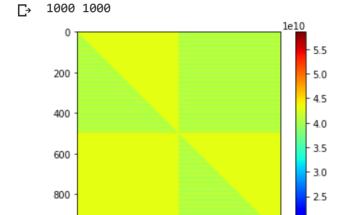
```
import numpy
import math
from math import cos, sin,pi,sqrt
from numpy import linspace
import matplotlib.pyplot as plt
```

```
def f(x):
 f = cos(x)
 return f
def f2(x):
 f2= sin(x)
 return f2
N=10
a=0
b=2
h=((b-a)/N)
E0=8.85e-12
lda=5
n=500
Ex=linspace(-500,500,1000)
Ey=linspace(-500,500,1000)
I=numpy.empty([len(Ex),len(Ey)],numpy.float) #Creamos un arreglo que no contenga valores inicializado
print(len(Ex),len(Ey))
for i in range(-500,500,1):
    a=i
    b=i+1
   h=((b-a)/N)
   fa=f(a)
    fb=f(b)
    acum=0
    for k in range(2,N,2):
        acum=(f(a+(h*k)))+acum
    acum2=0
    for k in range(1,N,2):
        acum2=(f(a+(h*k)))+acum2
    integral=0
    integral=(h/3)*(fa+fb+(acum*2)+(acum*2*4))
    Ex[i]=(lda/(4*pi*E0))*(integral)
    for j in range(-500,500,1):
        acum3=0
        f2a=f2(a)
        f2b=f2(b)
        for k in range(2,N,2):
            acum3=(f2(a+(h*k)))+acum3
```



600

800

200