

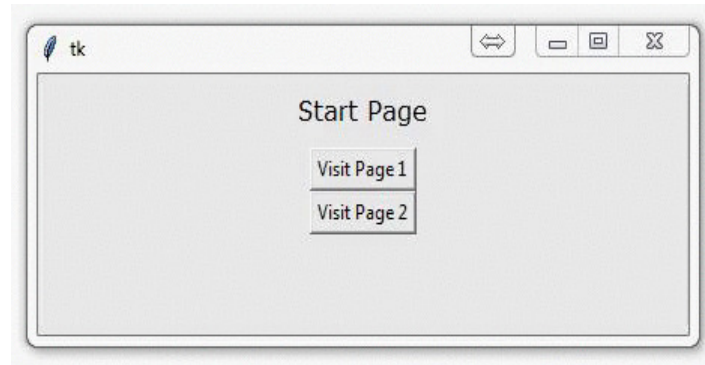
GUI programming on Python with tkinter

no-title.victordomingos.com

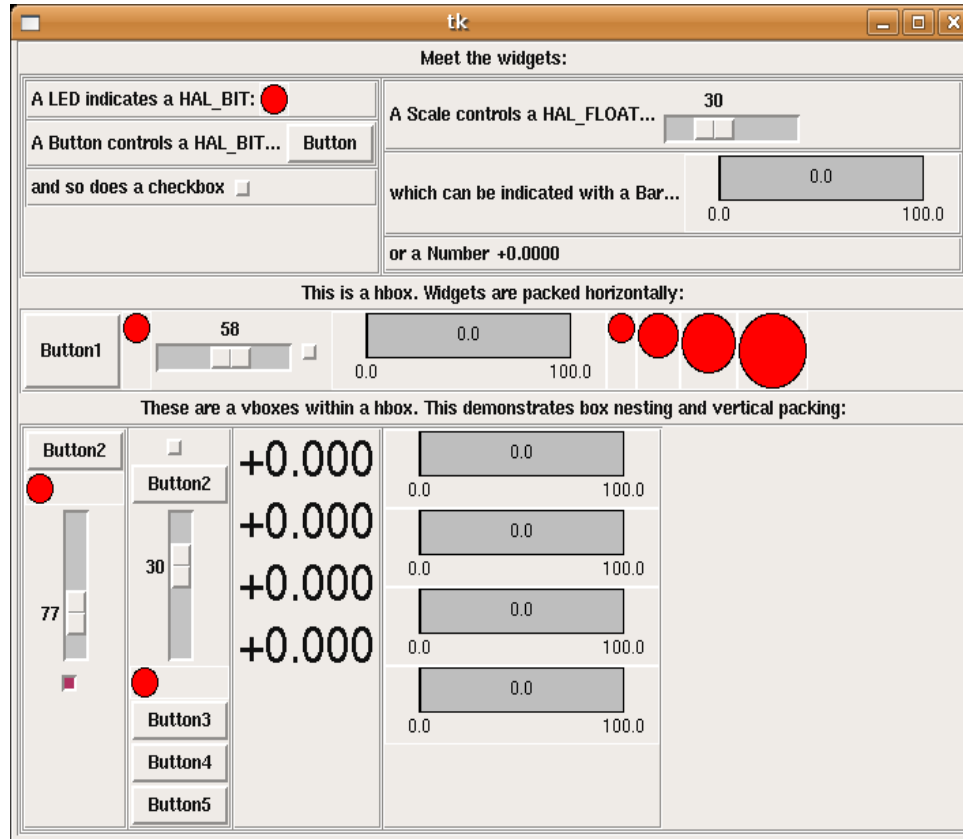
What is tkinter?

"Tkinter is Python's *de-facto* standard GUI (Graphical User Interface) package. It is a thin object-oriented layer on top of Tcl/Tk."

Tkinter examples you may have seen...



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With ttk, you get a nicer look.

Contar dinheiro

Notas:	Moedas:
500€ <input type="text"/>	2.00€ <input type="text"/>
200€ <input type="text"/>	1.00€ <input type="text"/>
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Limpar

Themed widgets can match the platform.

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Em Curso Cobrança Arquivo Cheque Rec. Arquivar Hoje Copiar... Adicionar Pesquisar

Dias	Destinatário	Estado	Objeto Nº	Vols	Cobrança	Cheque Rec.	Depositar
36	NPK - Network Project for Knowledge	Objeto entregue	ET010324403PT	3	0		
4	Victor Domingos	Objeto entregue	ET010324743PT	1	545	2017-04-06	2017-04-06
4	The Great Python Developers, S.A.	Objeto entregue	CO060280585PT	12	12432.21	N/D	2017-05-06
4	Elixir Consulting Group, Lda.	Objeto entregue	CO060280577PT	2	10234.10	N/D	2017-05-02
3	Trade&Ship, Pseudo Company Names, I	Objeto entregue	EA333406109PT	1	0		
2	Tell Me What You Think, Inc.	Objeto entregue	EA746821681PT	2	235.21	N/D	2017-05-21
1	Opensource Adventures, Lda.	Objeto entregue	ER294470227PT	1	0		
1	You Can Contribute Too, Unip. Lda.	Objeto entregue	EA746817259PT	7	0		
1	José Manuel Nome Inventado da Silva	Objeto entregue	EA746817695PT	2	735.12	N/D	2017-04-21
1	Miguel Fictício Araújo Lopes	Objeto entregue	EA746817143PT	1	0		
1	António C.	Objeto entregue	EA746812614PT	1	0		
1	Dj Mars	Objeto entregue	ER294407391PT	1	0		
1	MSAL	Objeto entregue	EA746812733PT	1	0		
1	The Great Python Developers, S.A.	Objeto entregue	EA746816797PT	1	0		
0	NPK - Network Project for Knowledge	Objeto entregue	EA746813985PT	1	0		
0	Tell Me What You Think, Inc.	Objeto aceite	EA746821960PT	1	0		

