Assignment 1

1. Write down algorithm steps of mid-point ellipse drawing algorithm.

2. Write down algorithm steps of mid-point circle drawing algorithm.

3. Explain DDA in details.

4. Explain Bradenham's Line drawing algorithm in details.

5. Differentiate between vector and raster graphics.

6. List the major differences between DDA and Bradenham's Line drawing algorithm.

7. Write short on

   a. Describe the architecture of raster and random scan display.

   b. Beam-penetration method

   c. Shadow-mask method

   d. Architecture of Random-scan (Vector) Systems

   e. Symmetry in circle and ellipse

   f. Boundary-Fill 4-Connected and Boundary-Fill 8-Connected

   g. Boundary-fill Algorithm and Flood-fill Algorithm


Assignment 2

1. Draw a line with two end point P(5,3) and Q(1,2) using DDA

2. Digitize the line with endpoints A(1,7) and B(6,3) using digital differential analyzer line drawing algorithm. Show all necessary steps.

3. Digitize the line with end points (1,2) and (5,6) using digital differential analyzer method.

4. Trace the Bresenham's Line drawing algorithm for the end points(1, 1) and (8, 5).

5. Plot the ellipse centered at (0, 0) with radius $r_x = 8$ and $r_y = 6$, using mid point ellipse drawing algorithm.

6. Plot the 1$^{st}$ octant of a circle centered at origin, having the radius 10 units.