

# VIT AP UNIVERSITY, ANDHRA PRADESH

## Lab Sheet 1 : Basic Graphics Primitives

Academic year: 2020-2021

Branch :CSE B.Tech

Semester: Fall

Date:17/11/20

Faculty Name: Prof.Mukti Kaushal Shah

School: SCOPE

Student name: M.Taran

Reg. no.: 19BCE7346

1

1. Write a program to implement **Bresenham's Line Drawing** Algorithm in OpenGL/Python.

**Input :** (5,5) to (13,9).

**Output:**

```
int x1=5;
int y1=5;
int x2=13;
int y2=9;
int yd=y2-y1;
int xd=x2-x1;
int e=0;
int y=y1;
for (int x=x1; x<=x2; x++){
    point(x,y);
    if((2*(e+yd))<xd){
        e+=yd;
    }
    else{
        y++;
        e+=(yd-xd);
    }
}
```



# VIT AP UNIVERSITY, ANDHRA PRADESH

## Lab Sheet 1 : Basic Graphics Primitives

Academic year: 2020-2021

Branch :CSE B.Tech

Semester: Fall

Date:17/11/20

Faculty Name: Prof.Mukti Kaushal Shah

School: SCOPE

Student name: M.Taran

Reg. no.: 19BCE7346

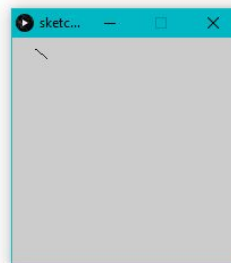
2

2. Write a program to **draw a line using DDA line** drawing Algorithm in OpenGL/Python

**Input :** (20,10) to (30,18).

**Output:**

```
int x0 = 20;
int y0 = 10;
int x1 = 30;
int y1 = 18;
size(200, 200);
int dx = x1 - x0;
int dy = y1 - y0;
int steps = abs(dx) > abs(dy) ? abs(dx) : abs(dy);
float xinc = dx / (float) steps;
float yinc = dy / (float) steps;
float x = x0;
float y = y0;
for (int i = 0; i <= steps; i++)
{
    point(x,y);
    x += xinc;
    y += yinc;
}
```



# VIT AP UNIVERSITY, ANDHRA PRADESH

## Lab Sheet 1 : Basic Graphics Primitives

Academic year: 2020-2021

Branch :CSE B.Tech

Semester: Fall

Date:17/11/20

Faculty Name: Prof.Mukti Kaushal Shah

School: SCOPE

Student name: M.Taran

Reg. no.: 19BCE7346

3

3. Write a program to **draw circle** in OpenGL/Python.

**Input:** radius  $r=50$  centered point (100,100)

**Output:**

```
def setup():  
    size(400,200)  
def draw():  
    circle(100, 100, 50);
```

