Myro Graphics Reference

Generating Colors: color_rgb(red, green, blue) : parameter value range: 0..255

GraphWin:

GraphWin(title, width, height) - Constructor
setBackground(color)
close()
isClosed()
getMouse()
setCoords(xLL, yLL, xUR, yUR) - When initially created, the graphics window coordinates range from 0,0 (upper left corner) to width-1,height-1 (lower right corner). This function can be used to change the coordinates of the window (so, for example, it ranges from 0,0 to 1,1, or, to position the origin at the center, from (-1,-1 to 1,1). Note that you may need to undraw and re-draw objects after a coordinate change.

Myro Graphics Objects Inherited Methods:
Methods inherited by all graphics objects:

setFill(color)
setOutline(color)
setWidth(pixels)
draw(aGraphWin) - Used to draw the object onto a graph window. Once drawn, updates are automatic.
undraw() - Removes the object from a graph window.
move(dx, dy) - Relative to current location.
clone() - Returns a reference to a clone of the object.

Point
Point(x, y) - Constructor
getX()
getY()

Line
Line(point1, point2) - Constructor
getCenter() - returns a point at the line center.
setArrow("first" / "last" / "both" / "none")
getP1()
getP2()

Circle
Circle(centerPoint, radius) - Constructor
getCenter()
getRadius()

Oval
Oval(point1, point2) - Constructor
getCenter()
getP1()
getP2()

Rectangle
Rectangle(point1, point2)
getCenter()
getP1()
getP2()

Image
Image(centerPoint, imageFileName) - Constructor

Polygon

Polygon(point1, point2, ...) - Constructor (individual points)

Polygon([p1,p2,p3...]) - Constructor (list of points)

getPoints() - Returns a list of points.

Text

Text(anchorPoint, string) - Constructor

setText(string)

getText()

getAnchor()

setFace(family)

setSize(point)

setStyle('normal'/'bold'/'italic')

setTextColor(color)

Example Programs:

```
#Draw SIN over X from -4 to 4
from myro import *
from math import sin

#Create a new Window
myWin = GraphWin("Sine",500,100)

#Set the coordinate system appropriate for
displaying this functions.
myWin.setCoords(-4.0,-1.0, 4.0,1.0)

yAxis = Line( Point(0.0,-1), Point(0.0,1) )
yAxis.draw(myWin)

xAxis = Line( Point(-4.0, 0), Point(4, 0) )
xAxis.draw(myWin)

for n in range(0,400):
    x = (n - 200) / 50.0
    y = sin(x)
    p = Point(x,y)
    p.draw(myWin)
    wait(0.01)
```

```
#Bouncing Ball
from myro import *

aWindow = GraphWin("Pong", 500,500)

xPos = 50
yPos = 50
xDelta = -2
yDelta = 5
aBall = Circle( Point(xPos,yPos), 10)
aBall.draw(aWindow)

aBall.setFill( color_rgb(255,0,0) )

while timeRemaining(60):

    if (0 > xPos) or (500 < xPos):
        xDelta = - xDelta

    if (0 > yPos) or (500 < yPos):
        yDelta = - yDelta


    xPos = xPos + xDelta
    yPos = yPos + yDelta

    aBall.move(xDelta, yDelta)
    wait(0.01)
```