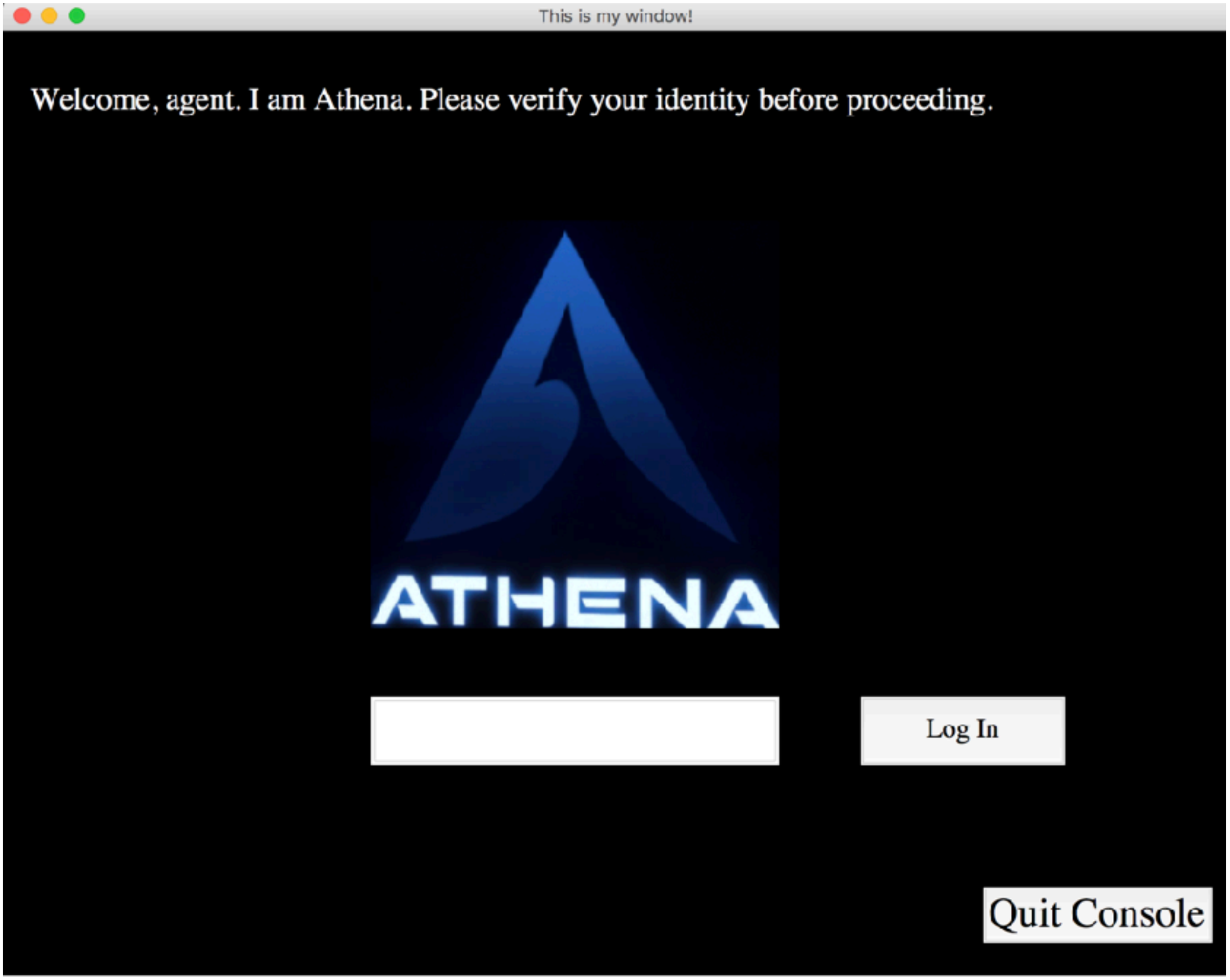
Tkinter

A Nice Little GUI Maker for Python

What is Tkinter?



How does it work?

- **Button**
- **Checklist**
- **Input Field**
- **Label**
- **Window**
- **Frame**
- **RadioButton**

```
root = Tk()
```

```
# Instaniate the input field for password input
entry = Entry(root,justify=CENTER)
entry.place(relx=0.3,rely=0.7,width=300,height=50)
```

```
myButton = Button(root)
```

```
label = Label(text="hi")
```

