Functions and Attributes used

1. Main window - tkinter.Tk()

*Syntax: <window\_name> = Tk(screenName=None, baseName=None, className='Tk', useTk=1, sync=0, use=None)*

**Docstring:** Toplevel widget of Tk which represents mostly the main window of an application. It has an associated Tcl interpreter. It is used to create the main-window for our application.

*<window\_name>.mainloop()* is used to keep this main window open and running until the close button is pressed.

*<window\_name>minsize() is used to set the minimum size of the main window that it has/that it opens with when we first execute the program. It takes arguments of width and height.*

*<window\_name>.title()* is used to set the title of the window in the title bar. It takes a single argument as a string.

Exampled:

*root = tkinter.Tk()*

*root mainloop()*

this creates a main window named root that stays open until the close button is pressed. (due to main-loop)

**Description of Attributes:**

It returns a new Toplevel widget on screen SCREENNAME. A new Tcl interpreter will be created. BASENAME will be used for the identification of the profile file (see readprofile). It is constructed from sys.argv[0] without extensions if None is given. CLASSNAME is the name of the widget class.

1. Display Labels – tkinter.Label()

Labels creates a widget that can be used to display text and bitmaps on a window

*Syntax: <label\_name> = Label (master=None, cnf={}, \*\*kw)*

***Some of the arguments that may be passed in Label () are: -***

*activebackground, activeforeground, anchor, background, bitmap, borderwidth, cursor, disabledforeground, font, foreground, highlightbackground, highlightcolor, highlightthickness, image, justify, padx, pady, relief, takefocus, text, textvariable, underline, wraplength*

text argument takes a string and I used to display text on the Label.

Example:

*L1 = = Label(root,text="Physics Laboratory").grid(row=cpr,column=0)*

This creates a Label of name L1 on the main-window (named root) displaying the name “Physics Laboratory”). The .grid() method is used to add the lable onto the main-window.

\*Requires an addition pack() or grid() method to be added to a window.

1. Entry Boxes – tk.Entry()

*Syntax:*

<variable\_name> = tkinter.Entry()

Construct an entry widget with the parent window.

**Valid resource names (Arguments)** : background, bd, bg, borderwidth, cursor, exportselection, fg, font, foreground, highlightbackground, highlightcolor, highlightthickness, insertbackground, insertborderwidth, insertofftime, insertontime, insertwidth, invalidcommand, invcmd, justify, relief, selectbackground, selectborderwidth, selectforeground, show, state, takefocus, textvariable, validate, validatecommand, vcmd, width, xscrollcommand.

Example:

*E1 = Entry(root,textvariable=bc\_isa1)*

Creates and entry box named E1 on the main window (named root here) and accepts the input from the use before storing it in a variable (with argument name textvariable – named bc\_isa1)

E1.pack() adds the widget to the mainwindow

1. Button Widgets – tkinter.Button()

Syntax:

*<variable\_name> = tkinter.Button()*

Construct a button widget with the parent MASTER.

**WIDGET-SPECIFIC OPTIONS:**

command, compound, default, height, overrelief, state, width.

Example:

*B1 = Button(root,text='Calculate',command=lambda: show(txt,report))*

Here we create a button named B1 that is packed onto the main-window (named root), the command that is performed upon the click of the widget is signified using ‘command’ keyword argument (the command here is defined by a lambda function)

B1.pack() will add this widget to the main-window

1. Text Box – tkinter.Text()

**Docstring:** Text widget which can display text in various forms. It is used to display text in a text box widget on a window.

**Allowed Arguments**: autoseparators, height, maxundo, spacing1, spacing2, spacing3, state, tabs, undo, width, wrap.

Example:

txt = Text (root, height = 6, width=70)

this creates a Text (textbox) object of variable name on the mainwindow (named root here) of height 6 and width 70.

txt.pack() will pack this widget onto the main-window