Entry와 다양한 widget 활용
13주차_02_05

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학습목표

- ▶ Entry widget 활용하기
- ▶ file dialog와 color chooser 활용하기

Entry widget, 입력 받기 I

```
from tkinter import *

top = Tk()
L1 = Label(top, text="User Name")
L1.pack(side = LEFT)

E1 = Entry(top, bd =5)
E1.pack(side = RIGHT)

L2 = Label(top, text="Student ID")
L2.pack(side = LEFT)

E2 = Entry(top, bd =5)
E2.pack(side = RIGHT)

top.mainloop()
```

User Name and Student ID kmkim   s2131111

Entry widget, 입력 받기 2

```
from tkinter import *
from math import *

root = Tk()
root.geometry("300x200+100+100")

def press():
    label2.configure(text = str(entry.get()) + "을 재생합니다." )

label1 = Label(root, text='지금 듣고 싶은 노래는? ')
label1.pack()

entry = Entry(root)
entry.pack()

button = Button(root, text = "클릭", command = press)
button.pack()

label2 = Label(root)
label2.pack()

root.mainloop()
```
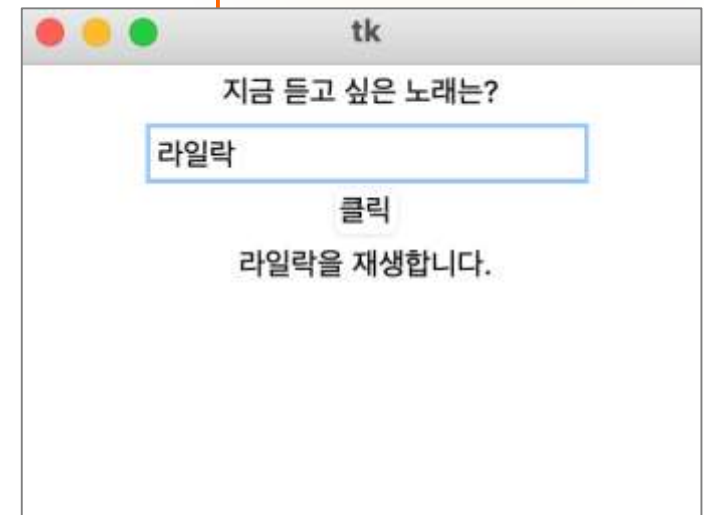
Canvas widget

▶ The Canvas widget uses two coordinate systems

    ▶ the window coordinate system with (0, 0) in the upper left corner
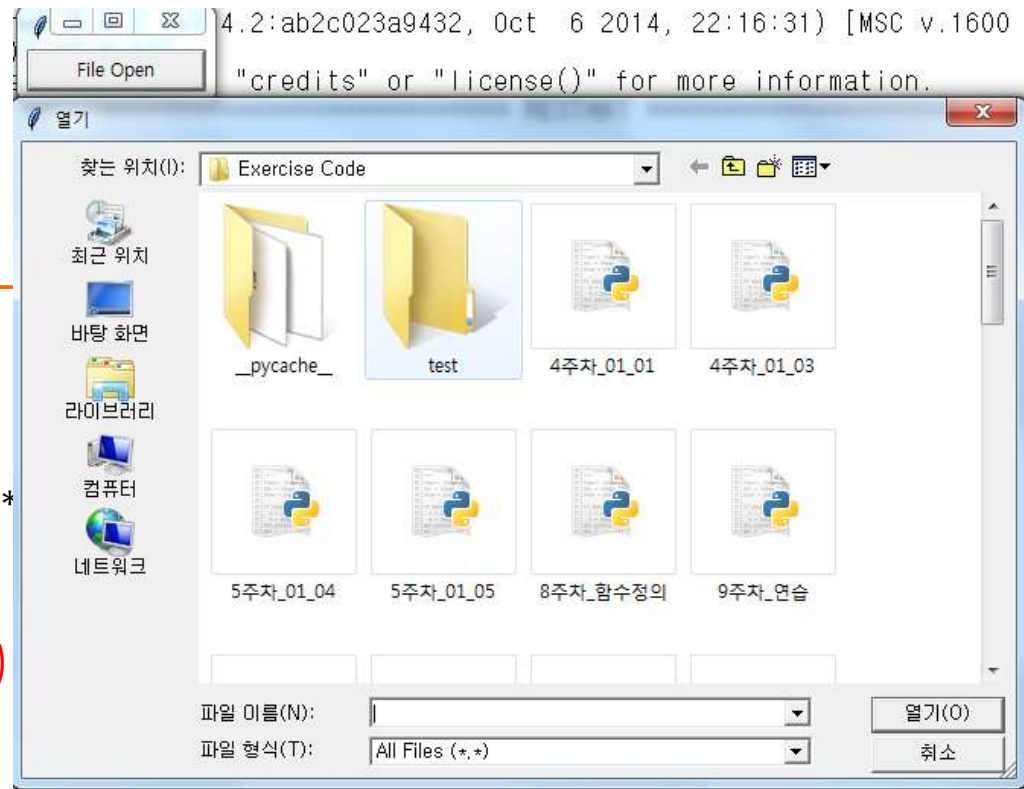
(0, 0) → +

