



**VIT-AP**  
**UNIVERSITY**

School: SCOPE

Semester: WIN SEM 2022-23

Subject: Computer Graphics (Lab)

Subject Code: CSE2006

## **Assignment 2**

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**NAME: S.B Ashrith**

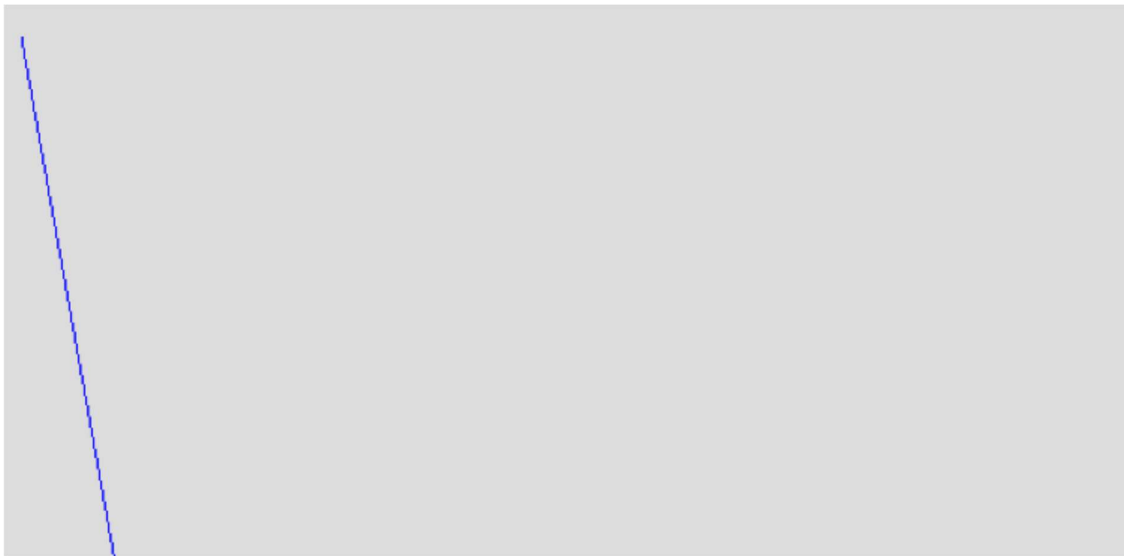
**Registration No:20BCE7236**

1. Write a program to implement DDA Line Drawing Algorithm.

```
function setup()
{
  createCanvas(600,300);
}
function draw()
{
  background(220);
  myLine(10,20,60,300);
  updatePixels();
}
function myLine(x1,y1,x2,y2)
{
  background(220);
```

```
dx=x2-x1;
dy=y2-y1;
if(dx>=dy)
{
steps = dx;
}
else
{
steps = dy;
}
dx = dx/steps;
dy= dy/steps;
x = x1; y = y1; k= 1;
while(k<= steps)
{
set(x, y, color('BLUE'));
x = x+ dx;
y = y+ dy;
k=k+1;
}}
```

Output



2. Write a program to implement Bresennham's Line Drawing Algorithm.

```
function setup()
{
  createCanvas(400,400);
}
function draw()
{
  background(220);
  myLine(60,40,5,300);
  updatePixels();
}
function myLine(x1,y1,x2,y2)
{
  dy=(y2-y1);
  dx=(x2-x1);
  i1=2*dy;
  i2=2*(dy-dx);
  d=2*dy-dx;
  if (x2-x1 <0)
  {
    x=x2;
    y=y2;
    xlast=x1;
  }
  else
  {
    x=x1;
    y=y1;
    xlast=x2;
  }
}
```

```
while (x<=xlast)
{
if(d<0)
{
d=d+i1;
}
else
{
d=d+i2;
y=y+1;
set(x,y,color('GREEN'));
x++;
}
}
}
```

Output

