

Source Code

```
#include<stdlib.h>

#include<stdio.h>

#include <GL/gl.h>

#include <GL/glut.h>

float x1, x2, y1, y2;

void TakeInput()

{

printf("Value of x1 : ");

scanf("%f", & x1);

printf("Value of y1 : ");

scanf("%f", & y1);

printf("Value of x2 : ");

scanf("%f", & x2);

printf("Value of y2 : ");

scanf("%f", & y2);

}

void display(void)

{

float dx = abs(x2 - x1);

float dy = abs(y2 - y1);

float p = 2 * dy - dx;
```

```
int itr = (int)dx - 1;

glBegin(GL_POINTS);

glVertex2f(x1, y1);

glEnd();

while(itr--)

{

if(p < 0)

{

p = p + 2.0 * dy;

x1 = x1 + 1;

y1 = y1;

}

else if(p > 0)

{

p = p + 2 * dy - 2 * dx;

x1 = x1 + 1;

y1 = y1 + 1;

}

glBegin(GL_POINTS);

glVertex2f(x1, y1);

glEnd();

}
```

```
glFlush();

}

void myInit (void) {

glClear(GL_COLOR_BUFFER_BIT);

glClearColor(0, 0, 0, 0);

glMatrixMode(GL_PROJECTION);

glLoadIdentity();

gluOrtho2D(-100.0, 100.0, 100.0, -100.0);

}

int main(int argc, char ** argv)

{

TakeInput();

glutInit( & argc, argv);

glutInitDisplayMode(GLUT_SINGLE | GLUT_RGB);

glutInitWindowSize(500, 500);

glutInitWindowPosition(100, 100);

glutCreateWindow("");

myInit ();

glutDisplayFunc(display);

glutMainLoop();}
```

Input:

```
"D:\Computer Graphics\Lab3\bin\Debug\Lab3.exe"  
Value of x1 : 2  
Value of y1 : 3  
Value of x2 : 80  
Value of y2 : 90  
  
Process returned 0 (0x0)   execution time : 24.687 s  
Press any key to continue.
```

Output:

