END-TERM PRALTICAL EXAM

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UNIVERSITY ROLL NO - 1121093

CLASS ROLL NO - 13

SUBJECT - COMPUTER GRAPHICS AND ANIMATIONS (PRACTICAL)

SUBJECT CODE - PBC-602

Name - Nikita Brisht Course - BCA - 6B University Role No- 1121093 Class Roll NO-13 Ps: Write an algorithm and Program to implement bresenham Circle Drawing Algorithm. Algorithm Steps: Start Stepa: Declare Pogox, y, r, d variables P.9 are coordinates of the center of the circle. r in the radius of the corde. Step 3: Enfeu the value of r Step 4: Calculate d=3-2r Steps: Initialize x=0 Anbsy = r Step 6: Check if the whole write is scan converted 9 + N7 = 4 Step 7: Plat eight points by using concepts of eaght - way symmetry. The center is at (prg) Coordent active pixel is (x,y).

putpixel (n+p,y+q)

putpixel (y+p, n+q)

putpixel (-y+p, n+q)

putpixel (-x+p,y+q)

putpixel (-x+p,-y+q)

putpixel (-y+p,-x+q)

putpixel (y+p,-x+q)

putpixel (y+p,-x+q)

Step 8: Find location of neut pixel to be scanned

if deo

then d=d+ en+6

increment x=x+1

then d= d + 4 (x-y) +10 encrement x=x+1 decrement y=y=1

Step 10: Stop.

Program:

include & graphics. h>

include & stalib. h>

include & stalib. h>

include & conio. h>

include < conio. h>

include < math. h>

void & gutway Symmetric flot (int ne, int ye, intre, inty)

putpixel (n+xe) y tye (ReD);

putpixel (n+xe) y tye (ReD);

putpixel (n+xe) y tye (ReD);

putpixel (utne, ytye 1820);

putpixel (utne, ytye 182100);

putpixel (-xtne, -ytye 1622N);

putpixel (-xtne, -ytye 1622N);

putpixel (-xtne, -ytye 192100);

putpixel (ythe 1 utye 12);

putpixel (ythe 1 utye 12);

putpixel (ythe 1 utye 119);

putpixel (ythe 1 utye 119);

putpixel (-ythe 1 utye 16);

putpixel (-ythe 1 utye 16);

void Bresenham Circle (int xc, intyc, inty)

2

Put t =0, y = v, al =3-(2 *v);

Sightway Symmetric Rot(xc, yc, xny);

```
while (x <= y)
    1/ (de=0)
      d=d+(4* x)+6;
      2 d = d+(4* x)-(4* y)+10;
    2 = x+1;
Eightway symmetric Pot (xc, ye, x, y);
  Put make (void)
    But Mc, ye, r, gdriver : DETECT, gmode, emor code;
 initgraph (fgdriver, fgmode, "C: MTURBOE3 NBG191);
    errorcode = graphresult ();
    if levrorcode ! grok)
Printif (6" Caraphi'is error: 1.5 lu11, grapherrormsq (errorcode));
  printf 166 Press any Key to halt: 11);
    getch ();
     exit (1);
```

clas Roll No - 13

print p 166 einter the value of xe and yeii);

Seanf (16 1/1.d.1.d.1, fxc, fye);

print p 66 Enter the value, of oadius:");

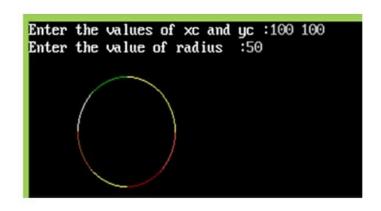
Seanf (66.1.d.1, 4r);

Bresenham Circle (xe, ye, r);

getch (s);

closegraphels;

return 0;



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(a) 27°C ∧ (a) (b) 11:09 AM (b) 6/16/2021