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# Web Development with Python Lesson 8







# OBSAH PREZENTÁCIE

- Opakovanie
- Typy súborov
- Práca so súborom
- Čítanie zo súboru
- Zápis do súboru



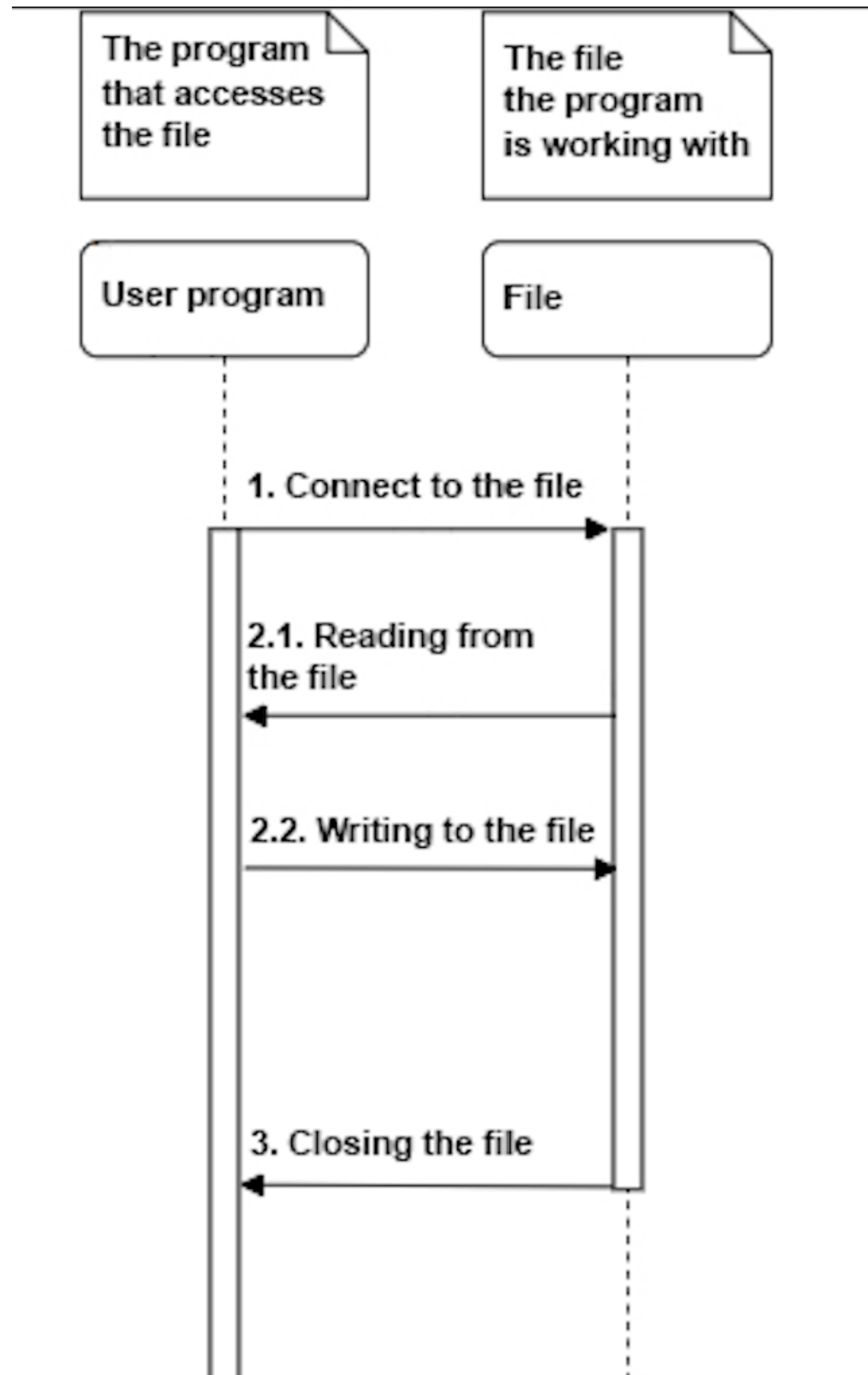
# OPAKOVANIE

- Aký je rozdiel medzi list a tuple?
- Aké sú špecifikácie dátového typu Set?
- Čo robí funkcia intersection v set?
- Čo je frozenset?
- Ako je definovaný dictionary?
- Ako dostanete hodnotu z dictionary s definovaným kľúčom a defaultnou hodnotu?

