Name- Adarsh Barthwal sub - Computer graphics and animation.

Course - BCA 6 A

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Ans-1 DDA Algorithm

Step1 - Start

Step2 - Declare $x_1, y_1, x_2, y_2, dx, dy, x, y$ as integer variable.

Step3 - Enter the value of x_1, y_1, x_2, y_2

Step4 - Calculate $dx = x_2 - x_1$

Step5 - Calculate $dy = y_2 - y_1$

Step6 - If ABS (dx) > ABS (dy)
Then step = abs (dx)
else

Step7 - xinc = dx/step
yinc = dy/step
assign x = x_1
assign y = y_1

Step8 Set pixel (x,y)

Step9 - x = x + xinc
y = y + yinc
Set pixle (Round (x), Round (y))

Step10 - Repeat step 9 until x = x_2

Step11 - End

Code for DDA

```
#include <graphics.h>
#include <conio.h>
#include <stdio.h>
 void main()
{
 int gd= DETECT, gm, i ;
 float x, y, dx, dy, steps ;
 int x0, x1, y0, y1;
 initgraph(&gd, &gm, "C:\\TC\\BGI");
 setbkcolor (WHITE);
 x0= 100, y0= 200 , x1= 500, y1= 300;
  dx = (float) (x1-x0);
  dy = (float) (y1-y0);
  if ( dx>=dy)
     {
       steps= dy;
     }
    dx = dx/steps;
    dy = dy/steps;
     x= x0;
     y= y0;
     i= 1;
    while ( i<= steps)
    {
      putpixle (x, y, RED);
```

```
        x+ = dx;
        y+ = dy;
        i = i+1;
    }
    getch();
    closegraph();
}
```