Ensemble de Mandelbrot

Dessin d'une fractale : l'ensemble de Mandelbrot

<sxh python; title : ensemble_mandelbrot.py> #!/usr/bin/env python # -*- coding: utf-8 -*- # version un peu aménagée du travail de BF, ba2 chimie 2012-2013 # ref : http://fr.wikipedia.org/wiki/Ensemble_de_Mandelbrot

from Tkinter import * from random import randrange

def mandel2(c):

```
    z=0
    for h in range(0,50):            #nombre d'iteration
        z = z**2 + c
        if abs(z) > 2:               #abs(z) correspond au module de z
            break                    #arrête l'execution du for si la condition est
remplie
    if abs(z) >= 2:
        return False
    else:
        return True
```

root = Tk() w = Canvas(root, width=600, height=600, background='white') w.pack()

for hx in range(0,600,50):

```
    w.create_line(0,hx,600,hx,fill="blue")
```

for hy in range(0,600,50):

```
    w.create_line(hy,0,hy,600,fill="blue")
```

print ("Initializing…")

for x in range(0,600):

```
    real = x / 200.0 -2
    for y in range(0,600):
        img = y / 200.0 -1.5
        c = complex(real, img)
        if mandel2(c):
            w.create_line(x,600-y,x+1,601-y,fill="black")
            w.pack()
```

print ("Complete!")

root.mainloop()

</sxh>

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Last update: **2013/11/28 13:48**