Assignment 2: (2 weeks)

[For plotting any point, use your implemented grid and plotpoint () only.]

Part- I: 1 week

1. Draw straight line using the following line drawing methods keeping the same grid structure in order to view resolution for each case.

i) DDA ii) Bresenham's iii) Midpoint

Part- II: 1 week

2. (a) Prepare a class 'Fire' following instructions below.

i. Fire (Fig. 2) is created by collection of straight lines which are very closed together.
ii. Use any line drawing algorithm that is implemented in Part-I, Assignment 2.
iii. Height of the straight lines change over time by changing endpoints away from the source of fire
iv. Colour of fire may vary as the flame is away from the source.

(b) Hence create a class 'Candle' (Fig. 3) having at least two methods light_candle () and put_out_candle ()

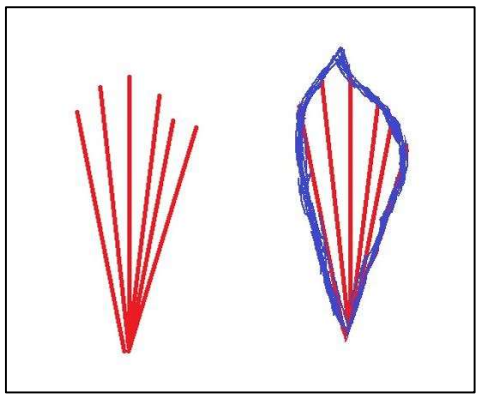

Fig. 2: Fire creation

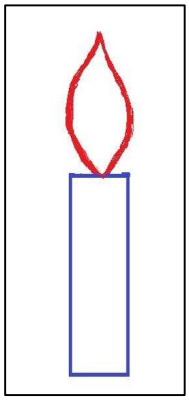

Fig. 3: Candle

[Optional Question]

Develop a recursive method for the following shape, 'Twig' (Fig.4) considering two parameters, length of the branches and angle between the branches, uniform for each recursive call. Hence randomize the parameters to make the shape more realistic.

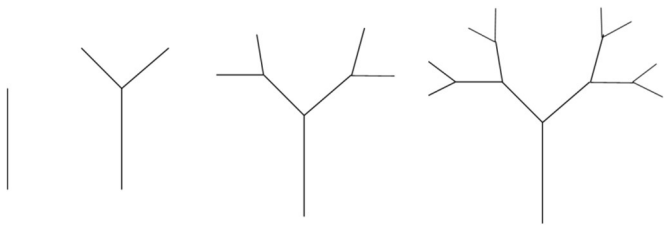

Fig.4: Twig generation
