

DEPARTMENT OF COMPUTER APPLICATIONS I Semester MCA (2024-2026 batch)

20MCA135 Data Structures Lab

Schedule of Lab Work

Sl.No	Name of Experiment	Planned Date
1	C Programs- Structure- Set 1 [CO 1]- Write these programs in the Observation	
1.1	Define structure Employee to store the information about an employee with the following attributes. • Empid (integer) • Empname (string) • Age (integer) • Salary (float) Write a C program to access the structure element using pointers. (Accessing the structure members using indirection operator)	
1.2	Define a structure named Book to store information about books with the following attributes. • Title (string) • Author (string) • ISBN (string) • Year of publication (integer) Write a C program to access the structure element using pointers. (Access structure members using Membership Operator	-07.10.2024
1.3	Create a structure with name, age and weight of a person. and do the following a) Input n number of persons details using dynamic memory allocation b) Display the n number of persons details.	
2	Dynamic Memory Allocation- Set 2 [CO 1]- Write these programs in the Ob Book	servation
2.1	Write a C program to insert n integer elements and print the elements using malloc() function	08.10.2024
2.2	Write a C program using malloc(), calloc(), realloc() and free() functions	08.10.2024
2.3	Write a C program for create a singly linked list with 5 nodes	09.10.2024
3	About the compiler- Set 3 [CO 1]- Fair record Questions- Prepare the fair record	
3.1	Advanced use of gcc Write a C program 'sum.c' to add two numbers. Read the input from Standard Input and write output to Standard output. Compile and generate output using gcc	09.10.2024

	command and its important options-o, -c, -D, -l, -I, -g, -O, -savetemps,-pg	
3.2	Familiarisation with gdb	09.10.2024
	Write a C program 'mul.c' to multipy two numbers. Read the input from Standard	
	Input and write output to Standard output. Compile and generate mul.out which is	
	then debug with gdb and use the important commands break, run, next, print,	
	display, help	
4	About the compiler- Set 4 [CO 1]- Fair record Questions -Prepare the fair	record
4.1	Using gprof	10.10.2024
	Write a program for finding the sum of two numbers using function. Then profile	
	the executable with gprof.	
4.2	Write a C program to find the sum of two numbers using different types of	10.10.2024
	functions.	
	a) Function with argument and return type	
	b) Function with argument and no return type	
	c) Function without argument and return type	
	d) Function without argument and no return type	
	This program should have menu driven options.	

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