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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