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Subject:- Computer Graphics & Animation LAB
Sec:- A
Sem:- 6th

PRACTICAL

P1

```
#include <stdio.h>
#include <graphics.h>
int main()
{
    int rev(float num)
    {
        return num<0? num-0.5 : num
          +0.5;
    }
int x1=100, x2=250, y1=100, y2=250
  , step, x, y;
int gd=DETECT, gm;
float x, y, m;
int dx=x2-x1;
int dy=y2-y1;
  m=dy/dx;
if(dx>dy)
        step=dx;
else
        step=dy;
```

```
intigraph(&gd,&gm,"");
outtextxy(x1,y1,"A");
outtextxy(x2,y2,"B");
putpixel(x1,y1,RED);
   x=x1, y=y1;
while(step>0)
  {
        ;if(m<1)
         {
              x=x+1;
              y=y+m;
         }
        ;if(m>=1)
       {
            x=x+1/m;
            y=y+1;
       }
    putpixel(rev(x),&rev(y),RED);
      step--;
  }
getch();
return 0;
}
```

Algorithm:-

Step 1:- Start Algorithm

Step 2:- Declare x1, y1, x2, y2, dx, dy, x, y as integer variables.

Step3:- intialize the value of x1, y1, x2, y2.

Step4:- Calculate $dx = x2 - x1$

Step5:- Calculate $dy = y2 - y1$

Step6:- if $dx > dy$

Then, step = dx;

else, step = dy;

Step7:- Assign, $x = x1$

$y = y1$

Step 8:- Set pixel (x, y)

Step 9:- ~~exit~~ Starting while loop (step 7 to)

if, $m < 1$

then $x = x + 1$;

$y = y + m$;

and,

if $m >= 1$

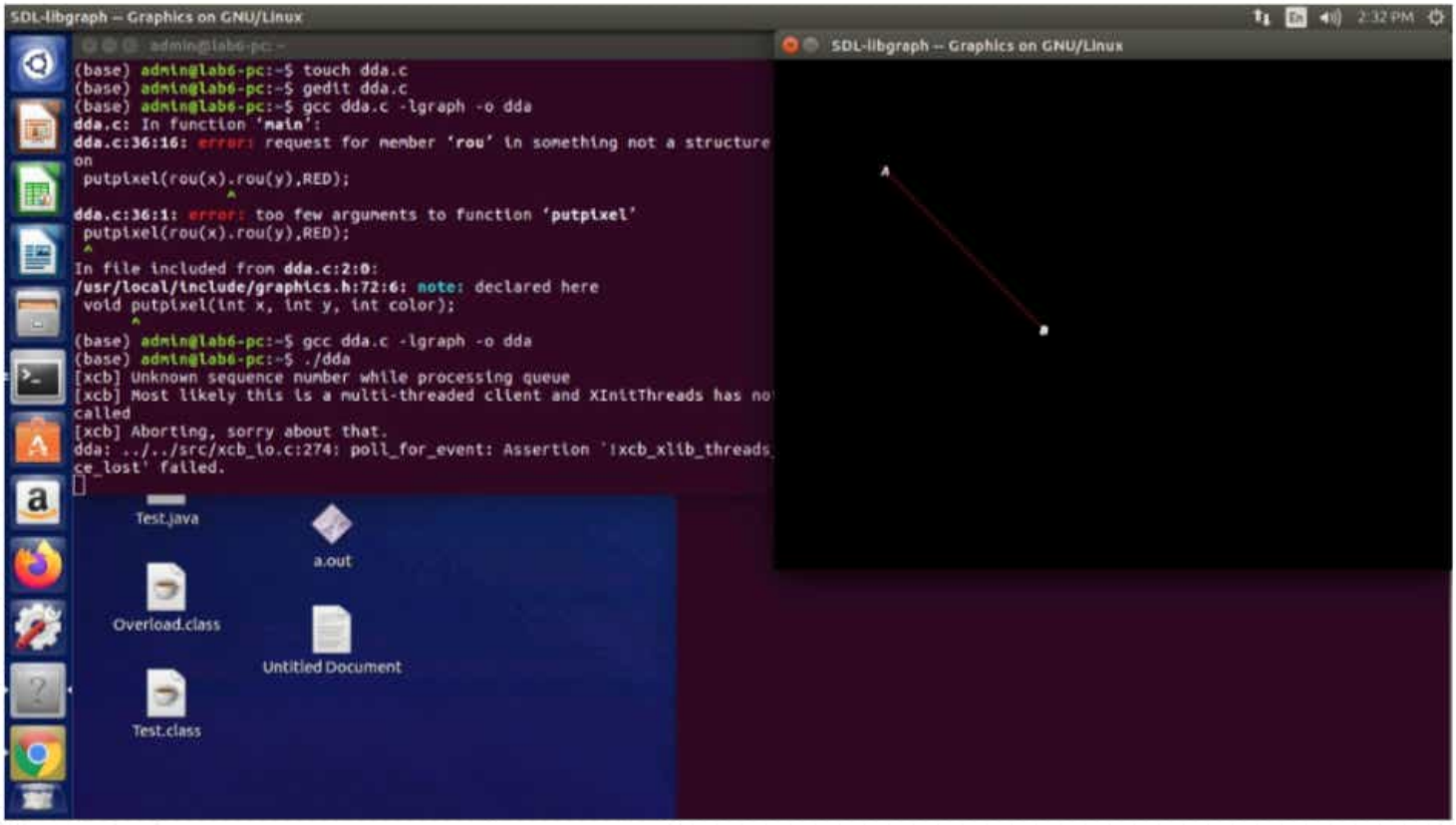
then $x = x + 1/m$;

