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**I.T. – 5**

**Q. Implement DDA line drawing algorithm.**

#include<stdio.h>

#include<graphics.h>

#include<math.h>

void main()

{

float x,y,x1,y1,x2,y2,dx,dy,length;

int i,gd,gm;

/\* Read two end points of line

---------------------------------- \*/

printf("Enter the value of x1 :\t");

scanf("%f",&x1);

printf("Enter the value of y1 :\t");

scanf("%f",&y1);

printf("Enter the value of x2 :\t");

scanf("%f",&x2);

printf("Enter the value of y2 :\t");

scanf("%f",&y2);

/\* Initialise graphics mode

---------------------------------- \*/

detectgraph(&gd,&gm);

//Replace NULL with "c:\\tc\\bgi" on Windows OS

initgraph(&gd,&gm,NULL);

dx=abs(x2-x1);

dy=abs(y2-y1);

if (dx >= dy)

{

length = dx;

}

else

{

length = dy;

}

dx = (x2-x1)/length;

dy = (y2-y1)/length;

x = x1 + 0.5; /\* Factor 0.5 is added to round the values \*/

y = y1 + 0.5; /\* Factor 0.5 is added to round the values \*/

putpixel (x, y, 15);

i = 1; /\* Initialise loop counter \*/

while(i <= length)

{

x = x + dx;

y = y + dy;

putpixel (x, y, 15);

i = i + 1;

delay(100); /\* Delay is purposely inserted to see

observe the line drawing process \*/

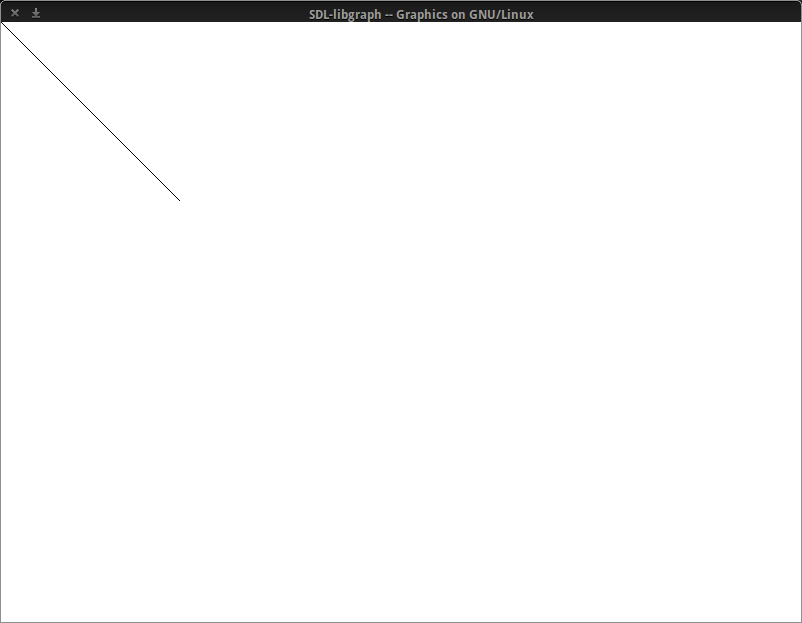
}

sleep(200);

getch();

closegraph();

}

****