Image Viewer App in Python using Tkinter

Prerequisites: Python GUI – tkinter, Python: Pillow

Have you ever wondered to make a Image viewer with the help of Python? Here is a solution to making the Image viewer with the help of Python. We can do this with the help of Tkinter and pillow. We will discuss the module needed and code below.

Module Needed

- **Tkinter:** Tkinter is library with the help of which we can make GUI(Graphical User Interface).

```
pip install tkinter
```

- **Pillow:** We can add photos as it is an imaging library of Python.

```
pip install pillow
```

Now let's code for it

Getting Started

- Below Code demonstrates the basic structures, button initialization, and layout of the GUI produced

Python3

```
# importing the tkinter module and PIL that
# is pillow module
from tkinter import *
from PIL import ImageTk, Image

# Calling the Tk (The initial constructor of tkinter)
root = Tk()
```

```
# We will make the title of our app as Image Viewer
root.title("Image Viewer")

# The geometry of the box which will be displayed
# on the screen
root.geometry("700x700")

# Adding the images using the pillow module which
# has a class ImageTk We can directly add the
# photos in the tkinter folder or we have to
# give a proper path for the images
image_no_1 = ImageTk.PhotoImage(Image.open("Sample.png"))
image_no_2 = ImageTk.PhotoImage(Image.open("sample.png"))
image_no_3 = ImageTk.PhotoImage(Image.open("Sample.png"))
image_no_4 = ImageTk.PhotoImage(Image.open("sample.png"))

# List of the images so that we traverse the list
List_images = [image_no_1, image_no_2, image_no_3, image_no_4]

label = Label(image=image_no_1)

# We have to show the box so this below line is needed
label.grid(row=1, column=0, columnspan=3)

# We will have three button back ,forward and exit
button_back = Button(root, text="Back", command=back,
                     state=DISABLED)

# root.quit for closing the app
button_exit = Button(root, text="Exit",
                     command=root.quit)

button_forward = Button(root, text="Forward",
                        command=lambda: forward(1))

# grid function is for placing the buttons in the frame
button_back.grid(row=5, column=0)
button_exit.grid(row=5, column=1)
button_forward.grid(row=5, column=2)

root.mainloop()
```

- **Forward function:** This function is for adding the functionality to forward button

---

Python3

```
def forward(img_no):
```

```
    # GLobal variable so that we can have
    # access and change the variable
    # whenever needed
    global label
    global button_forward
    global button_back
    global button_exit
    label.grid_forget()

    # This is for clearing the screen so that
    # our next image can pop up
    label = Label(image=List_images[img_no-1])

    # as the list starts from 0 so we are
    # subtracting one
    label.grid(row=1, column=0, columnspan=3)
    button_for = Button(root, text="forward",
                        command=lambda: forward(img_no+1))

    # img_no+1 as we want the next image to pop up
    if img_no == 4:
        button_forward = Button(root, text="Forward",
                                state=DISABLED)

    # img_no-1 as we want previous image when we click
    # back button
    button_back = Button(root, text="Back",
                         command=lambda: back(img_no-1))

    # Placing the button in new grid
    button_back.grid(row=5, column=0)
    button_exit.grid(row=5, column=1)
    button_for.grid(row=5, column=2)
```

- **Backward Function:** This function is for adding the functionality to backward button

---

Python3

```
def back(img_no):

    # We will have global variable to access these
    # variable and change whenever needed
    global label
    global button_forward
    global button_back
    global button_exit
    label.grid_forget()

    # for clearing the image for new image to pop up
```

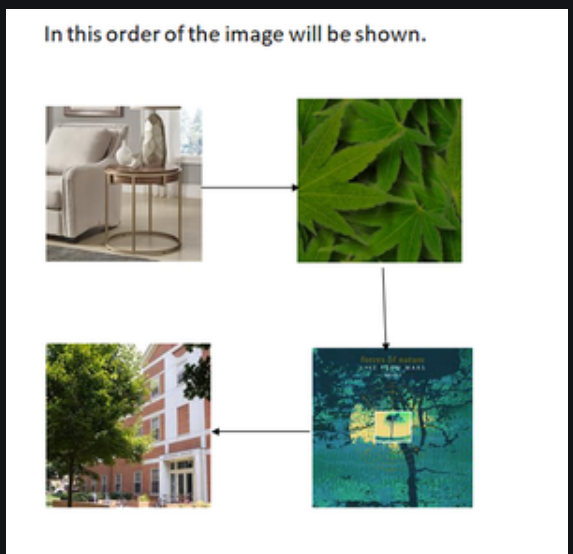
```
    label = Label(image=List_images[img_no - 1])
    label.grid(row=1, column=0, columnspan=3)
    button_forward = Button(root, text="forward",
                            command=lambda: forward(img_no + 1))
    button_back = Button(root, text="Back",
                         command=lambda: back(img_no - 1))
    print(img_no)

    # whenever the first image will be there we will
    # have the back button disabled
    if img_no == 1:
        button_back = Button(root, Text="Back", state=DISABLED)

    label.grid(row=1, column=0, columnspan=3)
    button_back.grid(row=5, column=0)
    button_exit.grid(row=5, column=1)
    button_for.grid(row=5, column=2)
```

Complete Code

Images Used and their order –



Order in which the images will be shown.