↓
+

Dialogs: file dialog I

```
#file dialog

from tkinter import *
from tkinter.filedialog import *

def callback() :
    name= askopenfilename()
    print(name)

errmsg = 'Error!'
Button(text='File Open',
command=callback).pack(fill=X)

mainloop()
```

Dialogs: color chooser I

```
from tkinter import *
from tkinter.colorchooser import *

def callback() :
    result = askcolor(color="#6A9662", title = "Colour Chooser")
    print(result)

root = Tk()

Button(root, text='Choose Color', fg="darkgreen", command=callback).pack(side=LEFT, padx=10)
Button(text='Quit', command=root.quit, fg="red").pack(side=LEFT, padx=10)

root.mainloop()
```
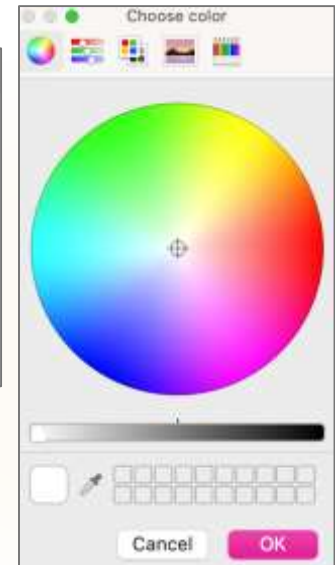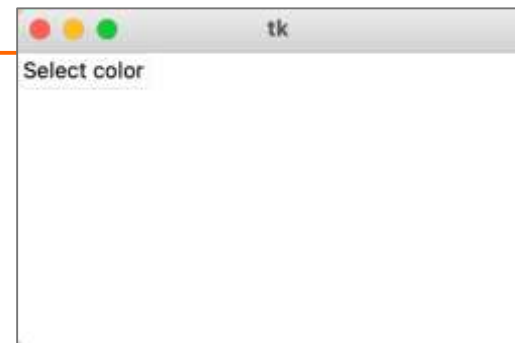
Dialogs: color chooser 2

```
from tkinter import *
from tkinter.colorchooser import *

root = Tk()

def choose_color():
    color_code = askcolor(title ="Choose color")
    print(color_code)

button = Button(root, text = "Select color",command = choose_color)
button.grid()
root.mainloop()
```

