7-1.

7-1.py - C:₩Users₩mandu₩Desktop₩스언어숙제4₩7-1.py (3.11.5)

File Edit Format Run Options Window Help

```
# 7-1

class Rectangle:
    def __init__(self, w=1, h=2):
        self.width = w
        self.height = h

    def getArea(self):
        return self.width * self.height

    def getPerimeter(self):
        return 2 * (self.width + self.height)

r1 = Rectangle(4, 10)
r2 = Rectangle(3.5, 35.7)

print("r1: 폭 {0}, 높이 {1}, 넓이 {2}, 둘레 {3}".format(
    r1.width, r1.height, r1.getArea(), r1.getPerimeter()))
print("r2: 폭 {0}, 높이 {1}, 넓이 {2}, 둘레 {3}".format(
    r2.width, r2.height, r2.getArea(), r2.getPerimeter()))
```

IDLE Shell 3.11.5

File Edit Shell Debug Options Window Help

```
Python 3.11.5 (tags/v3.11.5:cce6ba9, Aug 24 2023, 14:38:34) [MSC v.1936 64 bit
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
================ RESTART: C:₩Users₩mandu₩Desktop₩스언어숙제4₩7-1.py ==========
=====
r1: 폭 4, 높이 10, 넓이 40, 둘레 28
r2: 폭 3.5, 높이 35.7, 넓이 124.95000000000002, 둘레 78.4
>>>
```

7-2.

7-2.py - C:₩Users₩mandu₩Desktop₩스언어숙제4₩7-2.py (3.11.5)

File Edit Format Run Options Window Help

```
# 7-2

class Stock:
    def __init__(self, s, n, p, c):
        self.__symbol = s
        self.__name = n
        self.__previousClosingPrice = p
        self.__currentPrice = c

    def getName(self):
        return self.__name

    def getSymbol(self):
        return self.__symbol

    def getCP(self):
        return self.__currentPrice

    def getPCP(self):
        return self.__previousClosingPrice

    def setCP(self, cp):
        self.__currentPrice = cp

    def getPCP(self, pcp):
        self.__previousClosingPrice = pcp

    def getChangePercent(self):
        n = (self.__currentPrice - self.__previousClosingPrice)
        return 100 * n / self.__previousClosingPrice

s = Stock("INTC", "Intel Corporation", 20500, 20350)
print("{0}의 가격변동률: {1:.2f}".format(s.getName(), s.getChangePercent()) )
```

IDLE Shell 3.11.5

File Edit Shell Debug Options Window Help

```
Python 3.11.5 (tags/v3.11.5:cce6ba9, Aug 24 2023, 14:38:34) [MSC v.1936 64 bit
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
================ RESTART: C:₩Users₩mandu₩Desktop₩스언어숙제4₩7-2.py ==========
=====
Intel Corporation의 가격변동률: -0.73
>>>
```

7-3.

7-4.py - C:₩Users₩mandu₩Desktop₩스언어숙제4₩7-4.py (3.11.5)

File Edit Format Run Options Window Help

```
SLOW = 1
MEDIUM = 2
FAST = 3

class Fan:
    def __init__(self, s = SLOW, r = 5, c = 'blue', o = False):
        self.__speed = s
        self.__on = o
        self.__radius = r
        self.__color = c

    def setSpeed(self, s):
        self.__speed = s
    def getSpeed(self):
        return self.__speed
    def setOn(self, o):
        self.__on = o
    def getOn(self):
        return self.__on
    def setRad(self, r):
        self.__radius = r
    def getRad(self):
        return self.__radius
    def setColor(self, c):
        self.__color = c
    def getColor(self):
        return self.__color

f1 = Fan(FAST, 10, 'yellow', True)
f2 = Fan(MEDIUM)
print('f1 - 속도 {0}, 반지름 {1}, 색상 {2}, 전원 {3}'.format(
    f1.getSpeed(), f1.getRad(), f1.getColor(), f1.getOn()))
print('f2 - 속도 {0}, 반지름 {1}, 색상 {2}, 전원 {3}'.format(
    f2.getSpeed(), f2.getRad(), f2.getColor(), f2.getOn()))
```

IDLE Shell 3.11.5

File Edit Shell Debug Options Window Help

```
Python 3.11.5 (tags/v3.11.5:cce6ba9, Aug 24 2023, 14:38:34) [MSC v.1936 64 bit
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:₩Users₩mandu₩Desktop₩스언어숙제4₩7-4.py
f1 - 속도 3, 반지름 10, 색상 yellow, 전원 True
f2 - 속도 2, 반지름 5, 색상 blue, 전원 False
>>>
```

7-8.