Adicionar Remessa:

Nº Objeto Destinatário Cobrança Prazo Vols. Adicionar

Expedidor Observações RMA Cancelar

- Selecionar -

A introduzir dados referentes a nova remessa...

And it can grow, if you need it.

The image displays the RepService software interface, which is designed for managing repair services. It consists of several main components:

- RepService Main Window:** A window with a title bar and menu options. It contains a table listing various repair orders with columns for 'Nº', 'Cliente', 'Equipamento', 'Serviço', 'Estado', and 'Dias'. The table lists 10 different repair orders for various devices like smartphones and computers.
- Mensagens (Messages) Window:** A window titled '36 mensagens' showing a list of messages. A specific message is selected and its details are shown in a sub-window titled 'Reparação nº 12345'. The details include the name of the client (José Manuel da Cunha Fantástico), the article being repaired (Um artigo que se encontra em reparação), the current status (Em processamento), and the result (Orçamento aprovado).
- Reparação nº 6 (Client):** A detailed form for a repair order. It includes fields for 'Descrição', 'Estado: Marcos de acidente', 'Código de artigo', 'Nº de série', 'Data de compra', 'Nº da fatura', 'Local da intervenção', 'Avaria/Serviço', 'Senha', 'Acessórios entregues', and 'Notas'. The form is filled with example data for a repair of a 'Smartphone Daqueses Bons'.
- Reparação nº 7 (Stock):** A detailed form for a repair order, similar to the one for the client. It includes fields for 'Descrição', 'Código de artigo', 'Nº fatura fornecedor', 'Guia de recepção', 'Nº de série', 'Data fatura fornecedor', 'Data de entrada em stock', 'NAR', 'Nº de quebra de stock', 'Avaria/Serviço', and 'Notas'. The form is filled with example data for a repair of a 'Smartphone Daqueses Bons'.

The interface is clean and professional, with a light blue and white color scheme. It uses standard UI elements like buttons, dropdown menus, and text boxes to facilitate data entry and management.

The boilerplate:

```
1 import tkinter as tk
2
3 class MainApplication(tk.Frame):
4     def __init__(self, parent, *args, **kwargs):
5         tk.Frame.__init__(self, parent, *args, **kwargs)
6         self.parent = parent
7
8         <create the rest of your GUI here>
9
10
11 if __name__ == "__main__":
12     root = tk.Tk()
13     MainApplication(root).pack(side="top", fill="both", expand=True)
14     root.mainloop()
```


Available widgets (incl. ttk)

- Label
- Entry
- Button
- Checkbutton
- Menubutton
- Radiobutton
- Combobox
- Text
- Scale
- Scrollbar
- Spinbox
- Progressbar
- Treeview
- Separator
- Toplevel (+windows)
- Frame
- LabelFrame
- PanedWindow
- Notebook
- Sizegrip
- Canvas

...and some more in these modules

- `tkinter.scrolledtext`
- `tkinter.colorchooser`
- `tkinter.filedialog`
- `tkinter.messagebox`
- `turtle`

Let's see it in action!

So, should I use tkinter?

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PROS

- It's simple to learn.
- Bundled with Python.
- Highly portable.
- Can look [kind of] native.
- It's fast enough.
- Mature and stable.
- Free for commercial use.

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CONS

- Limited widget set (e.g. no date picker, no webview).
- No UI designer.
- Doesn't look *totally* native.
- It's not as fast as a native Swift or C++ GUI.
- Usually, no new features.

More info:

- <https://docs.python.org/3/library/tk.html>
- <https://tkdocs.com>
- <http://effbot.org/tkinterbook/tkinter-index.htm>
- <http://infohost.nmt.edu/tcc/help/pubs/tkinter/tkinter.pdf>

If you speak Tcl, explore Tcl/tk docs too.

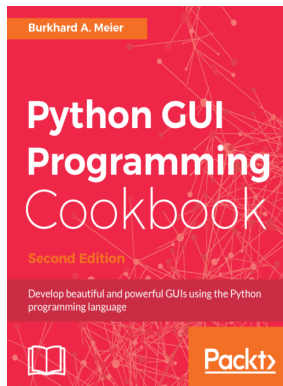
Useful books:



Tkinter GUI Application Development Blueprints

Bhaskar Chaudhary

Packt Publishing, 2015



Python GUI Programming Cookbook

Burkhard A. Meier

Packt Publishing, 2017

In case you get stuck...

- <https://stackoverflow.com/questions/tagged/tkinter>

Sooner or later, you will probably find, on StackOverflow, some insightful answers from a guy named Brian Oakley. You definitely should trust him. 😊

Thank you!