Select color

```
((255, 217, 108), '#ffd96c')
```
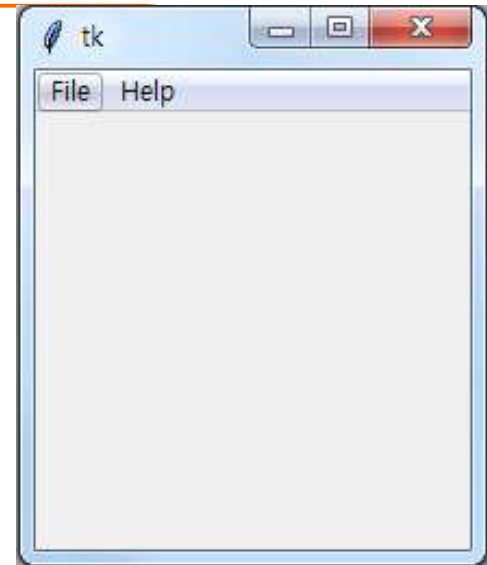
Creating menus I

```python
from tkinter import *

def NewFile() :
    print("New File!")
def OpenFile() :
    print("Open File!")
def About() :
    print("This is a simple example of a menu")


root = Tk()
menu = Menu(root)
root.config(menu=menu)
filemenu = Menu(menu)
menu.add_cascade(label="File", menu=filemenu)
filemenu.add_command(label="New", command=NewFile)
filemenu.add_command(label="Open", command=OpenFile)
filemenu.add_separator()
filemenu.add_command(label="Exit", command=root.quit)

helpmenu = Menu(menu)
menu.add_cascade(label="Help", menu=helpmenu)
helpmenu.add_command(label="About...", command=About)

mainloop()
```

Creating menus 2

```
from tkinter import *

root=Tk()
root.geometry("300x300+100+100")
root.resizable(False, False)

def close():
    root.quit()
    root.destroy()

menubar=Menu(root)
menu_1=Menu(menubar, tearoff=0)
menubar.add_cascade(label="handong", menu=menu_1)
menu_2=Menu(menubar, tearoff=0, selectcolor="red")
menubar.add_cascade(label="global", menu=menu_2)
menu_3=Menu(menubar, tearoff=0)
menubar.add_cascade(label="university", menu=menu_3)

root.config(menu=menubar)
root.mainloop()
```
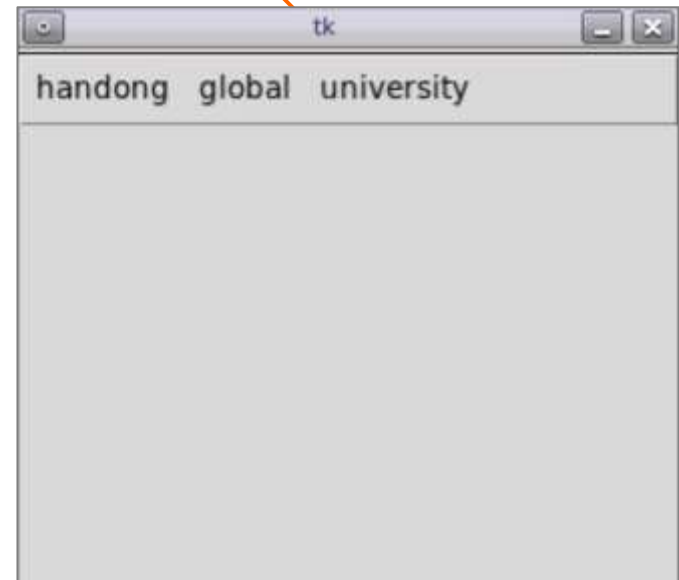
연습문제 1 - file dialog

- ▶ 버튼 1,2 두개를 만든다.
- ▶ 버튼 1을 눌렀을 때, 현재 위치에 있는 hello1.txt파일의 내용을 읽어 출력하고,
- ▶ 버튼 2를 눌렀을 때, 현재 위치에 있는 hello2.py파일의 내용을 읽어 출력한다.