7-8.py - C:₩Users₩mandu₩Desktop₩스언어숙제4₩7-8.py (3.11.5)

File Edit Format Run Options Window Help

```
# 7-8
from time import *

class StopWatch:
    def __init__(self):
        self.__startTime = time()

    def start(self):
        self.__startTime = time()

    def stop(self):
        self.__endTime = time()

    def getElapsedTime(self):
        return int((self.__endTime - self.__startTime) * 1000)

sum = 0
s = StopWatch()
for i in range(1, 1000001):
    sum += i
s.stop()
print("실행시간: {0}".format(s.getElapsedTime()))
```

IDLE Shell 3.11.5

File Edit Shell Debug Options Window Help

```
Python 3.11.5 (tags/v3.11.5:cce6ba9, Aug 24 2023, 14:38:34) [MSC v.1936 64 bit
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:₩Users₩mandu₩Desktop₩스언어숙제4₩7-8.py
실행시간: 363
>>>
```

12-1.

12-1.py - C:₩Users₩mandu₩Desktop₩스언어숙제4₩12-1.p...

File Edit Format Run Options Window Help

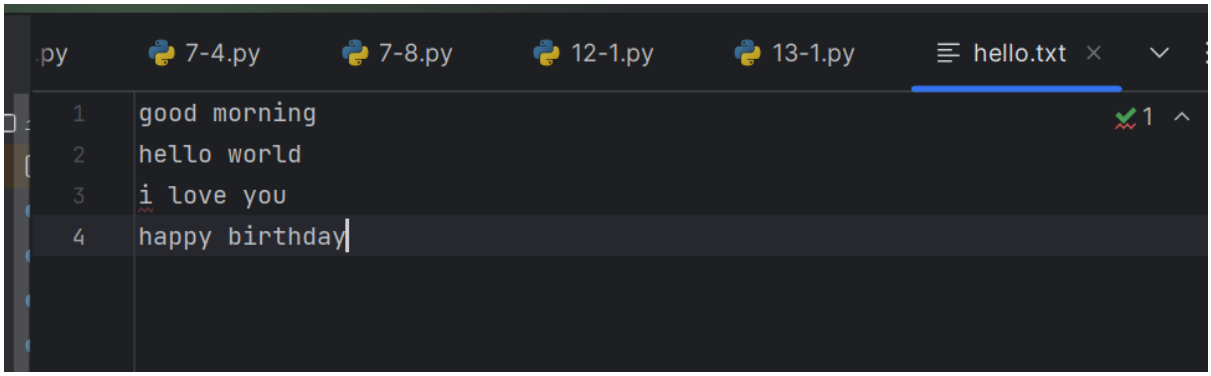
```
# 12-1
class GeometricObject:
    def __init__(self, color, isFill):
        self.color = color
        self.filled = isFill

class Triangle(GeometricObject):
    def __init__(self, c, isF, s1=1.0, s2=1.0, s3=1.0):
        f = False
        if isF == 1:
            f = True
        super().__init__(c, f)
        self.side1 = s1
        self.side2 = s2
        self.side3 = s3

    def setS1(self, v):
        self.side1 = v
    def setS2(self, v):
        self.side2 = v
    def setS3(self, v):
        self.side3 = v

    def getArea(self):
        s = (self.side1 + self.side2 + self.side3) / 2
        return(s * (s-self.side1)*(s-self.side2)*(s-self.side3))**0.5
    def getPerimeter(self):
        return self.side1+self.side2+self.side3
    def __str__(self):
        return("Triangle: side1 = " + str(self.side1) +
               ", side2 = " + str(self.side2) +
               ", side3 = " + str(self.side3) +
               ", color = " + str(self.color) +
               ", isFilled = " + str(self.filled) +
               ", Area = " + str(self.getArea()) +
               ", Perimeter = " + str(self.getPerimeter()))

t = Triangle('yellow', 1, 2.0, 2.0, 2.0)
print(t.__str__())
```

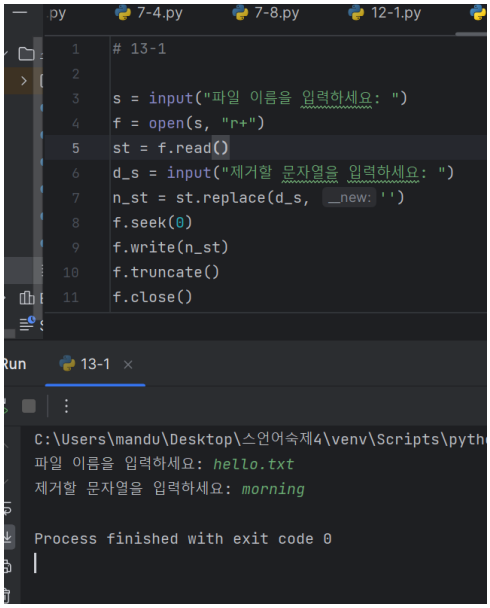
IDLE Shell 3.11.5

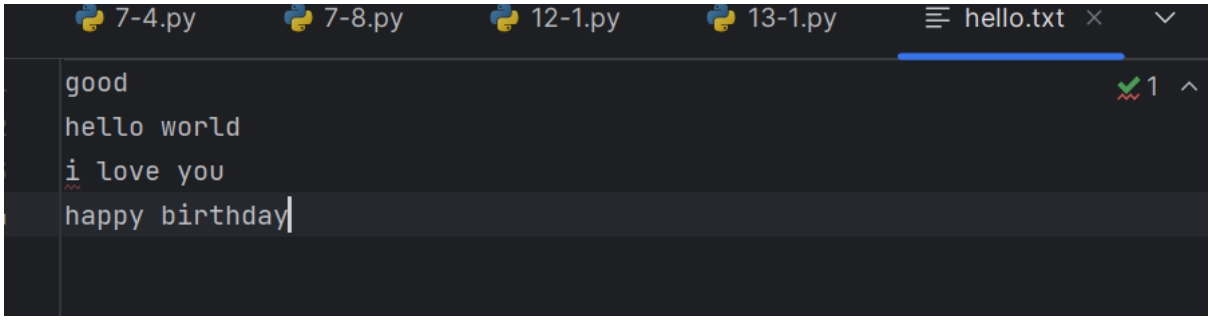
File Edit Shell Debug Options Window Help

```
Python 3.11.5 (tags/v3.11.5:cce6ba9, Aug 24 2023, 14:38:34) [MSC v.1936 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:₩Users₩mandu₩Desktop₩스언어숙제4₩12-1.py
Triangle: side1 = 2.0, side2 = 2.0, side3 = 2.0, color = yellow, isFilled = True
, Area = 1.7320508075688772, Perimeter = 6.0
>>>
```