# TYPY SÚBOROV

- **Textový súbor** - postupnosť znakov, ktorá môže obsahovať aj znaky konca riadka '\n'
  - html, XML, CSS, JSON, txt, rtf, csv, ...
- **Binárny súbor** - je sekvencia bytov, ktorá unikátne popisuje súbor na disku
  - png, jpg, mp4, zip, pdf, doc, ...

# PRÁCA SO SÚBOROM



# OTVORENIE SÚBORU

7

 main.py > ...

```
1 fileHandler = open("./text.txt", "r")
2 print(fileHandler)
```



Run

90ms on 13:15:38, 11/29 ✓

```
<_io.TextIOWrapper name='./text.txt'
mode='r' encoding='UTF-8'>
```

# METÓDY OTVORENIA SÚBORU

Mode	Description	Data processing starts from
r	Opening a read-only text file. If no such file exists, an exception will be thrown.	Start of file
w	Opening a text file for writing only. If such a file does not exist, it will be created. Otherwise, its contents will be deleted and the file will be overwritten..	Start of file
a	Opening a text file for adding. If such a file does not exist, it will be created.	End of file



# METÓDA READ

The **read()** method returns the specified number of bytes from the file. Default is -1 which means the whole file.

≡ text.txt

```
1 Lorem ipsum dolor sit amet, consectetur adipiscing elit,  
sed do eiusmod tempor incididunt ut labore et dolore  
magna aliqua. Ut enim ad minim veniam, quis nostrud  
exercitation ullamco laboris nisi ut aliquip ex ea  
commodo consequat. Duis aute irure dolor in reprehenderit  
in voluptate velit esse cillum dolore eu fugiat nulla  
pariatur. Excepteur sint occaecat cupidatat non proident,  
sunt in culpa qui officia deserunt mollit anim id est  
laborum.
```

 main.py

```
1 fileHandler = open("./text.txt", "r")  
2 print(fileHandler.read(10))
```



Run

Lorem ipsu

# METÓDA REPR

The **read()** method returns a printable representation of the object by converting that object to a string


```
main.py
1  fileHandler = open("./text.txt", "r")
2  print(repr(fileHandler.read()))
```

Run 72ms on 13:22:39, 11/29 ✓

```
'Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. \n\nDuis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. \n Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.'
```

# METÓDA `readline`

The **`readline()`** method returns one line from the file

 main.py

```
1 fileHandler = open("./text.txt", "r")
2 riadok = fileHandler.readline()
3 print(riadok)
```



Run

207ms on 13:30:4

Lorem ipsum dolor sit amet.

# METÓDA READLINES

The **readlines()** method returns lines from the file in list

 main.py

```
1 fileHandler = open("./text.txt", "r")
2 lines = fileHandler.readlines()
3 print(lines)
```

▼ Run

130ms on 13:32:41, 11/29 ✓

```
['Lorem ipsum dolor sit amet.\n', 'Consectetur adi
piscing elit, \n', 'Duis aute irure dolor in repre
henderit in voluptate velit esse cillum dolore eu
fugiat nulla pariatur.\n', '\n', 'Excepteur sint o
ccaecat cupidatat non proident, sunt in culpa qui
officia deserunt mollit anim id est laborum.']
```