연습문제 I 코드

```python
from tkinter import *
from tkinter.filedialog import *

root = Tk()

def press1():
    file1 = askopenfile(initialdir='./',filetypes =(("Python files","*.py"),("txt files","*.txt")))
    line1 = file1.readline()
    label1 = Label(root, text=line1)
    label1.grid()

def press2():
    file2 = askopenfile(initialdir='./',filetypes =(("Python files","*.py"),("txt files","*.txt")))
    line2 = file2.readline()
    label2  = Label(root, text=line2)
    label2.grid()

frame = Frame(root)
frame.grid()

btn1 = Button(root, text='버튼1', command=press1)
btn2 = Button(root, text='버튼2', command=press2)

btn1.grid()
btn2.grid()

root.mainloop()
```
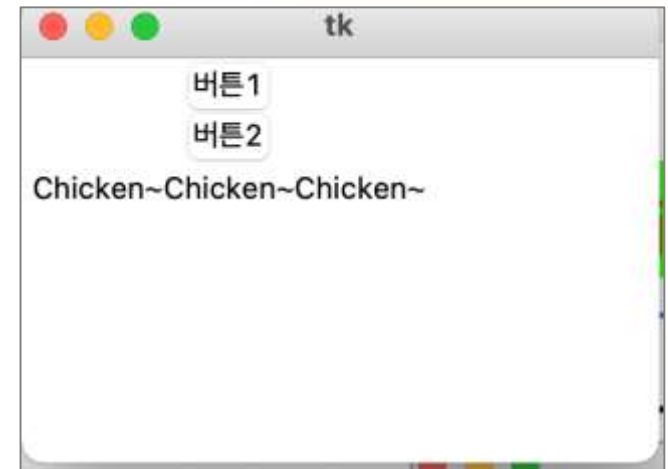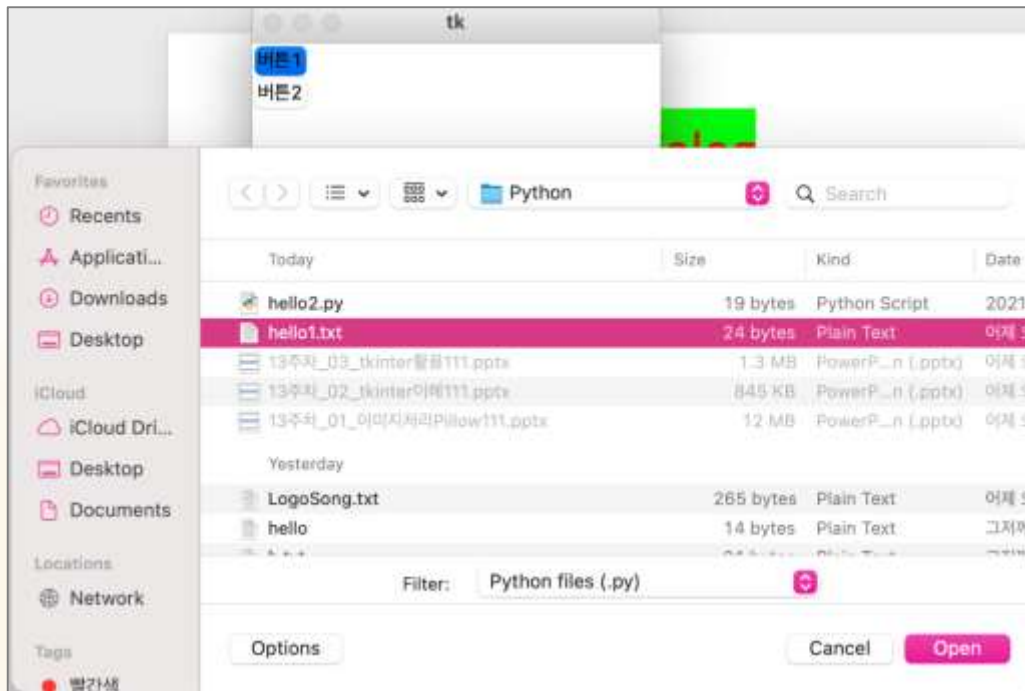
연습문제 I 결과

연습문제 2

▶ 그림판 만들기

▶ 색상 선택 하여 그리는 그림판을 만들면서

▶ 파일 열기, 저장 메뉴도 같이 만든다

연습문제 2 코드 (I)

```python
from tkinter import *
from tkinter.colorchooser import *

def NewFile() :
    print("New File!")
def OpenFile() :
    print("Open File!")
def About() :
    print("This is a simple example of a menu")

root = Tk()
menu = Menu(root)
root.config(menu=menu)

filemenu = Menu(menu)
menu.add_cascade(label="File", menu=filemenu)
filemenu.add_command(label="New", command=NewFile)
filemenu.add_command(label="Open...", command=OpenFile)
filemenu.add_separator()
filemenu.add_command(label="Exit", command=root.quit)
```

