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Batch: T5

Experiment 3: Implementation line algorithms

CODE:

```
#include <iostream>
#include <graphics.h>//Uncomment the graphics library functions if you are using it
using namespace std;

void plotPixel(int x1, int y1, int x2, int y2, int dx, int dy, int decide)
{
	int pk = 2 * dy - dx;
	for (int i = 0; i <= dx; i++)
	{
		cout << x1 << "," << y1 << endl;

		x1 < x2 ? x1++ : x1--;
		if (pk < 0)
		{

			if (decide == 0)
			{
			 putpixel(x1, y1, RED);
```

```
                pk = pk + 2 * dy;
            }
            else
            {
//                  (y1,x1) is passed in xt
             putpixel(y1, x1, RED);
                pk = pk + 2 * dy;
            }
        }
        else
        {
            y1 < y2 ? y1++ : y1--;
            if (decide == 0)
            {

                putpixel(x1, y1, RED);
            }
            else
            {
             putpixel(y1, x1, RED);
            }
            pk = pk + 2 * dy - 2 * dx;
        }
    }
}
```

```
int main()
{
 int gd = DETECT, gm;
 initgraph(&gd, &gm, "xxx");
        int x1 = 100, y1 = 110, x2 = 500, y2 = 500, dx, dy, pk;
                dx = abs(x2 - x1);
        dy = abs(y2 - y1);

        if (dx > dy)
        {
                plotPixel(x1, y1, x2, y2, dx, dy, 0);
}

        else
        {

                plotPixel(y1, x1, y2, x2, dy, dx, 1);
        }
 getch();
}
```

OUTPUT: