```
(1) WAP to do a line & increase its length 3 times
  #include Liostream. h>
 # include & como. hs
  # include Zgeaphics. h>
  Word Scaledline (int x, inty, intx2, int y2, int sa, int sy) L
   ルース1やられる
   y1 = y1 + sy;
   22 = 22 + Sx;
   y2 = 42 + 5y;
   Conte "Co-ordinates after scaling are "LLX, LLY, LLX2 LLY2;
   x2+=90;
    41+ = 90;
    42+=90;
    Setcolos (RED);
     line (21, y,, 2, 1, y2);
    void main () {
     int gd = DETECT. gm;
    "init graph (egd, egm, ".. 11BGI");
    int x1,4,, x2, 42, Sn, Sy;
    Contex Enter 2 co-ordinates of line";
    Cin> X1>> y1>> x2>> y2;
    Contex Enter the Scaling factors x & y"
    cin >> Sx>>> Sy
     line (21,41,22,42):
     Scaledline (21, 4, 12, 42, 8x, Sy);
     getch ();
     dosegraph();
```

```
(2) WAP to draw a triangle of tourslate et?
  # include <iostream.h>
  # include Lconio, h>
  # include Zgraphics.h)
  Void drawTriangle (int n., inty, intx2, inty2) int x3, inty3)
    line (x1, y1, x2, y2);
    line (x1, y1, x3, y3);
     line (x3, y2, x3, y3);
   Void translateTriangle (int x1, inty1, int x2, inty2, intx3,
             intys, int Tx, int Ty) L
     NI= XI+TX;
     2=22+Tx;
     23 = 23+ Tx)
     Yr= yi+ Ty;
     92 = 92+19;
      43 = 43+ Ty
      Setcolor (RED):
      Drawtnangle (11,41,2,42,43,43);
   Wold main () L
    int gd = perect, gm;
    int X1, 41, X2, 42, X3, 43, Tx, Tg;
    initgraph (2gd, 2gm, ".. 118GI");
    Contel Enter 3 Co-ordinates of Taiangle"
    Cont << "Enter Translation factor for 2 & y"
    Cin >> Tx >> Ty;
    drawtrangle (x1, 4, x2, 42, x3, 43);
    translate Triangle (x1.41, x2, y2, x3, y3, Tx, Ty);
    getch();
    dosegraph();
```

```
(3) Scaling of a Triangle.
                # include Liostream. h)
                 # include (conio. h)
               # include ¿graphics. h)
                void main() L
                      int gd = DETECT. gm ;
                      int x1, y1, x2, y2, Sn, Sy; x, y)
                      initgraph (egd, egm. ".. 11BGE");
                     Cont L'Enter Co-ordinates q Taiangle;
                      (4n >> 21 >> 41 >> 42 >> 42 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >> 43 >>
                    Cin>) x >1 y >> x, >> y, >> x2>) y2?
                     line (x,y, x,, xy,);
                     line (x1, y1, x2, y2);
                      line (x2, y2, n, y);
                    cont << " Enter the Scaling factor it's y",
                     CINY) SK >> Sy;
                     ル= ルギられ!
                    21 = 21 3 52!
                    2 = 72 × 5x;
                     y= y * sy:
                     g1= y1 x 5y:
                      42: 42 × 5y !
                     Setcolor (RED);
                     line (n, y, x,, y,);
                     line (x1,4,,x2,42);
                     line (x2, y2, x, y);
                    closegraph();
```

```
(4) Program to do a square & rotate et 45 de gree
 #include (conio. h)
 # include Liostream.h>
 # include Zgraphics.h)
 # include zmouth. h)
 # define PI3. 14159
 Void main () L
   int gd = DETECT, gm:
   initgraph (egd, 4gm. ".. 118GL");
   float x1, y1, x2, y2, x3, y8, x4, yu, 25, y5, x6, y6, x7, y7.
      ns, yg, rad;
   Contec" Enter the co-ordinates of the Square";
  Cin >> x1 >> y1 >> x2 >> y2 >> x3 >> y3 >> x4>> y4 !
  int art ] = L M1, 4, , x2, 42, x3, 43, x4, 44, x1, 4,3;
  drawpoly (5, ars):
  rad = PE14;
  25 = 21 + (os (rad) - y1+ sin (rad);
  45 = 11 $ Sin (rad) + y, * cos (rad);
  26 = 12 × Cos (rad) - 7/2 * Sin (rad) )
  y6 = y2 + sin(rad) + y2+ cos (rad);
  27 = 23 + Cos (rad) - 23 + Sin (rad);
  91= 43 + sin (rad) + 43 + Cos (rad);
  xg = nu * cos (rad) - xy * sin(rad);
  ys = yntsin (rad) + ynt cos (rad);
  int asMIT= 2x5, y5, x6, y6, 27, y7, x5, y5-3;
 Setcolor (RED);
 drawpoly (5, arri);
  getch ();
  closegraphi);
```

```
(5) WAP to do a Composite Translation!
