Tkinter library

We will use **Tkinter** library for **GUI** in python

http://www.tutorialspoint.com/python/python_gui_programming.html

Have a look to following widgets(Use at least two in your application)

https://docs.python.org/2/library/ttk.html

Simple window creation :

```
import Tkinter
top = Tkinter.Tk()
# Code to add widgets will go here...
top.mainloop()
```

Giving a fix size to box:

```
top.geometry('400x400')
```

Make a fixed size box:

```
top.resizable(width=False, height=False)   # it will remove the
maximize icon from the main window
```

Type of layouts

- Pack
- Grid
- place

Using Pack Geometry

```
from Tkinter import *
root = Tk()
root.geometry('400x400')
frame = Frame(root)
frame.pack()
```

```
bottomframe = Frame(root)
bottomframe.pack(side=BOTTOM)

redbutton = Button(frame, text="Red", fg="red")
redbutton.pack(side=LEFT)

greenbutton = Button(frame, text="Brown", fg="brown")
greenbutton.pack(side=LEFT)

bluebutton = Button(frame, text="Blue", fg="blue")
bluebutton.pack(side=LEFT)

blackbutton = Button(bottomframe, text="Black", fg="black")
blackbutton.pack(side=BOTTOM)

root.mainloop()
```

Using Place Geometry

```
from Tkinter import *

class DrawLeftFrame:
   def __init__(self, root):
        fm = Frame(root, bg="blue")
        fm.place(x=0, y=0, width=150, height=500)


class DrawCenterFrame:
   def __init__(self, root):
        fm = Frame(root, bg="red")
        fm.place(x=150, y=0, width=400, height=350)


class DrawBottomFrame:
   def __init__(self, root):
        fm = Frame(root, bg="green")
        fm.place(x=150, y=350, width=400, height=150)

root = Tk()
left = DrawLeftFrame(root)
center = DrawCenterFrame(root)
bottom = DrawBottomFrame(root)
root.geometry('500x500')
root.mainloop()
```

A comprehensive example related to application

```
from Tkinter import *
import random


# handle selected client
def callback(event):
   print "clicked at", event.x, event.y


# Handle enter
def text_place_handler(event):
   print "clicked at", event.x, event.y


def create_client_module(parent):
   for i in range(10):
       ct = [random.randrange(256) for x in range(3)]
       brightness = int(round(0.299 * ct[0] + 0.587 * ct[1] + 0.114 * ct[2]))
       ct_hex = "%02x%02x%02x" % tuple(ct)
       bg_colour = '#' + "".join(ct_hex)
       l = Label(parent,
                 text="ABC",
                 fg='White' if brightness < 120 else 'Black',
                 bg=bg_colour)
       l.bind("<Button-1>", callback)
       l.place(x=20, y=30 + i * 30, width=120, height=25)


class DrawBottomFrame:
   def __init__(self, root):
       fm = Frame(root, bg="green")
       fm.place(x=150, y=350, width=350, height=150)
       text_place = Text(fm, bg="white")
       text_place.place(x=5, y=5, width=340, height=140)
       text_place.bind("<Enter>", text_place_handler)


root = Tk()
left_frame = Frame(root, bg="blue")
left_frame.place(x=0, y=0, width=150, height=500)
create_client_module(left_frame)

center_frame = Frame(root, bg="red")
center_frame.place(x=150, y=0, width=350, height=350)

# We can use class to initiate a frame ot ui element
bottom = DrawBottomFrame(root)
root.geometry('500x500')
root.resizable(width=False, height=False)
root.mainloop()
```