**How to pack images in Python Tkinter file to an Exe file?**

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Ever had the experience of developing a Graphical User Interface (GUI) with images in widgets in Python using Tkinter, and after converting that .py file to an .exe file, the images included in the GUI is showing error?! This article helps to solve that issue and bring back the images included in the project in the EXE file also.

Tkinter is a python library used for building GUI. Let us consider a small and simple GUI having a Label widget and an image attached to it. The code of the Python file is below:

import tkinter as tk  
  
window = tk.Tk()  
window.geometry("300x200")  
window.title("School")  
applePhoto = tk.PhotoImage(file="red-apple.png")  
apple = tk.Label(window,text="Apple",image=applePhoto,compound=tk.LEFT)  
apple.pack()  
window.mainloop()

The GUI generated by the above code is below,

A screenshot of a computer

Description automatically generated

Screenshot of GUI generated using Tkinter and Python

Now the picture of a red apple appears with the Label widget in python file.

After converting this python file to an executable (.exe) file, and on opening the EXE file, it shows error to load the picture.

A screenshot of a computer error

Description automatically generated

Error

This is because the image file is present in the same folder along with the .py file before, and when we ran the application in IDE, it works well and the red apple image can be seen. But after converting to EXE file, the picture “red-apple.png” is not in the same folder as the EXE file. Also when we open an EXE file, we cannot places every such pictures along with it.

**How to solve this error?**

To avoid this error, convert this picture of red apple to base64. Then assign the base64 of the red apple picture within the code as PhotoImage.

**Step 1:** Visit <https://base64.guru/converter/encode/image/png> .There are many other websites also to convert picture of jpg, png or in other formats to base64. They are,

* [*https://www.base64-image.de/*](https://www.base64-image.de/)
* [*https://codebeautify.org/image-to-base64-converter*](https://codebeautify.org/image-to-base64-converter)
* [*https://www.browserling.com/tools/image-to-base64*](https://www.browserling.com/tools/image-to-base64)
* [*https://www.base64encoder.io/image-to-base64-converter/*](https://www.base64encoder.io/image-to-base64-converter/)

Use any of these websites. Here I am using <https://base64.guru/converter/encode/image/png>

**Step 2:** Click on the ‘Choose File’ button to select and upload the picture you want to add in your GUI from your computer.

A screenshot of a computer

Description automatically generated

Step 3: Choose the picture from your computer, and click ‘Open’ in the dialog box.

A computer screen shot of a computer

Description automatically generated

**Step 4:** Make sure that ‘plain text — just the base64 value’ is selected under the ‘Output format’ in the website.

A screenshot of a computer

Description automatically generated

**Step 5:** Click the button ‘Encode PNG to base64’ . Now the base64 of the uploaded picture is displayed in the box below.

A screenshot of a computer

Description automatically generated

**Step 6:** Copy the base64 of the uploaded image by clicking on the ‘copy’ button above the base64 box.

A screenshot of a computer

Description automatically generated

**Step 7:** Now open your IDE and make some changes to your python file. Create a variable and assign the copied base64 within double quotes. Here my variable name is APPLE\_IMAGE.

**APPLE\_IMAGE = r”*base64 copied*”**

**Step 8:** Then in the PhotoImage variable ‘applePhoto’, use the option ‘data’ and assign the variable containing the base64 ‘APPLE\_IMAGE’.

The python code after making these changes is as below:

import tkinter as tk  
  
#base64 of picture  
APPLE\_IMAGE = r""  
  
window = tk.Tk()  
window.geometry("300x200")  
window.title("School")  
# base64 converted to PhotoImage  
applePhoto = tk.PhotoImage(data=APPLE\_IMAGE)  
# Label with picture of red apple to its left  
apple = tk.Label(window,text="Apple",image=applePhoto,compound=tk.LEFT)  
apple.pack()  
window.mainloop()

**Step 9:** Now run this code in your IDE, it should work perfectly and the picture of red apple will be displayed.

**Step 10:** Next convert this python file to EXE file.

**Step 11:** Double click on the EXE file that is created. The application should open without errors now.

A screenshot of a computer

Description automatically generated

Double clicking on .exe file and the application opens with picture now

And that is how you can pack a picture along with a python file to create a perfectly working EXE file.

*Thanks for reading my article!*