Python3

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# importing the tkinter module and PIL
# that is pillow module
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from PIL import ImageTk, Image


def forward(img_no):

    # GLobal variable so that we can have
    # access and change the variable
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    global label
    global button_forward
    global button_back
    global button_exit
    label.grid_forget()

    # This is for clearing the screen so that
    # our next image can pop up
    label = Label(image=List_images[img_no-1])

    # as the list starts from 0 so we are
    # subtracting one
    label.grid(row=1, column=0, columnspan=3)
    button_for = Button(root, text="forward",
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    # img_no+1 as we want the next image to pop up
    if img_no == 4:
        button_forward = Button(root, text="Forward",
                                state=DISABLED)

    # img_no-1 as we want previous image when we click
    # back button
    button_back = Button(root, text="Back",
                         command=lambda: back(img_no-1))

    # Placing the button in new grid
    button_back.grid(row=5, column=0)
    button_exit.grid(row=5, column=1)
    button_for.grid(row=5, column=2)


def back(img_no):

    # We will have global variable to access these
    # variable and change whenever needed
    global label
    global button_forward
```

```
    global button_back
    global button_exit
    label.grid_forget()

    # for clearing the image for new image to pop up
    label = Label(image=List_images[img_no - 1])
    label.grid(row=1, column=0, columnspan=3)
    button_forward = Button(root, text="forward",
                            command=lambda: forward(img_no + 1))
    button_back = Button(root, text="Back",
                         command=lambda: back(img_no - 1))
    print(img_no)

    # whenever the first image will be there we will
    # have the back button disabled
    if img_no == 1:
        button_back = Button(root, Text="Back", state=DISABLED)

    label.grid(row=1, column=0, columnspan=3)
    button_back.grid(row=5, column=0)
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```

```
                    state=DISABLED)

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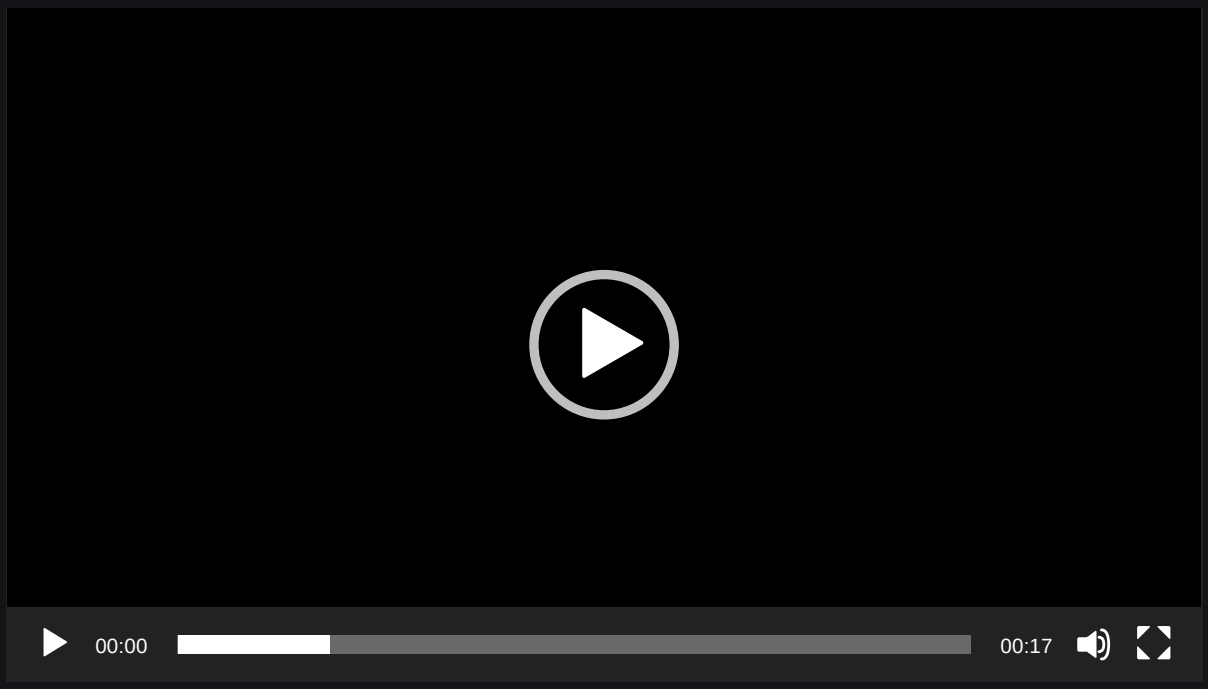
button_back.grid(row=5, column=0)
button_exit.grid(row=5, column=1)
button_forward.grid(row=5, column=2)

root.mainloop()
```

Output:



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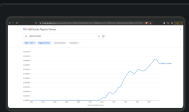
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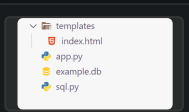

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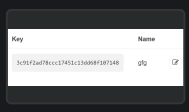
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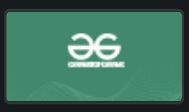
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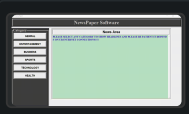
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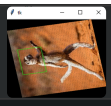

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