Tk() Class

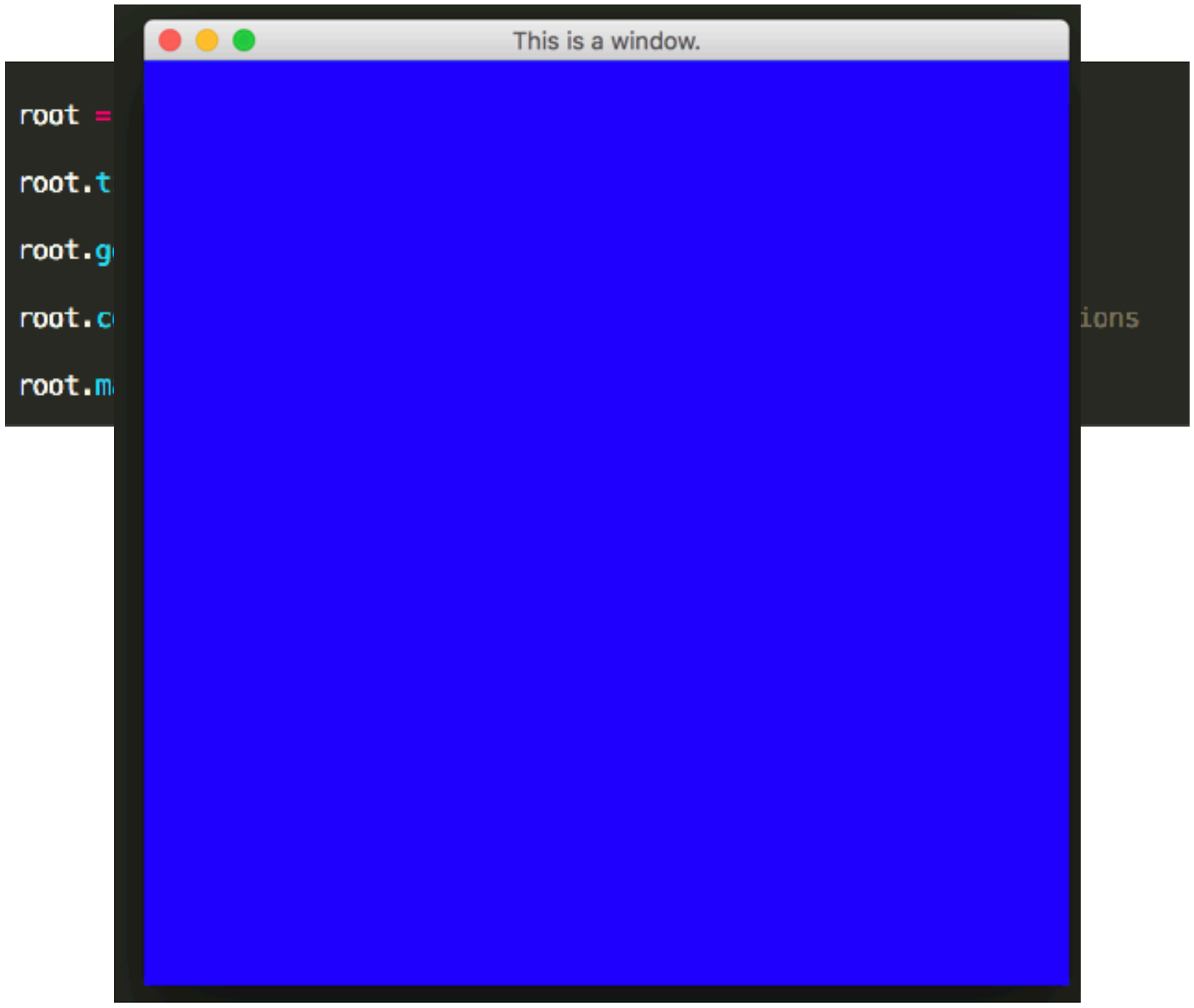
```
# Example of basic UI
root = Tk() # Create the master window called "root"
```

* **Lines of code**
* **Lines of code**
* **Lines of code**

```
root.mainloop() # Mandatory loop
```

Configurations and Functions

- **Every class can be configured**
- **Each class has unique configurations**
- **Each class has a plethora of unique functions**



Widgets

```
myButton = Button(root)
```

```
# Example of Pack Geometry Manager
window = Toplevel(root) # Create new window called "Window"

label = Label(window,text="hi").pack(side=LEFT) # Pack two labels

label2 = Label(window,text="hi2").pack(side=LEFT)


root.mainloop() # Mandatory loop
```

Button
Class: Button()

text = (string)

```
myButton = Button(root,text="This is a button!")
```

Set the Button's text.

command = (function name)

```
def buttonfunction():
    print("Button has been pressed!")
myButton = Button(root,command=buttonfunction)
```

The function of the button.

width = (int), height = (int)

```
myButton = Button(root,width=10,height=10)
```

The size of the button.

Input Field
Class: Entry()

textvariable = (name of string variable)

```
var = StringVar()
label = Entry(root,textvariable=var)
```

Set the input of the Entry to a variable

cursor = (cursor type string)

```
var = StringVar()
label = Entry(root,cursor="box_spiral")
```

Set the cursor when hovering over entry

justify = (LEFT, RIGHT, or CENTER)

```
label = Entry(root,justify=CENTER)
```

Set which side of the field the inputed text starts on. Defaulted to LEFT.