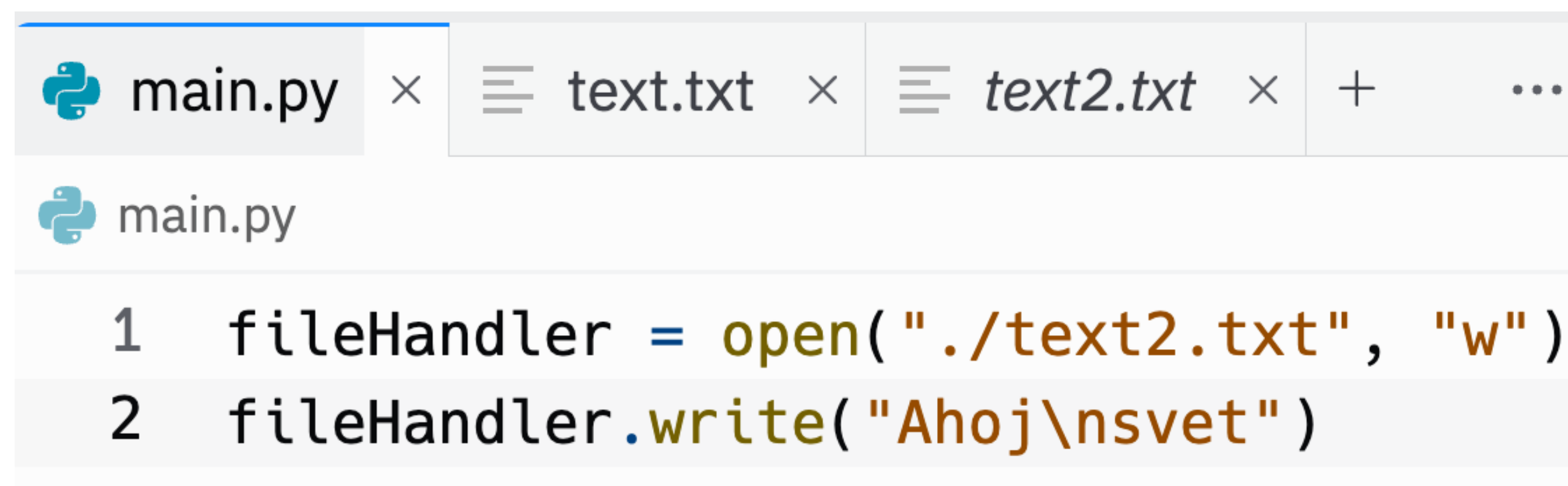
# PRECHÁDZANIE SÚBORU

 main.py

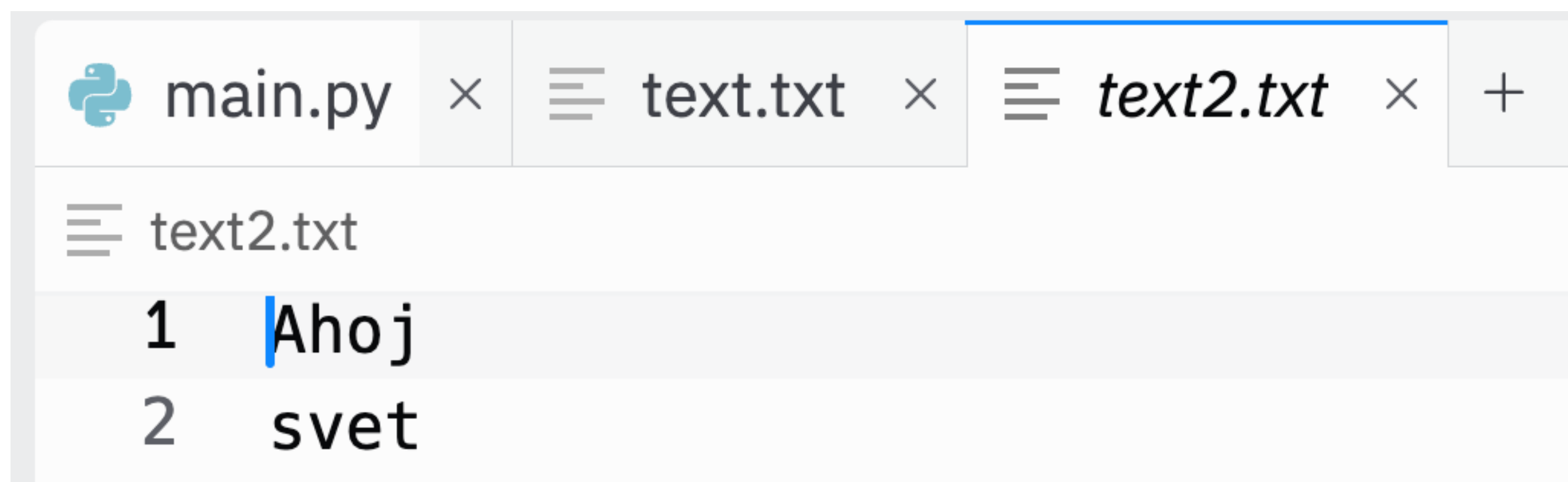
```
1  fileHandler = open("./text.txt", "r")  
2  ✓ for line in fileHandler:  
3      print(line)
```

