SHRI RAMSWAROOP MEMORIAL COLLEGE OF MANAGEMENT

BCA [SEM IV]

LAB ASSIGNMENT-1

Academic Session: 2022-23(Even)

BCA-406P: GRAPHICS AND MULTIMEDIA SYSTEM LAB

Experiment No.:1

CO1: DDA algorithms for line and circle and Bresenham's algorithms for circle and ellipse drawing.

Q.No.	Assignment Activities	BL
Q1	Write steps of DDA line drawing algorithm used in C.	4
Q2	Write a program in C to draw a 2D line using DDA algorithm.	4

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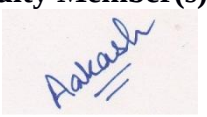
Mr. Aakash Srivastava 

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SHRI RAMSWAROOP MEMORIAL COLLEGE OF MANAGEMENT

BCA [SEM IV]

LAB ASSIGNMENT-2

Academic Session: 2022-23(Even)

BCA-406P: GRAPHICS AND MULTIMEDIA SYSTEM LAB

Experiment No.:2

CO1: DDA algorithms for line and circle and Bresenham's algorithms for circle and ellipse drawing.

Q. No.	Assignment Activities	BL
Q1	Write steps of Bresenham's line drawing algorithm used in C.	4
Q2	Write a program in C to draw a line using Bresenham's line drawing algorithm.	4

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BCA [SEM IV]

LAB ASSIGNMENT-3

Academic Session: 2022-23(Even)

BCA-406P: GRAPHICS AND MULTIMEDIA SYSTEM LAB

Experiment No.:3 **CO2:** Mid-Point Circle Algorithm Mid-Point Ellipse algorithm using C.

Q.No.	Assignment Activities	BL
Q1	Write the steps of midpoint circle drawing algorithm used in C.	4
Q2	Write a program in C to draw a circle on raster graphic display.	4
Q3	Write a program in C to draw a circle using midpoint circle drawing algorithm.	4

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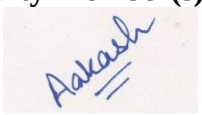
Mr. Aakash Srivastava 

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BCA [SEM IV]

LAB ASSIGNMENT-4

Academic Session: 2022-23(Even)

BCA-406P: GRAPHICS AND MULTIMEDIA SYSTEM LAB

Experiment No.:4

CO3: Understand the implementation of clipping, rotation, reflection, and shearing.

Q.No.	Assignment Activities	BL
Q1	Write a program in C to translate a triangle from origin to new location using translation matrix where translation factors tx and ty are given.	4
Q2	Write a program in C to scale a triangle from origin to new location using scaling matrix where scaling factors sx and sy are given.	4

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LAB ASSIGNMENT-5

Academic Session: 2022-23(Even)

BCA-406P: GRAPHICS AND MULTIMEDIA SYSTEM LAB

Experiment No.:5

CO3: Understand the implementation of clipping, rotation, reflection, and shearing.

Q.No.	Assignment Activities	BL
Q1	Write a program in C to apply 2D anti-clockwise rotation on a point about its origin.	4
Q2	Write a program in C to rotate an origin centered triangle in anti-clockwise direction using rotation matrix where angle of rotation is given.	4

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BCA [SEM IV]

LAB ASSIGNMENT-6

Academic Session: 2022-23(Even)

BCA-406P: GRAPHICS AND MULTIMEDIA SYSTEM LAB

Experiment No.:6

CO3: Understand the implementation of clipping, rotation, reflection, and shearing.

Q.No.	Assignment Activities	BL
Q1	Give mathematical formula for 2D reflection of a point in Cartesian coordinate system used in C. Also provide 2D reflection matrix of a point in homogeneous coordinate system used in C.	4
Q2	Write a program in C to reflect an origin centered triangle using reflection matrix where reflection factors are given.	4

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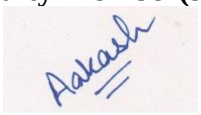
Mr. Aakash Srivastava 

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BCA [SEM IV]

LAB ASSIGNMENT-7

Academic Session: 2022-23(Even)

BCA-406P: GRAPHICS AND MULTIMEDIA SYSTEM LAB

Experiment No.:7

CO3: Understand the implementation of clipping, rotation, reflection, and shearing.

Q.No.	Assignment Activities	BL
Q1	Write steps of Cohen Sutherland line clipping algorithm used in C.	4
Q2	Write a program in C to clip a line segment using Cohen Sutherland line clipping algorithm.	4

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LAB ASSIGNMENT-8

Academic Session: 2022-23(Even)

BCA-406P: GRAPHICS AND MULTIMEDIA SYSTEM LAB

Experiment No.:8

CO3: Understand the implementation of clipping, rotation, reflection, and shearing.

Q.No.	Assignment Activities	BL
Q1	Write steps of Sutherland-Hodgeman polygon clipping algorithm used in C.	4
Q2	Write a program in C to clip a polygon using Sutherland-Hodgeman polygon clipping algorithm.	4

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BCA [SEM IV]

LAB ASSIGNMENT-9

Academic Session: 2022-23(Even)

BCA-406P: GRAPHICS AND MULTIMEDIA SYSTEM LAB

Experiment No.:9

CO3: Understand the implementation of clipping, rotation, reflection, and shearing.

Q.No.	Assignment Activities	BL
Q1	Give mathematical formulation for 2D composite transformation of a point in Cartesian coordinate system used in C.	4
Q2	Write a program in C to apply 2D composite transformation on a graphic primitive.	4

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BCA [SEM IV]

LAB ASSIGNMENT-10

Academic Session: 2022-23(Even)

BCA-406P: GRAPHICS AND MULTIMEDIA SYSTEM LAB

Experiment No.:10

CO4: Perform basic operations on images using animation software.

Q.No.	Assignment Activities	BL
Q1	Write steps to apply animation on a text using Flash 5.0.	4
Q2	Write steps to apply animation on a graphic primitive such as triangle using Flash 5.0.	4

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