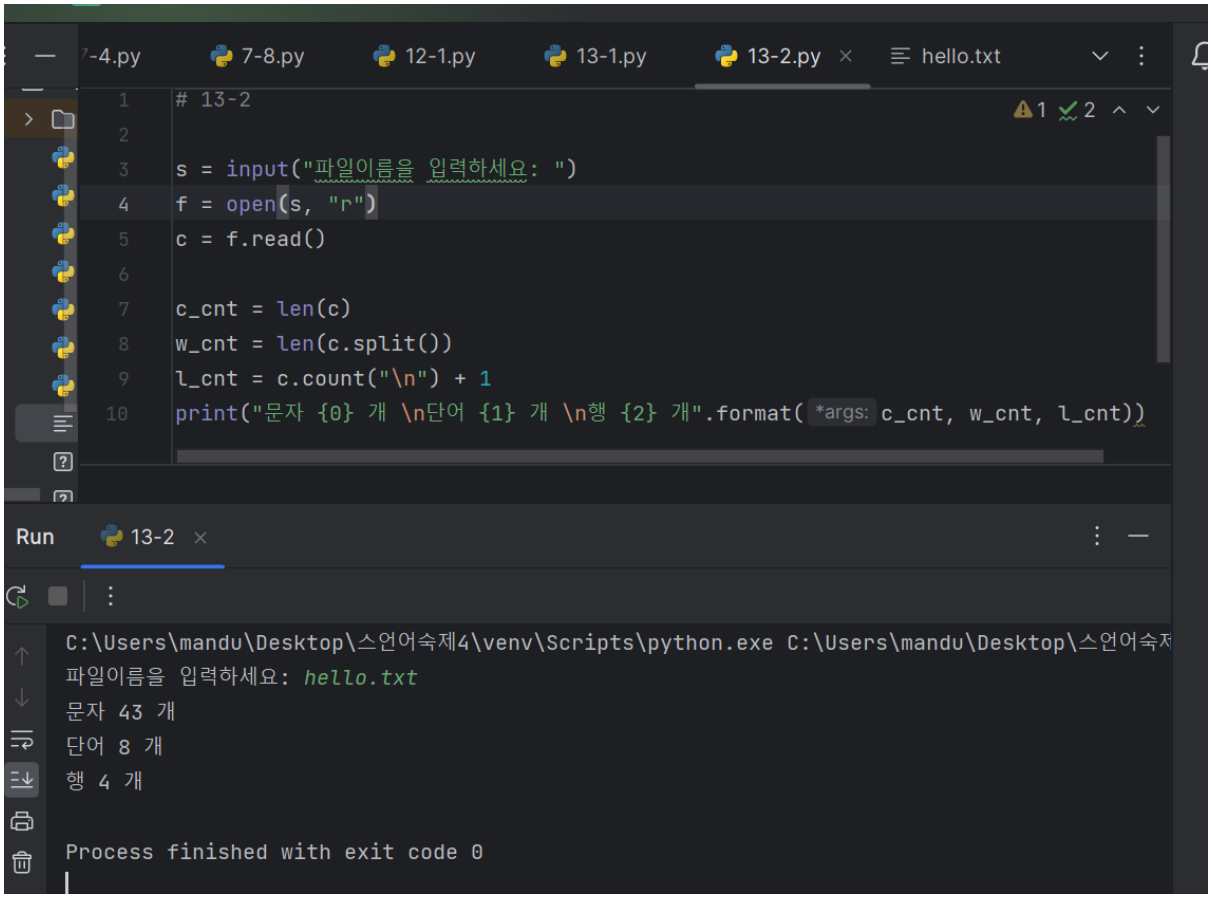
13-1.



