14-1-18

2-1 :
VIDEO DISPLAY DEVICES

Fig : 2-2 : Basic design of a magnetic - deflection CRT

Fig : 2-4 : Electrostatic deflection of the electron beam in a CRT.

Fig : 2-7 : A raster - scan system displays an object as a set of discrete Points across each scan line.

Fig :- 2.8 Interlacing scan lines on a raster - scan display. First all Point

. . . . . .

Random - scan displays:

Fig : 2.9 : Page 43

color produce করায় ৭টা system. তাই মোটামুটি first. but শুধু 4 টা color produce করতে পারে।

Fig: 2-10

3 টা electron gun আছে। 3 টাই pixel এর 3টা different point কে point করে। same ভাবে অন্য pixel এও হবে। . . . .

Fig - 2-14:

* How LCD works? fig - 2.16

LCD display এর ভিতর ছোট ছোট crystal রাখা হয় যেগুলো light কে rotate করে। crystal এর উপর যতটুকু voltage দেয়া হয় তার উপর depend করে light কে rotate করে। ফলে আমরা light দেখতে পাই display তে বাইরের থেকে।

পাব। . . . .

fig 2-17 : 3D Display

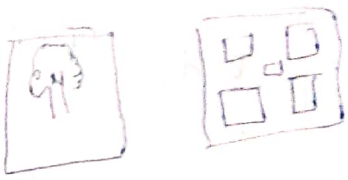
16-1-19

2-4 Graphics monitors and workstation :

2-5 Input devices :

Coordinate representation :

modeling coordinator
or local coordinator



$(x_{mc}, y_{mc}) \rightarrow$

Graphics function :

output primitive : যেগুলো basic format যেগুলো output primitive.

Geometric transformation : কোন কিছু ঘোরানো বড় করা

viewing transformation : কি ভাবে কোথা থাকবে কিভাবে যেগুলো viewing transformation.

Chapter - 3

3-1 Points and lines:

3-2 Line drawing algorithm:

$$y = m.x + b$$

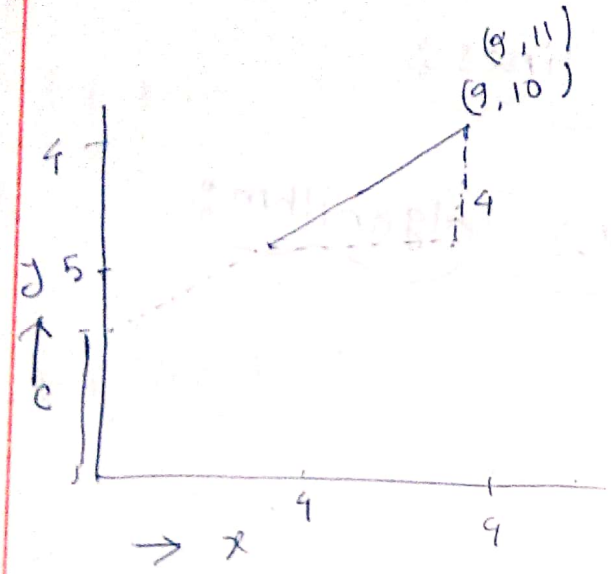
$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$b = y_1 - m.x_1$$

$$\Delta y = m \Delta x$$

$$\Delta x = \frac{\Delta y}{m}$$

20-1-19



(4,5), (9,9)