Label
Class: Label()

text = (string)

```
label = Label(root,text="This is a label.")
```

Set the label's text.

fg = (color string)

```
label = Label(root,fg="blue")
```

Set the label's text color.

bg = (color string)

```
label = Label(root,bg="red")
```

Set the label's background color.

Unique Variable Types

```
var = StringVar() # Define the StringVar

entry = Entry(root,textvariable=var,cursor="box_spiral",justify=CENTER)
```

- **StringVar()**
- **DoubleVar()**
- **IntVar()**
- **BooleanVar()**

.get()

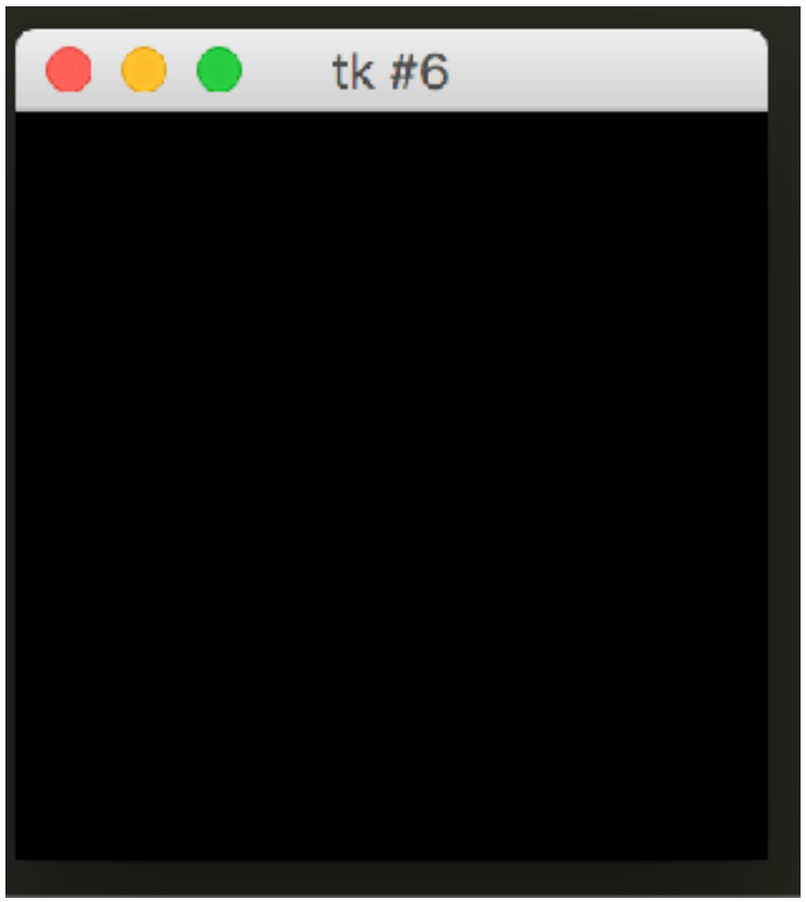
Black Window With Button

```
root.Tk() # Make the Tk() class

root.configure(background="black")

button = Button(root,text="This is a button.")

root.mainloop()
```



Geometry Managers

place()

```
label = Label(text="hi")

label.place(x=100,y=100)
```

grid()

```
label = Label(text="hi").grid(row=0,column=0)

label2 = Label(text="hi").grid(row=1,column=0)

label3 = Label(text="hi").grid(row=0,column=1)

label4 = Label(text="hi").grid(row=1,column=1)
```

pack()

```
label = Label(window,text="hi").pack(side=LEFT,padx=100) # Pack two labels on the left of the screen, total of 200 pixels away from each other.

label2 = Label(window,text="hi2").pack(side=LEFT,padx=100)
```

Black Window With Button

```
root = Tk() # Make the Tk() class

root.configure(background="black") # black background

button = Button(root,text="This is a button.") # Button Instantiation

button.place(relx=0.5,rely=0.5) # Place button 1/2 of the way to the right, 1/2 of the way down.

root.mainloop()
```

Those are the basics!

```
# Example of basic UI
root = Tk() # Create the master window called "root"

root.geometry('500x500') # Set window size using one of the many functions in the Tk() class

def LogIn():

    txt = entryfield.get() # Get() func

    if txt == "helloworld": # If the in

        accessgranted = Label(text="Acc                                                    green label that says "Access Granted"

root.configure(background="white",curso

entryfield = Entry() # Create entry fie

entryfield.place(relx=0.5,rely=0.5,widt

button = Button(text="Log In",command=L

root.mainloop() # MAIN LOOP
```