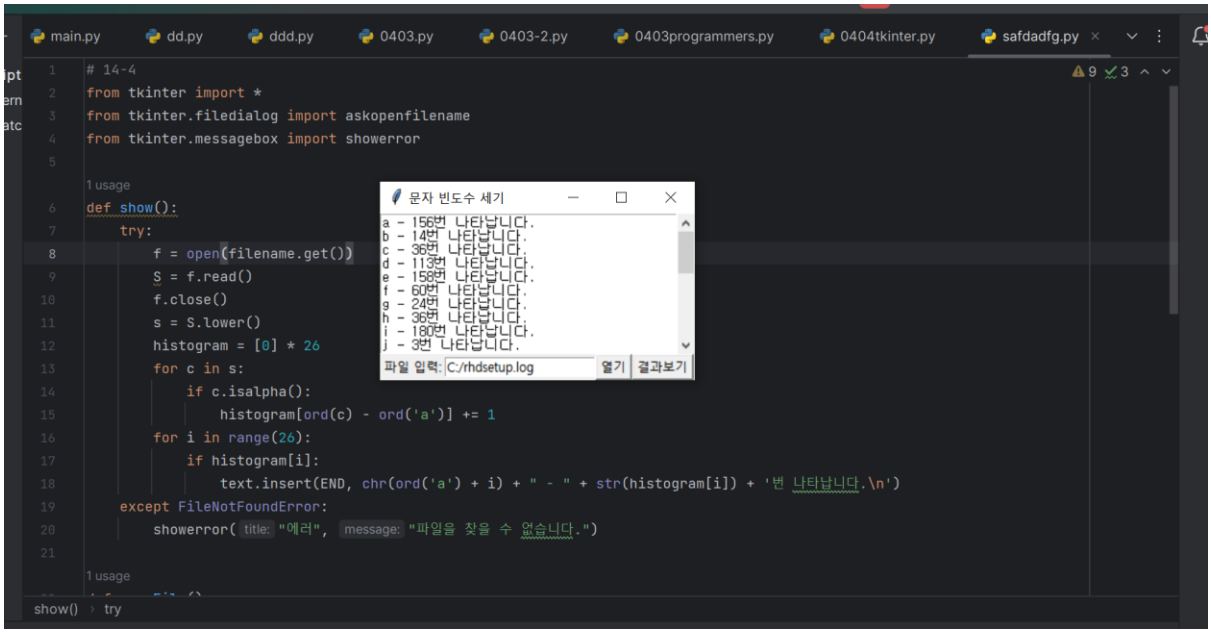


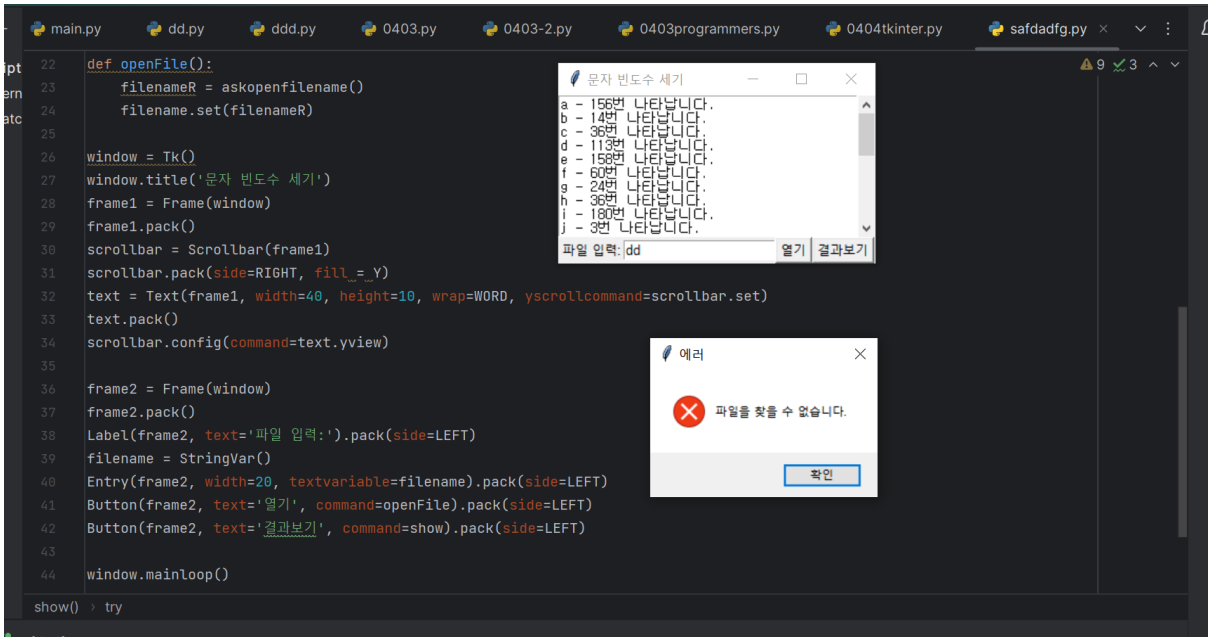

7-4.py
7-8.py
12-1.py
13-1.py
hello.txt
good
hello world
i love you
happy birthday

13-2.

