GEOCODING

1: SERVICES

yahoo

google

https://developers.google.com/maps/documentation/geocoding/intro

here

datasciencetoolkit

http://www.datasciencetoolkit.org/developerdocs#street2coordinates

```
import urllib.request
import json

with
urllib.request.urlopen('http://www.datasciencetoolkit.org/maps/api/geocode/json?sens
or=false&address=Alalia') as response:
        html = response.read().decode('utf-8')
        js = json.loads(html)
        print(js['results'][0]['geometry']['location'])
```

1: PYTHON LIBRARIES

https://github.com/geopy/geopy

https://pypi.python.org/pypi/geocoder

…

GUI

1: PYSIDE

https://wiki.qt.io/PySide

```
# Import PySide classes
import sys
from PySide.QtCore import *
from PySide.QtGui import *

# Create a Qt application
app = QApplication(sys.argv)
# Create a Label and show it
label = QLabel("Hello World")
label.show()

# Enter Qt application main loop
app.exec_()
sys.exit()
```

2. TKINTER

http://effbot.org/tkinterbook/tkinter-classes.htm

hello world:

```
from tkinter import *

master = Tk()
w = Label(master, text="Hello, world!")
w.pack()
master.mainloop()
```

button:

```
from tkinter import *

def print_hello_world(a):
print('Hello world!')

master = Tk()
w = Button(master, text="say Hello, world!", command=print_hello_world)
w.pack()
master.mainloop()
```

scale:

```
from tkinter import *

def print_slider_value():
print(scale.get())

master = Tk()
scale = Scale(master, from_=0, to=50, length=600, tickinterval=5, orient=HORIZONTAL)
scale.set(8)
scale.pack()

button = Button(master, text="print slider value", command=print_slider_value)
button.pack()

master.mainloop()
```

inside class:

```
import tkinter as tk

class Application(tk.Frame):
    def __init__(self, master=None):
        tk.Frame.__init__(self, master)
        self.pack()
```

```
            self.createWidgets()

        def createWidgets(self):
            self.hi_there = tk.Button(self)
            self.hi_there["text"] = "Hello World\n(click me)"
            self.hi_there["command"] = self.say_hi
            self.hi_there.pack(side="top")

            self.QUIT = tk.Button(self, text="QUIT", fg="red",
                                                command=root.destroy)
            self.QUIT.pack(side="bottom")

        def say_hi(self):
            print("hi there, everyone!")

    root = tk.Tk()
    app = Application(master=root)
    app.mainloop()
```

```
import tkinter
import urllib.request
import json

cities = ['Warszawa', 'Singapur', 'Perth', 'Bogota']
coords = []


for city in cities:
    • with
      urllib.request.urlopen('http://www.datasciencetoolkit.org/maps/api/geocode/json?sensor=false&addres
      s=' + city) as response:
      html = response.read().decode('utf-8')
      js = json.loads(html)
      coords.append(js['results'][0]['geometry']['location'])


master = Tk()


canvas1 = Canvas(master, width=360, height=180)

print(coords)

for coord in coords:
      canvas1.create_rectangle(coord['lat'] + 180 ,coord['lng'] + 90, coord['lat'] + 5,coord['lng'] + 5)

canvas1.pack()
```

```
master.mainloop()
```