Computer Graphics and Multimedia
(DCO-511)

Object No: 02

Name of the Object: Write a program in C to make a scenery according to your choice with the help of the built-in-graphics functions.

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PROGRAM-

```
#include<stdio.h>
#include<graphics.h>
#include<conio.h>
#include<dos.h>
void main()
{
int gd=DETECT,gm;
initgraph(&gd,&gm," ");
int maxx=getmaxx();
int maxy=getmaxy();

int i;
for(i=-230;i<650;i++)
{
/*.....*/
setcolor(RED);
setfillstyle(SOLID_FILL,RED);

line(330+i,100,422+i,100);
sector(345+i,99,90,180,15,11);
sector(360+i,99,75,180,17,18);
sector(385+i,99,0,180,26,28);
sector(405+i,99,0,180,18,18);

line(500+i,85,592+i,85);
sector(515+i,84,90,180,15,11);
sector(530+i,84,75,180,17,18);
sector(555+i,84,0,180,26,28);
sector(575+i,84,0,180,18,18);
```

```
/*.....................................*/
setcolor(RED);
line(0,maxy-154,maxx,maxy-154);    //brdige road

setfillstyle(SOLID_FILL,DARKGRAY);
bar(0,maxy-161,maxx,maxy-155);     //to thick the road

setfillstyle(SOLID_FILL,WHITE);

setcolor(RED);
arc(maxx/2,(maxy+280),30,150,(maxx/2+100)); //arc bridge
line(40,maxy/2+85,40,maxy/2+207);  //1st v pillr 40
line(80,maxy/2+85,80,maxy/2+175);   //2nd v pillr 80
line(120,maxy/2+85,120,maxy/2+150);  //3 v pillr 120
line(160,maxy/2+85,160,maxy/2+133);  //4th v pillr 160
line(200,maxy/2+85,200,maxy/2+118);   //5th v pillr 200
line(240,maxy/2+85,240,maxy/2+108);   //6th v pillr 240
line(280,maxy/2+85,280,maxy/2+103);   //7th v pillr 280
line(320,maxy/2+85,320,maxy/2+100);   //mid pillar 320
line(360,maxy/2+85,360,maxy/2+103);   //9th v pillr 360
line(400,maxy/2+85,400,maxy/2+108);   //10th v pillr 400
line(440,maxy/2+85,440,maxy/2+118);   //11th v pillr 440
line(480,maxy/2+85,480,maxy/2+133);   //12th v pillr 480
line(520,maxy/2+85,520,maxy/2+151);   //13th v pillr 520
line(560,maxy/2+85,560,maxy/2+176);   //14th v pillr 560
line(600,maxy/2+85,600,maxy/2+208);   //15th v pillr 600
//line(640,maxy/2+85,640,maxy/2+120);
setcolor(15);
setfillstyle(SOLID_FILL,RED);
```

```
bar(5,maxy/2+85,15,maxy);         //left extreme pillar
bar(625,maxy/2+85,635,maxy);      //right extreme pillar

setfillstyle(SOLID_FILL,WHITE);

//line(8,maxy-8,maxx,maxy-8);
setcolor(RED);
moveto(15,maxy-10);
lineto(40,maxy/2+85); //to 1st up
lineto(80,maxy/2+175); //to 2nd dwn
lineto(120,maxy/2+85); //to 3rd up
lineto(160,maxy/2+133); //to 4th dwn
lineto(200,maxy/2+85); //to 5th up
lineto(240,maxy/2+108); //to 6th dwn
lineto(280,maxy/2+85); //to 7th up
lineto(320,maxy/2+100);       //to mid dwn
lineto(360,maxy/2+85); //to 9th up
lineto(400,maxy/2+108); //to 10th dwn
lineto(440,maxy/2+85); //to 11th up
lineto(480,maxy/2+133); //to 12th dwn
lineto(520,maxy/2+85); //to 13th up
lineto(560,maxy/2+176); //to 14th dwn
lineto(600,maxy/2+85); //to 15th up
lineto(625,maxy-8);   //to right extrm pillar dwn

moveto(15,maxy/2+85);
lineto(40,maxy/2+207);          //to 1st dwn
lineto(80,maxy/2+85);           //to 2nd up
lineto(120,maxy/2+150);         //to 3rd dwn
lineto(160,maxy/2+85);          //to 4th up
```

```
lineto(200,maxy/2+118);        //to 5th dwn
lineto(240,maxy/2+85);         //to 6th up
lineto(280,maxy/2+103);        //to 7th dwn
lineto(320,maxy/2+85);     //to mid up
lineto(360,maxy/2+103);        //to 9th dwn
lineto(400,maxy/2+85);         //to 10th up
lineto(440,maxy/2+118);        //to 11th dwn
lineto(480,maxy/2+85);         //to 12th up
lineto(520,maxy/2+151);        //to 13th dwn
lineto(560,maxy/2+85);         //to 14th up
lineto(600,maxy/2+208);        //to 15th dwn
lineto(625,maxy/2+85);     //to right pillar up
setcolor(RED);


                        /* TRAIN*/

                        /*last boogie of train*/

setcolor(RED);                  //LINE BRWN
setfillstyle(SOLID_FILL,RED);       //BRSH BRWN
rectangle(0+i,maxy-180,16+i,maxy-166);    //BOX
line(0+i,maxy-171,16+i,maxy-171);         //BOX DIVIDE
floodfill(3+i,maxy-170,RED);          //BOX COLOR UPR

setcolor(BLUE);                 //LINE BLUE
setfillstyle(SOLID_FILL,BLUE);         //BRSH BLUE

pieslice(4+i,maxy-165,0,360,3);              //first wheel of last boogie
pieslice(12+i,maxy-165,0,360,3);           //second wheel
```

```
line(16+i,maxy-170,23+i,maxy-170);     //wires b/w last and sec last
line(16+i,maxy-172,23+i,maxy-172);


                    /*.....secnd last boogie.....*/

setcolor(RED);
setfillstyle(SOLID_FILL,RED);
rectangle(23+i,maxy-180,53+i,maxy-166);   //secnd last boogie
line(23+i,maxy-177,53+i,maxy-177);       //divide line
floodfill(25+i,maxy-172,RED);
setcolor(BLUE);
setfillstyle(SOLID_FILL,BLUE);

pieslice(32+i,maxy-165,0,360,3);        //first wheel
pieslice(44+i,maxy-165,0,360,3);        //second wheel

line(53+i,maxy-170,60+i,maxy-170);      //wire b/w
line(53+i,maxy-172,60+i,maxy-172);


                    /*.....third boogie.....*/

setcolor(RED);
setfillstyle(SOLID_FILL,RED);
rectangle(60+i,maxy-180,90+i,maxy-166);      //box
line(60+i,maxy-177,90+i,maxy-177);          //divide box
floodfill(63+i,maxy-172,RED);
setcolor(BLUE);
```

```
setfillstyle(SOLID_FILL,BLUE);

pieslice(69+i,maxy-165,0,360,3);
pieslice(81+i,maxy-165,0,360,3);

setcolor(BLUE);
rectangle(90+i,maxy-172,97+i,maxy-170); // b/w wires


                    /*......fourth boogie......*/

setcolor(RED);
setfillstyle(SOLID_FILL,RED);
rectangle(97+i,maxy-180,127+i,maxy-166);      //BOX
line(97+i,maxy-177,127+i,maxy-177);
floodfill(100+i,maxy-172,RED);
setcolor(BLUE);
setfillstyle(SOLID_FILL,BLUE);

pieslice(106+i,maxy-165,0,360,3);
pieslice(118+i,maxy-165,0,360,3);

setcolor(BLUE);
rectangle(127+i,maxy-172,134+i,maxy-170);      //wires


                        /* 5th boogie */

setcolor(RED);
setfillstyle(SOLID_FILL,RED);
```

```
rectangle(134+i,maxy-180,164+i,maxy-166);   //5th boogie
line(134+i,maxy-177,164+i,maxy-177);
floodfill(137+i,maxy-172,RED);          //5th bogie upr sctn  color

setcolor(BLUE);                         //lineblue
setfillstyle(SOLID_FILL,BLUE);              //brush blue

pieslice(143+i,maxy-165,0,360,3);       //wheel
pieslice(154+i,maxy-165,0,360,3);

setcolor(BLUE);
rectangle(164+i,maxy-172,171+i,maxy-170);      //wires b/w


                        /*ENGINE*/

setcolor(BROWN);
setfillstyle(SOLID_FILL,BROWN);
rectangle(171+i,maxy-184,183+i,maxy-166);       //ENGINE bck side
floodfill(173+i,maxy-172,BROWN);

setcolor(BLUE);                         //lineblue
setfillstyle(SOLID_FILL,BLUE);


rectangle(168+i,maxy-186,185+i,maxy-184);     //bckside roof

setcolor(RED);
setfillstyle(SOLID_FILL,RED);
        rectangle(183+i,maxy-178,199+i,maxy-166);   //frontside
```

```
        floodfill(185+i,maxy-172,RED);
setcolor(BLUE);                 //lineblue
setfillstyle(SOLID_FILL,BLUE);


        pieslice(176+i,maxy-167,0,360,5);       //BIG WHEEL
        pieslice(186+i,maxy-165,0,360,3);        //wheel
        pieslice(194+i,maxy-165,0,360,3);

        pieslice(199+i,maxy-172,0,90,5);        //engine head
        pieslice(199+i,maxy-172,270,360,5);

 bar(187+i,maxy-189,189+i,maxy-178);          //pipe for smog


                        /*..... SMOG..... */

setcolor(LIGHTGRAY);
line(187+i,maxy-191,189+i,maxy-191);
line(186+i,maxy-193,188+i,maxy-193);
line(185+i,maxy-195,187+i,maxy-195);
line(182+i,maxy-197,186+i,maxy-197);
line(182+i,maxy-195,186+i,maxy-193);
line(178+i,maxy-199,184+i,maxy-199);
line(176+i,maxy-195,180+i,maxy-195);
line(176+i,maxy-201,180+i,maxy-201);
line(176+i,maxy-199,180+i,maxy-199);
line(176+i,maxy-198,180+i,maxy-198);

 delay(50);
```

```
  setbkcolor(9);
 cleardevice();
 }
getch();
}
```

OUTPUT-