	0	14	15	31	3.55	5	72.63
CO3	Analyze the efficiency of data structure operations.	0	0	0	2	20	9	31	3.45	5	53.95
CO4	Evaluate arithmetic approaches for data structure manipulation.	0	0	0	1	18	6	27	3.03	5	50.53
CO5	Create and develop advanced data structure applications using C.	0	0	0	2	17	8	27	3.00	5	50.00

CO Assessment method	CO1	CO2	CO3	CO4	CO5
Direct method (IA Test, Assignment/quiz)	98	98	98	98	98
Weightage (80%)	78	78	78	78	78
Indirect method (Course Exit Survey)	75.25	72.63	68.95	60.53	60.00
Weightage (20%)	15.05	14.53	13.79	12.11	12.00
Final CO Attainment	93.12	92.59	91.85	90.17	90.06





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DEPARTMENT OF MATHEMATICS

CO-PO-PSO MAPPING (EVEN SEM . 2023-2024)

Semester: IV

Name of the faculty member: JASMINE MT

Course: CSC4C04-DATA STRUCTURE USING C

(I) CO Attainment

A: Direct assessment (80%)-Tests, Assignment, Examination

B: Indirect assessment (20%)-Course end survey

COs	Mapping of POs	Mapping of PSOs	Direct Assessment		Indirect Assessment	Overall Attainment 0.8 (a) + 0.2(b)	Target (%)	Attainment
			(a)	(b)				
CO1	PO1 & PO8	PSO1 , PSO3 & PSO5	98	75.26		93		
CO2	PO1, PO3, PO4, PO5, PO7 & PO8	PSO1 , PSO3, PSO4 & PSO5	98	72.63		93		
CO3	PO5 & PO8	PSO3 & PSO4	98	68.95		92	75	YES
CO4	PO3, PO4 , PO5, PO7 & PO8	PSO1, PSO3 , PSO4, PSO5 & PSO6	98	60.53		90		
CO5	PO3, PO4 , PO5, PO7 & PO8	PSO1 , PSO3, PSO4, PSO5 & PSO6	98	60.00		90		

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HOD

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