$m = \frac{9-5}{9-4} = \frac{4}{5} = .8$

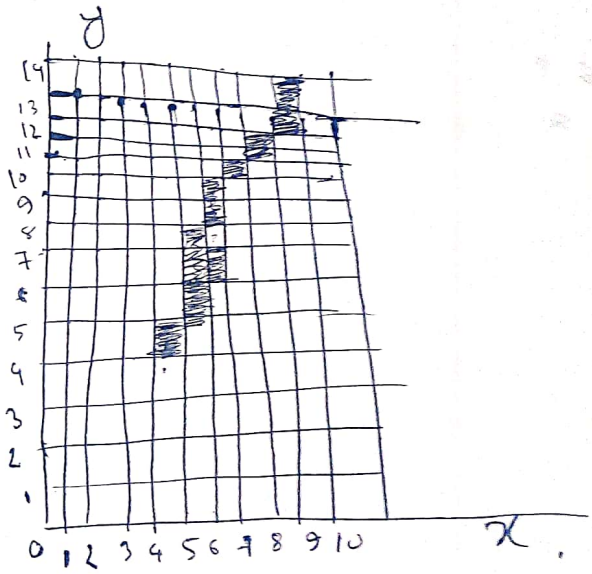
x	y	
4	5	5
5	5 8	6
6	6 6	7
7	7 4	7
8	8 2	8
9	9	9

(4,5), (9,11)

$m = 6/5 = 1.2$

(5, 6) , (10, 15)

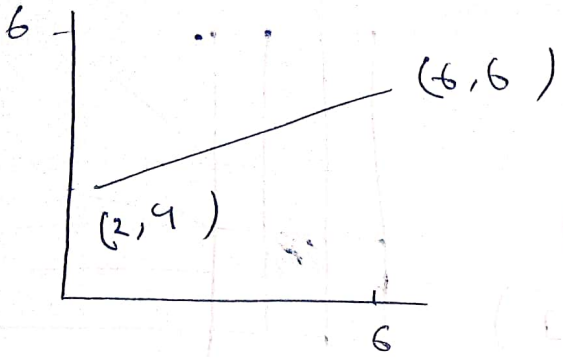
y	x	nearest integer
5	5	5
6	5	5
7	5.6	6
8	6.2	6
9	6.8	7
10	7.4	7
11	8	8
12	8.6	9
13	9.2	9
14	9.8	10
15	10.4	10

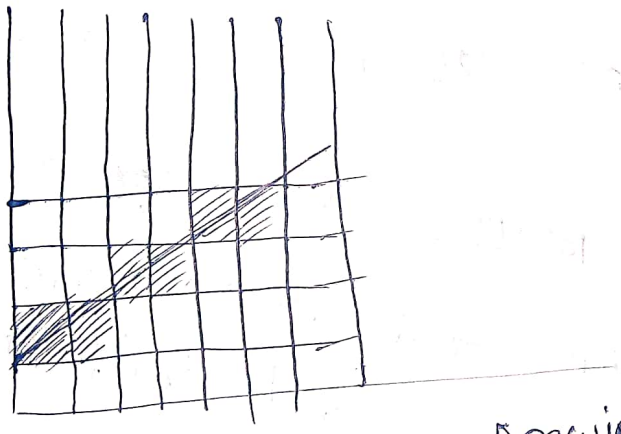


(20, 10) , , (30, 18)

fig : 3-9 :

21-9-19





x_k, y_k

x_{k+1}, y_k / y_{k+1}

Bresenham's Line Drawing Algorithm for $|m| < 1$:

P = decision Parameter

23-1-19

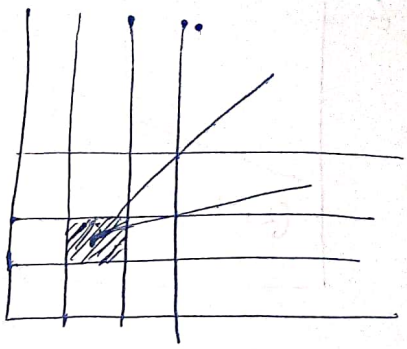
* exam
algorithm ও derivation and
(চার্ট করে) করতে হবে।

$d_1 = y - y_i$ → $m(x+1)$

$d_2 = -(y_i+1) - y$

$d_1 = (x_i+1), (y_i)$

$(x_i+1), (y_i+1)$



exam
* line draw করতে হবে।

CT-Xm
(1) CRT and LCD (2) কিভাবে কাজ করে?
(3) DDA algorithm and calculation and limitation.
(4) Bresenham's algorithm calculation and derivation.