	Date
cpt. No	Page No.
	program 8
	write a program to implument the cohen-Hodgeman polygon
	cupping algorithm. make provision to specify the input polygon
	and window for cupping.
	#include crossmans
	# men de Carlguton
	int- bold-eist bold-boink[20][2] oud-bold-eist oud-bold-boink[20]
	Clippus-sizi, clippus-points[20][2];
	lonst fat MAY-POINTS = QO;
	and the second of the second o
	void draupolylist prolizy, ist n) {
	glacto (al-baraon);
	for (Int 1=0;120);1+1)
	gluouraf (P[1][1], P[1][1]);
	gland();
	3
	and the first of t
	int x-introduct (int XI, int YI, int X2, int Y2, int X3, int Y3,
	(44 this tax ini
	The state of the s
	Int num = (x1 x y2 - Y1 + x2) x (x3-x4) - (x1-x2)
	* (x3*x4 - 43*Y4);
-	The same of the sa
	(4x- 8x) * (ey-14) - (4y-84) * (ex-1x) = (nb tri
-	Detwer num/den;

Teacher's Signature _

```
int 4-intollect ( and XI, int YI, Pat x2, pat y2, int x3, int y3,
            int x4, int y4)
       int num = (x1 * 42 - 41 * x2) * (43 - 44) - (41-42) *
                          ( x3 * y4 - y3 + x4);
       10x den = (x1-x2)* (x3-44)- (41-42)* (x3-x4);
       detwn nunlder;
   y
void cuplant poly journel [[2], and poly size, out x 1 int y1 int x2,
                            10t Y2)
   1
         int new_points [MAX_points][2], new_poly size = 0;
         for (11/1=0; 1< poly_siz; 1++)
                     1nt 1c = (:+1) 1. pay .size;
                    Ind ix = poly-poink[i][o], iy=poly-poink[i][i];
                     int xx = poly-poink[x][o], ky = poly-poink[x][i];
                     1 of 1-pos = (x2-x1) + (14-41) - (42-41) + (1x-x);
                     101 k-pos=(x2-x1)*[F4-41)-142-41)*[F4-xi)
```

f (1-pos > =0 44 k-pos > =0	
d	*,
new-ports (new-poly-s	aeJOJ=kx;
new-point [new-poly-	Stac] [1] = xy;
nuw-pdy-sizett;	
j	¥
cue if li-pos < 0 ++ K-posz	0)
1	
new-points [new-po14-9	(30][0] = X_1ntuket(X1, 41, x2, 42)
	וא, וא, וא, וא)
y ··· y ··· y	
nuv-part(new-poly-s	[3c] (1) = y-10 tous cut (x1, y1, x2, 42,
(אן און אין דו און	Kingara Minasofity
new-poly-slac++3	
new-points[new-poly-	swello] = fx;
new-points (new-poly	
new-poly-5/3(++)	\$ **
3	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
cue is (1-608250 1410=60	0520
1	
new-points[new-po	1y_512e][0] = x_10tusculx1, +1, x2,
	7,77, xx, ky);
	14-5181][0]= 4-10 touscut (x1,41, 42, 42
1x, 1y, rx, 1c	
new-poly-\$13(++)	
4	and No. 1 and the World
else	
y	
1.	Teacher's Signature

```
po 14-513 ( = new -pody_513 ()
dorlint 1=0; 10,0014-5131,94+1)
        poly-1201 nx[1][0] = new - points[1][0];
       ban -bolote [][]= nem-bolote [][];
  4
 word toeteld
       g1 charlover (0.0f, 0.0f, 0.0f, 0.0f);
       g | marin mode (GL-1200) ECTEON);
       gleod Identity 17;
        9 1 ortho: (0.0,500.0,0.0,500.0,0,0,500);
        gl(leas (GL. COLOR-BUPPER-BEF);
  void displaying
             101+12%
            g/color of (1.01,0.09,0.0x);
           drawpoly (clippu-point, clippu-si&c);
            310010x3 (00), 1.0x, 0.0x);
           drawpoly (org-poly point, org-polysiac);
```

and the same	Date
Expt. No	Page No
	for (Int- 1:01, icclepous size; 1++)
	int (c = (1+1) 1. clip pul_she;
_	
	clip(poly-point, poly size, cuppu-point(i)(b),
	Clippus-point(1)(1), clippus-point(10)(6),
	Cippus-looious[k][l])
	1
	glcolor3f (0.0f, 0.0f, 10f);
	drawpoly (poly-point, poly-size);
	g(Flush();
5	у У
	int main (int alge, chart algues)
_	
-	pring("120 ra no. groweran);
	scarf (40/0d 4, 4, po 14-512i);
	org-poly-size.
	pring (terre the no, of varies of clipping windown);
	COOL C/ Nojed 1. 4 Wipped ->168)
	for 1 int 1=0; 5 < Wippu_ SIBC; 1+1)
	printf(" (lip vatex n); scart - s(" o/. d y od", 4 cippae-points (i)[0],
	scart - 31 " o/. d y od", 4 clippul-points (1)(0),
	([[]] Prince of the control of the c

4 cupper-points [1)(1);

glutinit (fage, asgu); gurrier Duplaymode (GLUT_SINGLE [GLUT_RGB); glut forthoindowsia e (400, 400); glatherwindowposition (100,100); glut charthandow (polygon clepping in), glut Deplaytine (display); glut man Loop (2) retain 0; (10/4) be well in retains

15 1 12 and to con of, 12 30 1 / 1 well

win in the second of the second of the second

CONTRACTOR ASSOCIATION A

OUTPUT:

