Implementation of Graphical objects

AIM:-

To implement a graphical objects in c.

PROGRAM:-

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

void drawcar (void)
{
    int i, j=0, gd=DETECT, gm;

    for (i=0 ; i<=420 ; i=i+10)
    {
        setcolor (RED);
        line (0+i ; 300, 210+i, 300);
        line (50+i ; 300, 75+i, 270);
        line (75+i ; 270, 150+i, 270);
        line (150+i ; 270, 165+i, 300);
        line (0+i ; 300, 0+i, 330);
        line (210+i ; 300 + 210+i, 330);
        circle (65+i ; 330, 15);
        circle (65+i ; 330, 2);
        circle (145+i, 330, 15);
        circle (145+i, 330, 2);
```

```
        line (0+i, 330, 50+i, 330);
        line (80+i, 330, 130+i, 330);
        line (210+i, 330, 160+i, 330);
        delay (100);
        cleardevice();
    }
    getch();
    closegraph();
}
int main()
{
    drawcar();
    return 0;
}
```

RESULT:

Implementation of graphical object was done successfully.

EX : 2

Implementation DDA line drawing algorithm

AIM :

To implement DDA line drawing algorithm in C.

ALGORITHM :-

left to right

```
if (m <=1)
{
    x_{k+1} = x_k + 1;
    y_{k+1} = y_k + m;
}
else
{
    x_{k+1} = x_k + 1/m;
    y_{k+1} = y_k + 1;
}
```

Right to left :

```
if (m <=1)
{
    x_{k+1} = x_k - 1;
    y_{k+1} = y_k - m;
}
else
{
    x_{k+1} = x_k - 1/m;
    y_{k+1} = y_k - 1;
}
```

PROGRAM:-

```
#include <iostream.h>
#include <conio.h>
#include <graphics.h>
#include <math.h>
void ddal( int x1, int y1, int x2, int y2)
{
    float dx, dy, len, xi, yi, i=1;
    dx = x2-x1;
    dy = y2-y1;
    if (abs(dx)>=abs(dy))
        len=abs(dx);
    else
        len=abs(dy);
    xi = x1+0.5;
    yi = x1+0.5;
    putpixel( xi, yi, WHITE);
    dx=(dx)/len;
    dy=(dy)/len;
    while (i<=len)
    {
        xi = xi+dx;
        yi =yi+dy;
        putpixel (xi, yi, WHITE);
        i++;
    }
}
```

```
void main()
{
    int gd = DETECT, gm;
    initgraph( &gd, &gm, "
    dda( 100, 100, 300, 100 );
    dda( 100, 100, 200, 300 );
    dda( 300, 100, 200, 300 );
    dda( 100, 270, 200, 50 );
    dda( 300, 270, 200, 50 );
    dda( 100, 270, 300, 270 );
    getch();
    closegraph();
}
```

RESULT:

Thus the implementation of DDA line drawing algorithm was done successfully.