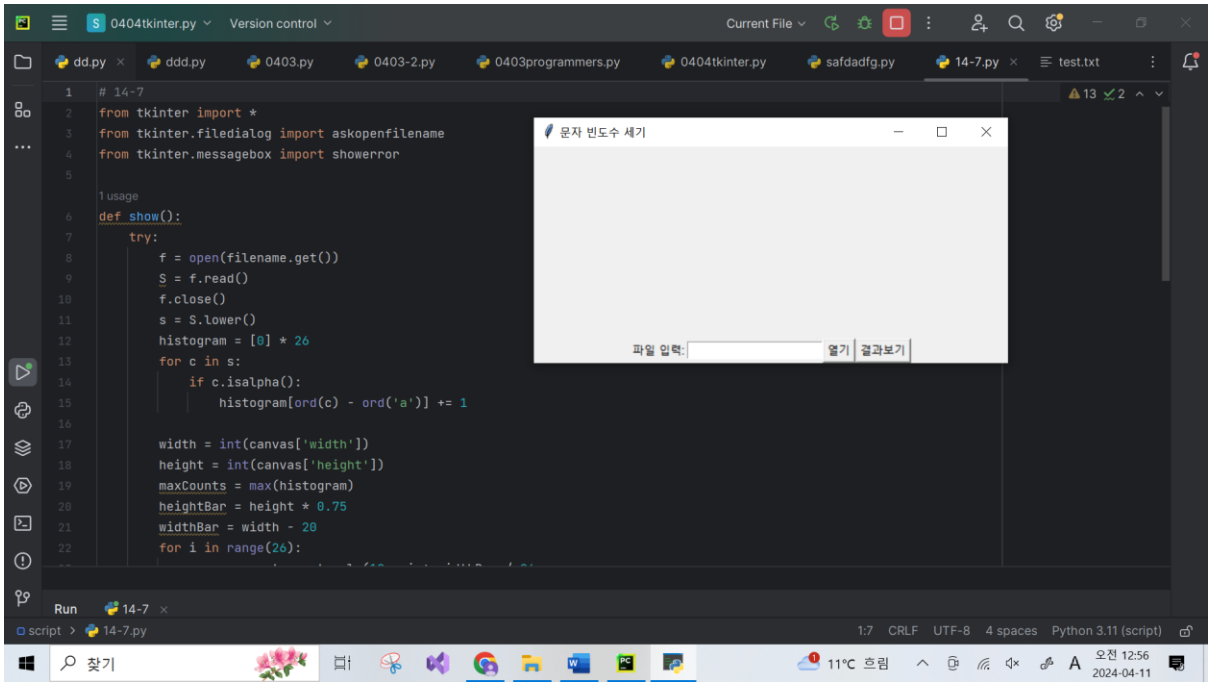

7-8.py
12-1.py
13-1.py
13-2.py
hello.txt
# 13-2
s = input("파일이름을 입력하세요: ")
f = open(s, "r")
c = f.read()
c_cnt = len(c)
w_cnt = len(c.split())
l_cnt = c.count("\n") + 1
print("문자 {0} 개 \n단어 {1} 개 \n행 {2} 개".format(*args: c_cnt, w_cnt, l_cnt))
Run
13-2
C:\Users\mandu\Desktop\스언어숙제4\venv\Scripts\python.exe C:\Users\mandu\Desktop\스언어숙제
파일이름을 입력하세요: hello.txt
문자 43 개
단어 8 개
행 4 개
Process finished with exit code 0

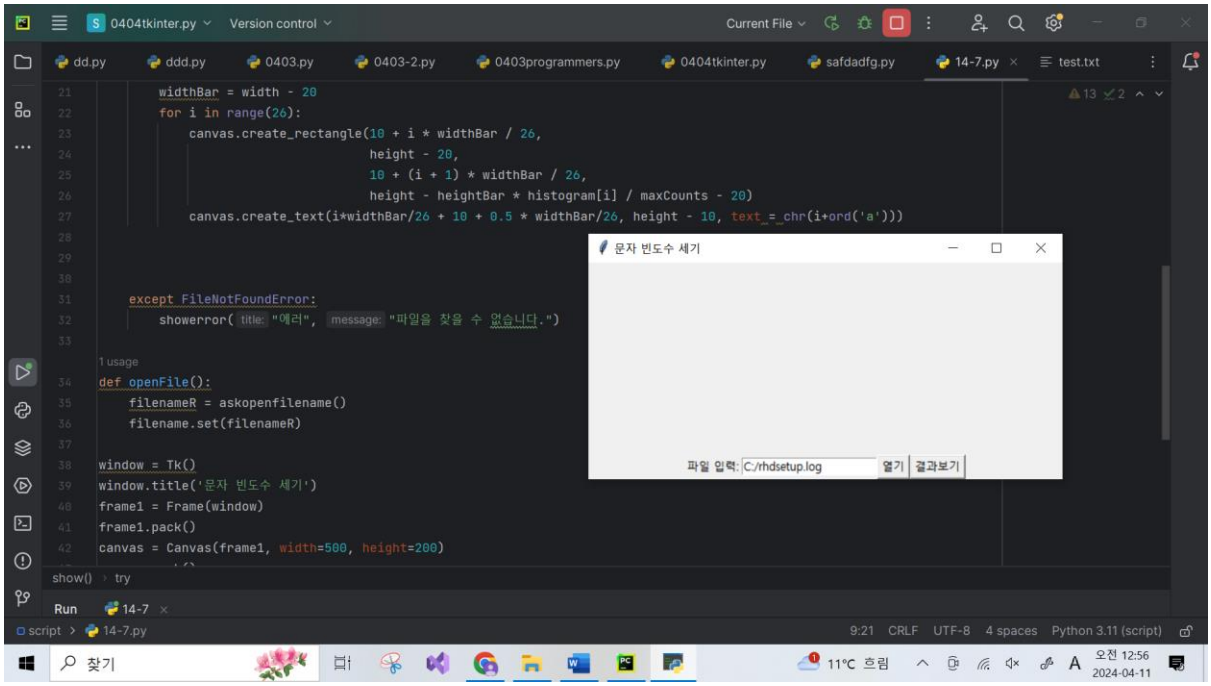
14-4.