# ZAPISOVANIE DO SÚBORU

The **write()** method to write to file  
**a** - will append to the end of the file  
**w** - will overwrite any existing content




```
main.py × ≡ text.txt × ≡ text2.txt × + ...  
main.py  
1 fileHandler = open("./text2.txt", "w")  
2 fileHandler.write("Ahoj\nsvet")
```




```
main.py × ≡ text.txt × ≡ text2.txt × +  
text2.txt  
1 Ahoj  
2 svet
```

# ZAPISOVANIE DO SÚBORU

 main.py

```
1  fileHandler = open("./text2.txt", "a")  
2  fileHandler.write("Ako sa mas?")
```

 main.py ×

≡ text.txt ×

≡ *text2.txt* ×

+

≡ text2.txt

```
1  Ahoj
```

```
2  svetAko sa mas?
```

# ZAPISOVANIE DO SÚBORU



main.py

```
1  fileHandler = open('text2.txt', 'w')  
2  print("Ako sa mas?", file = fileHandler)
```



# ZAPISOVANIE DO SÚBORU

The **writelines()** method writes the items of a list to the file



main.py

```
1  fileHandler = open("./text2.txt", "w")
2  zoznam_riadkov = ["Ahoj\n", "ako\n", "sa\n", "mas\n", "?"]
3  fileHandler.writelines(zoznam_riadkov)
```

≡ text2.txt

```
1  Ahoj
2  ako
3  sa
4  mas
5  ?
```

# ZATVORENIE SÚBORU

The **close()** method closes an open file.  
You should always close your files, in some cases, due to buffering, changes made to a file may not show until you close the file.



main.py

```
1  fileHandler = open("./text2.txt", "w")
2  zoznam_riadkov = ["Ahoj\n", "ako\n", "sa\n",
                    "mas\n", "?"]
3  fileHandler.writelines(zoznam_riadkov)
4  fileHandler.close()
```

# ZATVORENIE SÚBORU

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main.py

```
1  fileHandler = open("./text2.txt", "w")
2  zoznam_riadkov = ["Ahoj\n", "ako\n", "sa\n",
                    "mas\n", "?"]
3  fileHandler.writelines(zoznam_riadkov)
4  fileHandler.close()
```

# AUTOMATICKÉ ZATVORENIE SÚBORU

20

 main.py

```
1  ✓ with open('text.txt', 'r') as fileHandler:  
2      print(fileHandler.readline())  
3  
4  fileHandler = open('text.txt', 'r')  
5  print(fileHandler.readline())  
6  fileHandler.close()
```



# ZADANIE

Napíšte program, ktorý si vypýta meno súboru a potom vypíše prvé 3 znaky z prvého riadka tohto súboru.

# ZADANIE

Napíšte program, ktorý si vypýta meno súboru a potom vypíše počet riadkov a dĺžku najdlhšieho riadka tohto súboru.

# ZADANIE

Napíšte program, ktorý si vypýta meno súboru a potom vypíše počet riadkov a dĺžku najdlhšieho riadka tohto súboru.

# ZADANIE

Napíšte program, ktorý nahradí všetky slová v texte  
nejakým iným slovom.



**ĎAKUJEM ZA POZORNOST**