$y = y + 1$;

Step 10:- Set pixel (Round(x), Round(y))

Step 11:- Repeat step 9 until $x = x_2$

Step 12:- End Algorithm


SDL-libgraph -- Graphics on GNU/Linux
2:32 PM
admin@lab6-pc: ~
(base) admin@lab6-pc:~$ touch dda.c
(base) admin@lab6-pc:~$ gedit dda.c
(base) admin@lab6-pc:~$ gcc dda.c -lgraph -o dda
dda.c: In function 'main':
dda.c:36:16: error: request for member 'rou' in something not a structure
on
putpixel(rou(x).rou(y),RED);
^
dda.c:36:1: error: too few arguments to function 'putpixel'
putpixel(rou(x).rou(y),RED);
^
In file included from dda.c:2:0:
/usr/local/include/graphics.h:72:6: note: declared here
void putpixel(int x, int y, int color);
^
(base) admin@lab6-pc:~$ gcc dda.c -lgraph -o dda
(base) admin@lab6-pc:~$ ./dda
[xcb] Unknown sequence number while processing queue
[xcb] Most likely this is a multi-threaded client and XInitThreads has no
called
[xcb] Aborting, sorry about that.
dda: ../../src/xcb_io.c:274: poll_for_event: Assertion '!xcb_xlib_threads
ce_lost' failed.
SDL-libgraph -- Graphics on GNU/Linux
Test.java
a.out
Overload.class
Untitled Document
Test.class

P3

```
#include<stdio.h>
#include<graphics.h>
int main()
{
    int gd=DETECT,gm;
    initgraph(&gd,&gm,"");
    line(0,200,getmax(),200);
    line(0,360,getmax(),360);
    setcolor(WHITE);
    rectangle(150,210,260,230);
    floodfill(152,220,WHITE);
    rectangle(150,240,260,260);
    floodfill(152,241,WHITE);
    rectangle(150,270,260,290);
    floodfill(152,271,WHITE);
    rectangle(150,300,260,320)
    floodfill(152,301,white)
    rectangle(150,320,260,350);
    floodfill(152,331,white);
    setcolor(WHITE);
    rectangle(140,200,145,130);
    rectangle(130,130,155,70);
    setcolor(RED);
    circle(142,82,6);
    floodfill(142,82,RED);
    setcolor(YELLOW)
    circle(142,100,6)
    floodfill(142,100,YELLOW);
    setcolor(GREEN);
```

```
    circle(142,118,6);
    floodfill(143,118,GREEN);
    setcolor(WHITE);
      getch();
    closegraph();
      return 0;
}
```