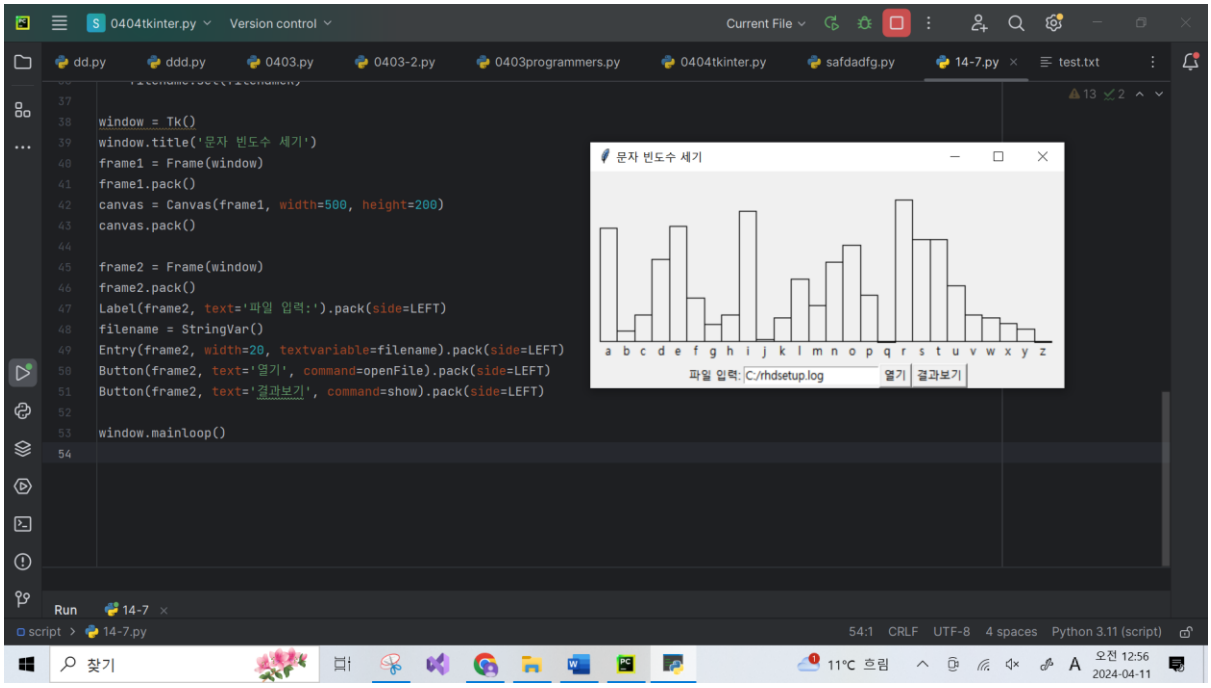

main.py
dd.py
ddd.py
0403.py
0403-2.py
0403programmers.py
0404tkinter.py
safdadfg.py
# 14-4
from tkinter import *
from tkinter.filedialog import askopenfilename
from tkinter.messagebox import showerror
1 usage
def show():
try:
f = open(filename.get())
S = f.read()
f.close()
s = S.lower()
histogram = [0] * 26
for c in s:
if c.isalpha():
histogram[ord(c) - ord('a')] += 1
for i in range(26):
if histogram[i]:
text.insert(END, chr(ord('a') + i) + " - " + str(histogram[i]) + '번 나타납니다.\n')
except FileNotFoundError:
showerror(title: "에러", message: "파일을 찾을 수 없습니다.")
1 usage
show() › try
문자 빈도수 세기
a - 156번 나타납니다.
b - 14번 나타납니다.
c - 36번 나타납니다.
d - 113번 나타납니다.
e - 158번 나타납니다.
f - 60번 나타납니다.
g - 24번 나타납니다.
h - 36번 나타납니다.
i - 180번 나타납니다.
j - 3번 나타납니다.
파일 입력: C:/rhdsetup.log
열기
결과보기