연습문제 2 코드 (2)

```
helpmenu = Menu(menu)
menu.add_cascade(label="Help", menu=helpmenu)
helpmenu.add_command(label="About...", command=About)

canvas = Canvas(root, width=500, height=500)
color = "red"
result = '#476042'

def callback() :
    global result
    result = askcolor(title = "Colour Chooser")
    result = result[1]

button = Button(root, text='Choose Color', fg="darkgreen", command=callback)
button.pack(side=LEFT, padx=10)

lastx, lasty = 0, 0
```
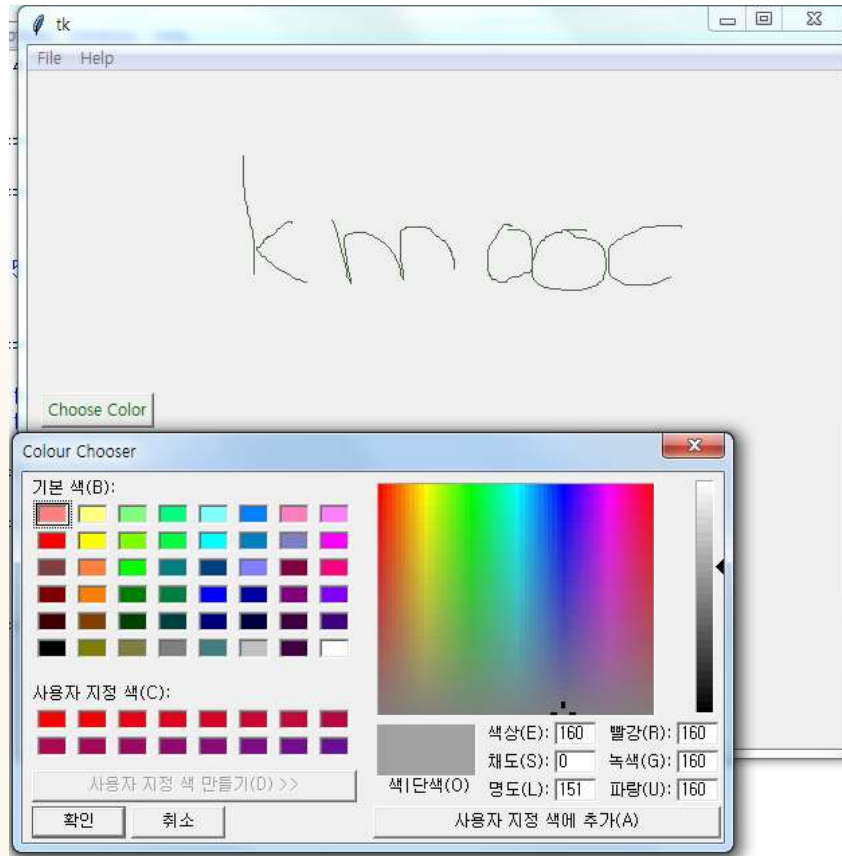
연습문제 2 코드 (3)

```python
def xy(event) :
    global lastx, lasty
    lastx, lasty = event.x, event.y

def addLine(event) :
    global lastx, lasty
    canvas.create_line((lastx, lasty, event.x, event.y), fill=result)
    lastx, lasty = event.x, event.y

root.columnconfigure(0, weight=1)
root.rowconfigure(0, weight=1)

canvas.pack()
canvas.bind("<Button-1>", xy)
canvas.bind("<B1-Motion>", addLine)

root.mainloop()
```

연습문제 2 결과

강의 요약

- Entry widget 활용
- file dialog와 color chooser 활용
  - file dialog: askopenfilename()
  - color chooser: askcolor()

목표 달성 질문

- ▶ askcolor()를 사용하면 어떤 결과가 화면에 나타나는가?

- ▶ askopenfilename() 를 사용하면 어떤 결과가 화면에 나타나는가?

감사합니다

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