from tkinter import \*  
from tkinter import messagebox  
  
class Main():  
 def \_\_init\_\_ (self):  
 self.root = Tk()  
 self.root.geometry("500x500")  
 self.root.resizable(0,0)  
  
 def run(self):  
 self.root.mainloop()  
  
class Widgets():  
 def \_\_init\_\_(self):  
 self.frame = Frame(main.root, width=500, height=500,bg = "orange")  
 self.frame.place(x=0,y=0)  
 self.txt = Text(self.frame, width=20, height=10, wrap=WORD)  
 self.txt\_x = 165  
 self.txt\_y = 120  
 self.txt.place(x=self.txt\_x,y=self.txt\_y)  
 self.lbactions = (u'\u2190',u'\u2191',u'\u2192',u'\u2193')  
 self.lbVar = StringVar(value=self.lbactions)  
 self.lb = Listbox(self.frame, listvariable=self.lbVar, font="Verdana 13", width=2, height=4)  
 self.lb.place(x=30,y=405)  
 self.rbVar = IntVar(value=0)  
 self.rb1 = Radiobutton(self.frame, text = "Левая и верхняя", value = 0, variable=self.rbVar, font = "Verdana 13", bg = "orange")  
 self.rb2 = Radiobutton(self.frame, text="Правая и нижняя", value=1, variable=self.rbVar, font = "Verdana 13", bg = "orange")  
 self.rb1.place(x=65,y=400)  
 self.rb2.place(x=65,y=430)  
 self.label = Label (self.frame, text =100\*"\_",fg="green", bg= "orange")  
 self.label.place(x=0,y=380)  
 self.startbutton = Button(self.frame, text = "Пуск", bg="lime green",font = "Verdana 11", width =20, command = lambda:self.move())  
 self.startbutton.place(x=65, y=463)  
  
  
 def move(self):  
 self.direction = ""  
 self.dx = ""  
 self.txt.update\_idletasks()  
 print(self.txt.winfo\_reqwidth(), self.txt.winfo\_reqheight())  
 #rbVar value: 0 - upper-left, 1px move  
 #rbVar value: 1 - bottom-right 1line/1symbol move  
 #lbVar values refer to direction 2190 - left,2191 - up, 2192 - right, 2193 - down  
 #txt box size x = 164 approx y = 164 (one symbol/line size calculated by division)  
  
 if self.lb.curselection() == ():  
 messagebox.showerror(title="Ошибка", message="Выберете направление перемещения редактора текста.")  
  
 else:  
 self.txt.delete("1.0", "end")  
 if self.rbVar.get() == 0:  
 self.dx = "на 1 пиксель"  
 if self.lb.curselection()[0] == 0:  
 self.direction = "влево"  
 self.txt.update\_idletasks()  
 self.txt.place(x=self.txt\_x-1,y=self.txt\_y, width = self.txt.winfo\_width()+1)  
 self.txt\_x-=1  
 self.txt.insert(INSERT, "Границы редактора были изменены "+self.direction+" "+self.dx)  
 if self.lb.curselection()[0] == 1:  
 self.direction = "вверх"  
 self.txt.update\_idletasks()  
 self.txt.place(x=self.txt\_x,y=self.txt\_y-1, height = self.txt.winfo\_height()+1)  
 self.txt\_y-=1  
 self.txt.insert(INSERT, "Границы редактора были изменены " + self.direction + " " + self.dx)  
 if self.lb.curselection()[0] == 2:  
 self.direction = "вправо"  
 self.txt.update\_idletasks()  
 self.txt.place(x=self.txt\_x+1,y=self.txt\_y, width = self.txt.winfo\_width()-1)  
 self.txt\_x+=1  
 self.txt.insert(INSERT, "Границы редактора были изменены " + self.direction + " " + self.dx)  
 if self.lb.curselection()[0] == 3:  
 self.direction = "вниз"  
 self.txt.update\_idletasks()  
 self.txt.place(x=self.txt\_x,y=self.txt\_y+1, height = self.txt.winfo\_height()-1)  
 self.txt\_y+=1  
 self.txt.insert(INSERT, "Границы редактора были изменены " + self.direction + " " + self.dx)  
 if self.rbVar.get()==1:  
 if self.lb.curselection()[0] == 0:  
 self.direction = "влево"  
 self.dx = "на 1 символ"  
 self.txt.update\_idletasks()  
 self.txt.place(x=self.txt\_x,y=self.txt\_y, width = self.txt.winfo\_width()-8)  
 self.txt.insert(INSERT, "Границы редактора были изменены " + self.direction + " " + self.dx)  
 if self.lb.curselection()[0]==1:  
 self.direction = "вверх"  
 self.dx = "на 1 строку"  
 self.txt.update\_idletasks()  
 self.txt.place(x=self.txt\_x,y=self.txt\_y, height = self.txt.winfo\_height()-16)  
 self.txt.insert(INSERT, "Границы редактора были изменены " + self.direction + " " + self.dx)  
 if self.lb.curselection()[0] == 2:  
 self.direction = "вправо"  
 self.dx = "на 1 символ"  
 self.txt.update\_idletasks()  
 self.txt.place(x=self.txt\_x,y=self.txt\_y, width = self.txt.winfo\_width()+8)  
 self.txt.insert(INSERT, "Границы редактора были изменены " + self.direction + " " + self.dx)  
 if self.lb.curselection()[0] == 3:  
 self.direction = "вниз"  
 self.dx = "на 1 строку"  
 self.txt.update\_idletasks()  
 self.txt.place(x=self.txt\_x,y=self.txt\_y, height = self.txt.winfo\_height()+16)  
 self.txt.insert(INSERT, "Границы редактора были изменены " + self.direction + " " + self.dx)  
  
  
  
  
main = Main()  
widgets = Widgets()  
main.run()