

Names Ankush Negi

Course BCA 6 A

Roll no.  $\rightarrow$  17

University Roll no.  $\rightarrow$  1121019

Q1.)

### DDA

Step 1  $\rightarrow$  Read the input of 2 end points of line as  $(x_1, y_1)$  &  $(x_2, y_2)$  such that  $x_1 \neq x_2$  &  $y_1 \neq y_2$

Step 2: Calculate  $dx = x_2 - x_1$  and  $dy = y_2 - y_1$

Step 3: If  $(dx \geq dy)$

$step = dx$

    else

$step = dy$

Step 4  $\rightarrow$   $x_{in} = dx / step$  &  $y_{in} = dy / step$

Steps  $\rightarrow$   $x = x_1 + 0.5$  &  $y = y_1 + 0.5$

Step 6: for  $(k=0; k < step; k++)$

{

$x = x + x_{in}$

$y = y + y_{in}$

    Putpixel  $(x, y)$

}

```
#include <graphics.h>
#include <stdio.h>
#include <math.h>
```

```
void main()
```

```
{
```

```
float x, y, x1, y1, x2, y2, dx, dy, step;
```

```
int i, gd=DETECT, gm;
```

```
initgraph (&gd, &gm, "c:\\turbo(3\\bgi)");
```

```
scanf("%f%f", &x1, &y1);
```

```
printf("Enter the value of x1 and y1: ");
```

```
scanf("%f%f", &x1, &y1);
```

```
printf("Enter the value of x2 and y2: ");
```

```
scanf("%f%f", &x2, &y2);
```

```
dx = abs(x2 - x1);
```

```
dy = abs(y2 - y1);
```

```
if (dx >= dy)
```

```
step = dx;
```

```
else
```

```
step = dy;
```

```
dx = dx / step;
```

```
dy = dy / step;
```

```
x = x1;
```

```
y = y1;
```

```
i = 1
```

```
while (i <= step)
```

```
{ putpixel(x, y, 5);
```

```
x = x + dx;
```

y = y + dy;

i = i + 1;

delay (100);

}

closegraph();

}

Enter the value of x1 and y1 : 100  
100  
Enter the value of x2 and y2: 150  
150