

```
#include <graphics.h>
```

```
#include <stdlib.h>
```

```
#include <stdio.h>
```

```
#include<malloc.h>
```

```
#include<dos.h>
```

```
#include <conio.h>
```

```
int xasp,yasp,gdriver = VGA, gmode=VGAMED, errorcode;
```

```
struct pos
```

```
{
```

```
    int x;
```

```
    int y;
```

```
};
```

```
struct face
```

```
{
```

```
    int radius;
```

```
    struct pos position;
```

```
    int mood;
```

```
};
```

```
typedef struct face face;
```

```
face *face1;
```

```
void getposition()
```

```
{
```

```
    printf("Enter X Co-ordinate:");
```

```
    scanf("%d",&face1->position.x);
```

```
    printf("Enter X Co-ordinate:");
```

```
    scanf("%d",&face1->position.y);
```

```
}
```

```
void drawface()
```

```
{
```

```
    char ch='x';
```

```
    int i=0,x,y,color,r,imgsize,dif;
```

```
    x=face1->position.x=320;
```

```
    y=face1->position.y=180;
```

```
    face1->radius=150;
```

```
    color=15;
```

```
    r=face1->radius;
```

```
    setbkcolor(0);
```

```
    getaspectratio(&xasp,&yasp);
```

```
    setcolor(8);
```

```
    circle(x,y,face1->radius);
```

```
    setfillstyle(1,color);
```

```
    floodfill(x,y,getcolor());
```

```
    draweyes(face1);
```

```
    drawhair(face1);
```

```
    drawmouth(face1);
```

```
    drawnose(face1);
```

```
}
```

```
drawnose()
```

```

{

    int i,x,y,r;
    x=face1->position.x;
    y=face1->position.y;
    r=face1->radius;
    setcolor(0);

    for(i=0;i<2;i++)
    {
        arc(x-160-i,y-r/4,340-i,10,r);
        line(x-20,y+4+i,x+20,y+10+i);
    }
}

draweyes()
{

    int i,x1,x2,y1,y2,r;
    setcolor(0);
    r=face1->radius;
    x1=face1->position.x-r/2;
    y1=face1->position.y-r/4;
    x2=face1->position.x+r/2;
    y2=face1->position.y-r/4;

    setaspectratio(xasp/2,yasp);
    arc(x1,y1-r/8,40,140,r/4);//left eyebrow
    arc(x1,y1-r/8+1,40,140,r/4);//left eyebrow
    arc(x1,y1-r/8+2,40,140,r/4);//left eyebrow
    setaspectratio(xasp,yasp);

```

```

for(i=0;i<2;i++)
{
    arc(x1,y1+i+5,40,140,r/4); //upper left eye
    arc(x1,y1-r/5+i,220,320,r/4); //lower left eye
}

circle(x1,y1-r/12,r/10); //left pupil
setfillstyle(1,0);
floodfill(x1,y1-r/10,getcolor());
setfillstyle(1,WHITE);
floodfill(x1-15,y1-r/6,getcolor());

setaspectratio(xasp/2,yasp);
arc(x2,y2-r/8,40,140,r/4); //right eyebrow
arc(x2,y2-r/8+1,40,140,r/4); //right eyebrow
arc(x2,y2-r/8+2,40,140,r/4); //right eyebrow

setaspectratio(xasp,yasp);
for(i=0;i<2;i++)
{
    arc(x2,y2+i+5,40,140,r/4); //upper right eye
    arc(x2,y2-r/5+i,220,320,r/4); //lower right eye
}

circle(x2,y2-r/12,r/10); //right pupil
setfillstyle(1,0);
floodfill(x2,y2-r/12,getcolor());

setfillstyle(1,WHITE);
floodfill(x2-15,y2-r/6,getcolor());
}

```

```

drawmouth()
{
    int x,y,r,i;

    x=face1->position.x;
    y=face1->position.y+(face1->radius/1.5);
    r=face1->radius;
    setcolor(BLACK);

    if((face1->mood)==1)
        for(i=0;i<4;i++)
            arc(x,y-r/2+i,220,320,r/2);//make happy
    if((face1->mood)==0)
        for(i=0;i<4;i++)
            arc(x,y-i,40,140,r/2);//make sad
}

```

```

drawhair()
{
    int x,y,r;

    setcolor(8);
    setaspectratio(xasp,yasp/1.5);

    r=face1->radius;
    x=face1->position.x-r/2;
    y=face1->position.y-r/3;

    arc(x,y,34,225,100);

    arc(x+r,y,314,138,100);

    setfillstyle(1,RED);
    floodfill(x,y-70,getcolor());
}

```

```

        floodfill(x+r,y-70,getcolor());
        setaspectratio(xasp,yasp);
    }

void main(void)
{
    int i=0;
    initgraph(&gdriver, &gmode,"C:\\TC\\BGI");

    while(!kbhit())
    {
        if((i%2)==1)
        {
            setvisualpage(1);
            setactivepage(0);
            clearviewport();
            face1->mood=0;
            drawface();
            delay(1000);
        }
        else
        {
            setvisualpage(0);
            setactivepage(1);
            clearviewport();
            face1->mood=1;
            drawface();
            delay(300);
        }
        i++;
    }
}

```

```
    getch();  
    closegraph();  
}
```

Output:-