main.py
dd.py
ddd.py
0403.py
0403-2.py
0403programmers.py
0404tkinter.py
safdadfg.py
def openFile():
filenameR = askopenfilename()
filename.set(filenameR)
window = Tk()
window.title('문자 빈도수 세기')
frame1 = Frame(window)
frame1.pack()
scrollbar = Scrollbar(frame1)
scrollbar.pack(side=RIGHT, fill=Y)
text = Text(frame1, width=40, height=10, wrap=WORD, yscrollcommand=scrollbar.set)
text.pack()
scrollbar.config(command=text.yview)
frame2 = Frame(window)
frame2.pack()
Label(frame2, text='파일 입력:').pack(side=LEFT)
filename = StringVar()
Entry(frame2, width=20, textvariable=filename).pack(side=LEFT)
Button(frame2, text='열기', command=openFile).pack(side=LEFT)
Button(frame2, text='결과보기', command=show).pack(side=LEFT)
window.mainloop()
show() › try
문자 빈도수 세기
a - 156번 나타납니다.
b - 14번 나타납니다.
c - 36번 나타납니다.
d - 113번 나타납니다.
e - 158번 나타납니다.
f - 60번 나타납니다.
g - 24번 나타납니다.
h - 36번 나타납니다.
i - 180번 나타납니다.
j - 3번 나타납니다.
파일 입력: dd
열기
결과보기
에러
파일을 찾을 수 없습니다.
확인

14-5.


0404tkinter.py
Version control
Current File
dd.py
ddd.py
0403.py
0403-2.py
0403programmers.py
0404tkinter.py
safdadfg.py
14-7.py
test.txt
# 14-7
from tkinter import *
from tkinter.filedialog import askopenfilename
from tkinter.messagebox import showerror
1 usage
def show():
try:
f = open(filename.get())
S = f.read()
f.close()
s = S.lower()
histogram = [0] * 26
for c in s:
if c.isalpha():
histogram[ord(c) - ord('a')] += 1
width = int(canvas['width'])
height = int(canvas['height'])
maxCounts = max(histogram)
heightBar = height * 0.75
widthBar = width - 20
for i in range(26):
문자 빈도수 세기
파일 입력:
열기
결과보기
Run
14-7
script
14-7.py
1:7
CRLF
UTF-8
4 spaces
Python 3.11 (script)
찾기
11°C 흐림
오전 12:56
2024-04-11


0404tkinter.py
Version control
Current File
dd.py
ddd.py
0403.py
0403-2.py
0403programmers.py
0404tkinter.py
safdadfg.py
14-7.py
test.txt
widthBar = width - 20
for i in range(26):
canvas.create_rectangle(10 + i * widthBar / 26,
height - 20,
10 + (i + 1) * widthBar / 26,
height - heightBar * histogram[i] / maxCounts - 20)
canvas.create_text(i*widthBar/26 + 10 + 0.5 * widthBar/26, height - 10, text = chr(i+ord('a')))
except FileNotFoundError:
showerror(title: "에러", message: "파일을 찾을 수 없습니다.")
1 usage
def openFile():
filenameR = askopenfilename()
filename.set(filenameR)
window = Tk()
window.title('문자 빈도수 세기')
frame1 = Frame(window)
frame1.pack()
canvas = Canvas(frame1, width=500, height=200)
문자 빈도수 세기
파일 입력: C:/rhdsetup.log
열기
결과보기
show()
try
Run
14-7
script
14-7.py
9:21
CRLF
UTF-8
4 spaces
Python 3.11 (script)
찾기
11°C 흐림
오전 12:56
2024-04-11


0404tkinter.py
Version control
Current File
dd.py
ddd.py
0403.py
0403-2.py
0403programmers.py
0404tkinter.py
safdadfg.py
14-7.py
test.txt
window = Tk()
window.title('문자 빈도수 세기')
frame1 = Frame(window)
frame1.pack()
canvas = Canvas(frame1, width=500, height=200)
canvas.pack()
frame2 = Frame(window)
frame2.pack()
Label(frame2, text='파일 입력:').pack(side=LEFT)
filename = StringVar()
Entry(frame2, width=20, textvariable=filename).pack(side=LEFT)
Button(frame2, text='열기', command=openFile).pack(side=LEFT)
Button(frame2, text='결과보기', command=show).pack(side=LEFT)
window.mainloop()
문자 빈도수 세기
a b c d e f g h i j k l m n o p q r s t u v w x y z
파일 입력: C:/rhdsetup.log
열기
결과보기
Run
14-7
script
14-7.py
54:1
CRLF
UTF-8
4 spaces
Python 3.11 (script)
찾기
11°C 흐림
오전 12:56
2024-04-11