**ITE402 Multimedia and Graphics Lab**

**L37+L38+L39+L40**

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**Aim:** **To study and Implement Midpoint Line Drawing Algorithm.**

**Code:**

#include<iostream>

#include<cstdlib>

#include "graphics.h"

using namespace std;

void midpointline(int x1, int y1, int x2, int y2);

int main()

{

initwindow(400, 400);

int x1, y1, x2, y2;

cout << "Enter initial point:";

cin >> x1 >> y1;

cout << "Enter final point:";

cin >> x2 >> y2;

midpointline(x1, y1, x2, y2);

while (!kbhit());

closegraph();

return 0;

}

void midpointline(int x1, int y1, int x2, int y2)

{

int dx = x2 - x1;

int dy = y2 - y1;

putpixel(x1, y1, 10);

int f = dy- dx/2;

for (int k = 0, x = x1, y = y1; k<dx; k++, y++, x++)

{

if (f<0)

{

putpixel(x + 1, y, 10);

f = f + dy;

}

else

{

putpixel(x + 1, y + 1, 10);

f = f + dy-dx;

}

}

}

**Output**

**Aim: To gain knowledge of basic tools of Adobe Professional Flash CS5.**

**Selection tool:**

* The first important tool is the Selection tool. This tool is used to make selections on

objects and graphics on the drawing area, or stage.

* You can either click on individual objects to select them, or click and drag to make a

rectangular region and select all the objects in it.

* Once you make a selection, you may perform subsequent actions that affect your

selection, such as moving it around the stage, deleting, or altering it in the Properties

panel. Hold down the SHIFT key to select multiple individual objects.

**Sub-selection tool:**

* The Sub-selection tool is used for selecting and modifying anchor points on curves and

lines.

* Clicking once on a line or curve with the Sub-selection tool reveals the anchor points.
* Anchor points are represented either by a hollow square (a corner point), or a hollow

circle (a curve point).

* Clicking on an anchor point with the Sub-selection tool will select that anchor point (then represented by a filled square or circle).
* You can then click and drag the anchor point to move it, ALT-click and drag on a corner

point to convert it to a curve point (and thus reveal anchor point tangent handles), or

* ALT-click on a curve point to convert it to a corner point (and thus remove the tangent

handles).

**Line tool:**

* The Line tool is an important drawing tool. It functions like the line tool in other drawing

programs.

**Lasso tool:**

* The Lasso tool can be used to select objects on the stage.
* It allows creating a freeform selection area by clicking and dragging around an area.
* When you release the mouse button, Flash automatically completes the tool with a

straight line.

**Pen tool:**

The Pen tool is used to create precise paths that are either straight lines or smooth curves.

Stroke width, style, and color, and fill color (for closed paths) can be changed in the

Properties panel.

**Text tool:**

* The Text tool allows you to draw text on the stage.
* Position the cursor on the stage where you want to begin your text and then click and

start typing.

* The text font, size, color and paragraph formatting can be changed in the Properties

panel.

**Oval tool:**

* The Oval tool allows you to create ovals of any shape and size (including circles).
* Stroke width, style, and color, and fill color for ovals can be changed in the Properties

panel.

**Rectangle and PolyStar tools:**

* The Rectangle and PolyStar tools allow you to create rectangles and polygons.
* To switch between the Rectangle and PolyStar tools, click and hold the tool icon

on the Tools panel, then select the desired tool from the menu that appears.

* Stroke width, style, and color, and fill color for rectangles and polygons can be

changed in the Properties panel. In addition, for the PolyStar tool, the number of sides of a polygon, or points on a star, can be changed by clicking on Options in the Properties panel.

**Pencil tool:**

* The Pencil tool is used to create lines and shapes on the stage in much the same way you would use a real pencil.
* Stroke width, style, and color can be changed in the Properties panel.
* To use the Pencil tool, click and drag across the stage to create a line.

**Brush tool:**

* The Brush tool is used much like a paint brush.
* Click and drag across the stage to paint.
* The fill color can be changed in the Properties panel.

**Free Transform tool:**

* The Free Transform tool can be used to transform objects in a variety of ways. To use the tool, click on an object on the stage to reveal transform handles.
* Then, under the Options section of the Tools panel, choose the type of transformation you want to perform.
* Options include Rotate and Skew, Scale, Distort, and Envelope.

**Fill Transform tool:**

* The Fill Transform tool allows you transform gradient and bitmap fills.

**Ink Bottle tool:**

* The Ink Bottle tool allows you to change the stroke color, width, and style of lines and
* shape outlines.

**Paint Bucket tool:**

* The Paint Bucket tool allows you to fill enclosed areas with color.

**Eyedropper tool:**

* The Eyedropper tool allows you to copy stroke and fill properties from one object to

another.

**Eraser tool:**

* The Eraser tool allows you to erase objects on the stage.

**Hand tool:**

* The Hand tool is used for moving the view of the stage.

**Zoom tool:**

* The Zoom tool is used for magnifying or reducing the view of the stage.

**Aim: To learn how to use motion tween in flash.**

* Open a new actionsript file.
* If your timeline window is not open, press (Ctrl+Alt+T).
* Now you can see a single Layer called "Layer1" in your timeline Window.
* Select the first frame. Import your image onto stage, upon which you would want to

implement motion tween.

* File>Import>Import to Stage, or just press (Ctrl+R). Or you can even draw your own object, you can either choose Rectangular tool or Oval tool from the tool box and draw your desired shape.
* Now select your object on the stage and press F8 to convert this image to a Symbol. Convert to Symbol window will pop-up.
* Name your Symbol whatever you like. Select Graphic behavior and press OK.
* Right now your Symbol is in frame1 of Layer1. Select frame 20 and press F6 to insert a

new keyframe.

* Still keeping playhead on frame 20, move your Symbol to any other position other than

the present one.

* Select any frame between, 2 to 19 and select Motion from the tween pop-up menu in the Property inspector. Now your Layer will look something like the one shown below.
* Now press (Ctrl+Enter) to view your motion tween.