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Roll No - 20

```
//Scan Line fill Algorithm
#include<graphics.h>
void scanFill(int x[],int y[] ,int edges)
{
	int i,j,temp;
	int ymax=300 , ymin =100 ;
	for (i = ymin; i <= ymax; i++)
	{

		int interPoints[edges], count = 0;
		for (j = 0; j < edges; j++)
		{
		int next = (j + 1) % edges;


		if ((y[j] > i && y[next] <= i) || (y[next] > i && y[j] <= i))
		{
			interPoints[count++] = x[j] + (i - y[j]) * (x[next] - x[j]) / (y[next] - y[j]);
		}
		}


		for (j = 0; j < count - 1; j++)
		{
		for (int k = 0; k < count - j - 1; k++)
		{
			if (interPoints[k] > interPoints[k + 1])
			{
				temp = interPoints[k];
				interPoints[k] = interPoints[k + 1];
				interPoints[k + 1] = temp;
			}
		}
		}


		for (j = 0; j < count; j += 2)
		{
		line(interPoints[j], i, interPoints[j + 1], i);
		}
```

```
        }
}

int main()
{
        int gd = DETECT, gm;
        initgraph(&gd, &gm, NULL);
        int x[] = {100, 200, 300};
        int y[] = {100, 300, 200};
        int edges = 3;
        scanFill(x, y, edges);
        delay(5000);
        closegraph();
        return 0;
}
```

COMMAND

```
oem@oem-OptiPlex-3090:~$ g++ scanLine.cpp -o scanLine -lgraph
oem@oem-OptiPlex-3090:~$ ./scanLine
```

OUTPUT: