

Graphics in C



How to start?



1. Initialize the graphics mode:

```
#include<graphics.h>
void main()
{
int gdriver=DETECT,gmode;
initgraph(&gdriver,&gmode,"C:\\TC\\BGI");
.....
closegraph();
}
```

- We must know the window size which varies from on screen to another.
- We deal with the window as an x-y grid.
- The value at each point is called a pixel.
- We can reach any pixel with its (x,y) coordinate
- Pixel at :
 - (0,0) is at the top-left corner
 - (x,0) is at the top-right corner
 - (0,y) is at the bottom-left corner
 - (x,y) is at the bottom-right corner

∞ To get the size of the window used:

`getmaxx`-----to get the largest x-coordinate

`getmaxy`-----to get the largest y-coordinate

∞ Before we start drawing, we must know the available color palette available.

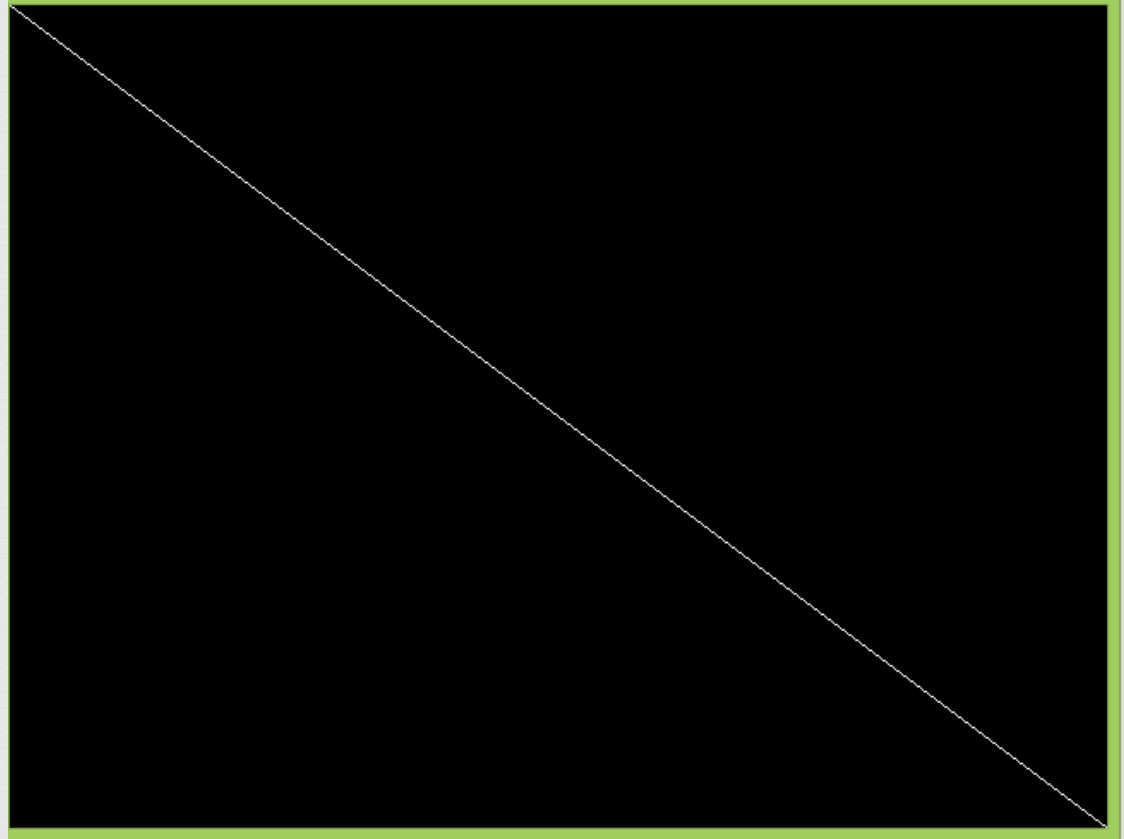
∞ We have 16 different color available and they are as follows:

COLOR	VALUE
BLACK	0
BLUE	1
GREEN	2
CYAN	3
RED	4
MAGENTA	5
BROWN	6
LIGHTGRAY	7

COLOR	VALUE
DARKGRAY	8
LIGHTBLUE	9
LIGHTGREEN	10
LIGHTCYAN	11
LIGHTRED	12
LIGHTMAGENTA	13
YELLOW	14
WHITE	15

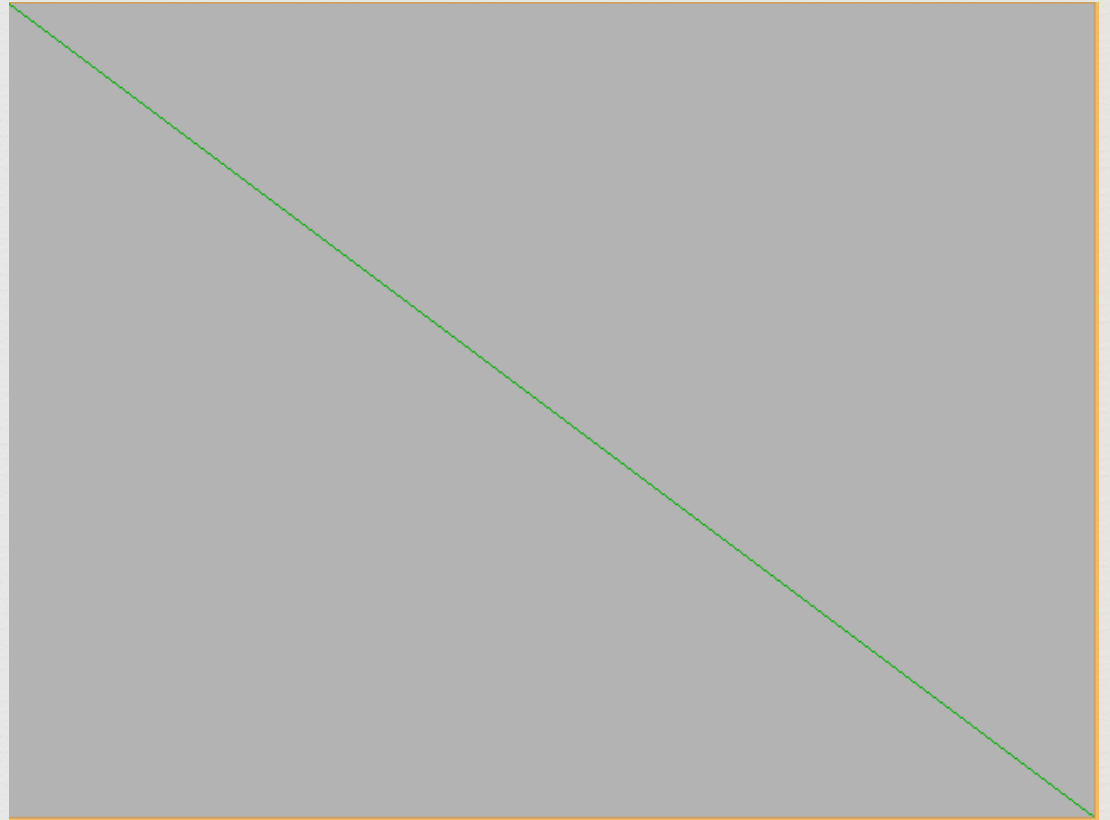
How to draw a line

```
#include<stdio.h>
#include<conio.h>
#include<graphics.h>
void main()
{
int gdriver = DETECT,gmode;
int x,y;
    initgraph(&gdriver,&gmode,"C:\\NTC\\BGI");
    x=getmaxx();
    y=getmaxy();
    line(0,0,x,y);
getch();
}
```



How to draw a line and change the background color

```
#include<stdio.h>
#include<conio.h>
#include<graphics.h>
void main()
{
int gdriver = DETECT,gmode;
int x,y;
initgraph(&gdriver,&gmode,"C:\\NTC\\NBGI");
x=getmaxx();
y=getmaxy();
setbkcolor(LIGHTGRAY);
setcolor(GREEN);
line(0,0,x,y);_
getch();
}
```



How to draw other shapes

arc(x,y,stang,endang,r) - - - draws an arc from **stang** to **endang** with the centre **(x,y)** and radius **r**,

circle (x,y,r) - - - - - draws a circle with centre **(x,y)** and radius **r**,

ellipse (x,y,stang,endang,xr,yr) - - - draws an ellipse from **stang** to **endang** with the centre **(x,y)** and **xr** horizontal radius and **yr** vertical radius,

rectangle (x1,y1,x2,y2) - - - - - draws a rectangle with a diagonal **(x1,y1)** till **(x2,y2)** ,

How to fill in your drawings with patterns

setfillstyle(fillpattern,filcolor)

available fillpatterns :

0 :EMPTY_FILL	1: SOLID_FILL	2: LINE_FILL- - -
3:LTSLASH_FILL //	4: SLASH_FILL //	5: BKSLASH_FILL\\
6:LTBKSLASH_FILL\\	7: HATCH_FILL	8: XHATCH_FILL
9: INTERLEAVE_FILL	10:WIDE_DOT_FILL	
11:CLOSE_DOT_FILL		

floodfill(x,y,border)----- fills with the selected pattern the figure contained in (x,y) and bounded by the line with the color **border**

Example

```
EX1_LIN1.CPP
#include<stdio.h>
#include<conio.h>
#include<graphics.h>
void main()
{
int gdriver = DETECT,gmode;
int x,y;
    initgraph(&gdriver,&gmode,"C:\\ATC\\BGI");
    x=getmaxx();
    y=getmaxy();
    setcolor(RED);
    rectangle(100,100,250,300);
    setfillstyle(SLASH_FILL,CYAN);
    floodfill(150,150,RED);
getch();
}
```