   Hinclude Liostream. h>
   # include / Conio. h>
   # include < graphics. h>
   Void trans (intox, intoy, intox, intoy, intoy, intoys,
   "int *tx, int *ty1. int *tx2. int * ty2) (
   *x1 = *x1+ *tx, + *txx)
   *x2= *x2+ *tx, + *tx2)
   * x3 = * x3 + * fx, + * tx2 }
   *y = * y + * ty + * ty 2 }
   *y2 = *y2 + *fy1 + *fy2)
   *y3 = *y3 + *ty, + *ty2;
 void main () L
   int gd = PETECT, gm;
   initgraph (tgd, Lgm, ".. 11 BGI");
   int x1=100, y1=100, x2=150, y2=50, x3=200, y3=100,
    tx1, ty, tx2, ty2;
   Cout < L" Enter Translation factor";
   cin>> tx, >> tx_>> ty, >> ty; >> ty; >>
   line (x1, 4, x2, y2);
   line (x2, y2, x3, y3);
   line (x3, y3, x, y,);
   trans (&x1, by1, tx2, by2, tgg, by3, ltx1, bty1, ltx2;
             lty2);
    line (x1, y1, x2, y2);
    line (x2, y2, x3, y3);
    line (23, y3, 21, y1);
    getch();
    closegraph ();
```

```
6) WAP to do Composite Staling:
  # include Liostream.h>
  # include < (onio.h)
 # include Lstallib.h)
 # include Lgraphics.h>
  Noid main()L
    int gd = DETECT, gm, n, y, 8;
    initgraph (egd, egm, ". #BGI");
    x : getmax x()/2 ),
    y = getman y17/2;
    8=0;
    While (!kbhit1)) {
      Setcolor (BLACK);
      Circle (n,y, 7) :
      r= +1:
      Setcolor (NHSIE);
      Circle (x,y,r);
      i) (ntr > = getman x 11 y-r > = get man y())
     break;
   getch ();
 (+) WAP to draw Triangle & Repleets along xiy & x=y anis.
   # include Liostream. W
   # include LConio.hy
   # include Zgraphics.h>
   Void main () L
    int gd = DETECT, gm;
    int x1, y1, x2, y2, x3, y3, c;
    initgraph (egd, egm, ".. IIBGI");
    Cout ec" Enter the Co-ordinates";
    Cin >> x1 >> y1 >> x2 >> y2 >> 23 >> y3 ?
```

```
(ODDA line Drawing Algo.
 # include Liostream. h>
 # include < Comio. h>
 # include Zgraphics. h)
 Void mainest
 int gd = DETECTigm:
 float xi, y, x2, y2, dx, dy, xinc, yinc, );
 initgraph (tga. Lgm, ".. 11BGE");
 Cont ck" Enter the Starting point" 1
  Cin >> 2(1>) 41:
  Contec " Enter the End point":
  (in >) x2 >> 42;
  dx = x2 - x1;
 dy = 92-41;
  if (dy)dn)L
       Steps = da -,
  Else L
      steps = dy;
  xinc = dul steps;
  Yine = dy | Steps;
  for (i=0, iz=Steps, i++)2
     patpinel (n.y., 2):
      x= nitxine,
      y = yit yine ?
   getch (1;
    closegraphe;
```

```
(9) Bresonham line Drawing Algo
 # include Liostream. h)
 # include < Comio. h>
 # include < grayhics. h>
 Void main()L
 int gd = PETECT, gm;
 float ni, y, x2, y2, d, dx, dy;
 init graph (Lgd, Lgm, ".. 118GI"):
 Cont ex Enter the Co-ordinates of the line.
 Cin >) x, >) y, >) x2 >) y2
 dx = x2-x,;
 dy = 42-41:
 かられり
 7=9,3
 While (x < x2) L
    putpinel (n, y, u);
    white (d $0) (
        gt+;
        d=d+2*(dy-dx)
    Elsel
        ntt
       d = d + 2+dy
    getch();
    close geaphes;
```

the many services of

```
(10) DDA Circle drawing Algo!
  #include Liostream. hs
  # include & conio. h)
  # include & graphics. h>
  # include (math, h)
  World main () h
   int ga = DETEEL. gm:
  Int x, y, xuyut, s, r;
  init graph (fgd, tgm, "., 11BGI")
   Contec Enter the Co-ordinates of Center"
   Cin >> >c >> ye
   Contec" Enter the radius "
   cin >> x;
   for (t=0, ic= (2+3.14), ++=0.01)
  L
n=nct v+ Cos(t);
    y= yc+ x* Sin (+);
    putpixel (n. y.3);
     getch ();
    closegraph();
```

```
(11) Bresonham's Circle Drawing Algo.
 # include Liostream. hs
 # include Llonio. h>
 # include Zgraphics, h>
 Void plot (inta, intb, intxc, intyc)
putpixel (xcta, yctb, 1)?
 putpixel (xctb, ycta, 2);
 putpixel (xc-a, yetb, 3)?
 putpixel (xcta,
                 yc-b,4)1
 putpixel (xc-b, yc+a,5):
 putpixel (xith, yi-a, 6);
 putpixel (xc-a, yc-b,7);
 putpixel (xc-b, yc-a, 8);
World main () L
 int gd = DETEE, 1, gm;
 float xi, yi, v, p, x, y;
  initgraph (ega, egm, ".. [[BG[");
 Cont < " Enter the Center Co-ordinates & Conter")
  cins xc >> yc >> ;
  n=0
   4= =
   p=1-7;
  While (xxy)L
      if (pco) L
         n++
         plot (x,y,x,yc)
         p=p+2 2 2 +1;
```