***//19.Smily//***

#include<conio.h>

#include<stdio.h>

#include<graphics.h>

#include<math.h>

#include<dos.h>

void smile(int,int,int);

void plot(int,int,int,int);

void brecircle(int ,int,int);

void plotcircle(int,int,int,int);

void main(){

int xcen,ycen,gd=DETECT,gm,r;

initgraph(&gd,&gm,"C:\\turboc3\\bgi");

brecircle(120,120,90);

brecircle(85,80,12);

brecircle(150,80,12);

smile(118,100,60);

getch();

}

void brecircle(int xc,int yc,int r){

int x,y,p;

x=0;

y=r;

p=1-r;

plotcircle(xc,yc,x,y);

while(x<y){

x++;

if(p<0)

{

p=p+2\*x+1;

}

else

{

y--;

p=p+2\*(x-y)+1;

}

plotcircle(xc,yc,x,y);

}

}

void plotcircle(int xc,int yc,int x,int y){

putpixel(xc+x,yc+y,15);

putpixel(xc-x,yc+y,15);

putpixel(xc+x,yc-y,15);

putpixel(xc-x,yc-y,15);

putpixel(xc+y,yc+x,15);

putpixel(xc-y,yc+x,15);

putpixel(xc+y,yc-x,15);

putpixel(xc-y,yc-x,15);

}

void smile(int xc,int yc,int r){

int x,y,p;

x=0;

y=r;

p=1-r;

plotcircle(xc,yc,x,y);

while(x<y){

x++;

if(p<0){

p=p+2\*x+1;

}

else

{

y--;

p=p+2\*(x-y)+1;

}

plot(xc,yc,x,y);

}

}

void plot(int xc,int yc,int x,int y){

putpixel(xc+x,yc+y,15);

putpixel(xc-x,yc+y,15);

}

***Output:***

