Introduction to the Lab

1.1 Lab Objective

This course aims to develop the understanding of concepts and algorithms of computer graphics using C Programming. Also, this helps in understanding the working of MAYA tool for 2D/3D objects and their transformation using MAYA tool.

1.2 Course Outcomes

On successful completion of this Course, students should be able to:

257.1. Understand the use of C Graphics Library for writing the programs.

257.2. Implantation of scan conversion algorithms using C Programming.

257.3. Implementing the concept of 2D/3D transformation,

257.4. Implementing the concept of World & View Coordinate System and Clipping Algorithms.

257.5. Understand the object modeling and transformation using MAYA tool.

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Exp. no	Experiment Name	Date of performance	Date of checking	Marks	Signature
1.	a) Study and prepare list of Graphic functions. b) Write a C program to make a hut and car using built-in graphic function.	25 – 08 - 2020	30 – 08 - 2020	9	
2.	DDA Algorithm Write a C program to draw a line using DDA algorithm.	06 – 09 - 2020	07 – 09 - 2020	10	
3.	Bresenham's Algorithm Write a C program to draw a line using Bresenham's algorithm.	06 – 09 - 2020	11 – 09 - 2020	9	
4.	Midpoint Circle Generation Algorithm To implement midpoint circle generation algorithm or bresenham's circle algorithm for drawing a circle of given center (x, y) and radius r.	09 – 09 - 2020	11 – 09 - 2020	10	
5.	BRESENHAM'S CIRCLE DRAWING A LGORITHM Implementation of Bresenham's circle drawing algorithm.	15 – 09 - 2020	20 – 09 - 2020	10	
6A.	Write C Programs for the implementation of 2D transformations.	22 – 09 - 2020	03 – 10 - 2020	10	
6B.	Write C Programs for the implementation of 2D and 3D transformations.	29 – 09 - 2020	03 – 10 - 2020	10	
7.	Write a C program to demonstrate Cohen	27 – 10 - 2020	25 – 11 - 2020	10	

	Sutherland line clipping algorithm.				
8.	Write a C program to draw 4 point Bezier Curve.	27 – 10 - 2020	25 – 11 - 2020	10	
9.	Using Flash/Maya perform different operations (rotation, scaling, move etc.) on objects.	03 – 12 - 2020	03 – 12 - 2020	10	
10.	To bounce a ball using animation.	03 – 12 - 2020	03 – 12 - 2020	10	
Beyond Syllabus					
1.	Write a program to draw a car using inbuild graphics function and translate it from bottom left corner to right bottom corner of screen (Animation).	3 – 11 - 2020	24 – 11 - 2020	10	
2.	Write a program to rotate a circle (alternatively inside and outside) around the circumference of another circle (animation).	3 – 11 - 2020	24 – 11 - 2020	10	
3.	To Write a program in C to draw a Rainbow.	03 – 12 - 2020	03 – 12 - 2020	10	
4.	To Write a program in C to display a digital and analog clock displaying current time.	03 – 12 - 2020	03 – 12 - 2020	10	
5.	Created a program using C. A man walking in Rain.	03 – 12 - 2020	03 – 12 - 2020	10	