

# Python Programming and NLP (in English)

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# Summary on Input-Output (IO)

- Open a file for reading or writing:

```
import codecs
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import codecs  
finput = codecs.open('my_file.txt', 'r', 'utf-8')  
finput.close()
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# Summary on Input-Output (IO)

- Open a file for reading or writing:

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import codecs
finput = codecs.open('my_file.txt', 'r', 'utf-8')
for line in finput:
    print(line)
finput.close()
```

- 1 Loop over file.

# Summary on Input-Output (IO)

- Open a file for reading or writing:

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import codecs
finput = codecs.open('my_file.txt', 'r', 'utf-8')
lines = finput.readlines()
for line in lines:
    print(line)
finput.close()
```

- ② Read all lines.

# Summary on Input-Output (IO)

- Open a file for reading or writing:

```
import codecs
finput = codecs.open('my_file.txt', 'r', 'utf-8')
content_str = finput.read()
print(content_str)
finput.close()
```

- ③ Read whole string.

# Review

- Do you have questions about the exercises?

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- Do you have questions about the exercises?
- Do you have questions about the review material?
  - Section 7.2 (Reading and writing files), or
  - Section 7.2.1 (Methods of file objects).



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- Writing in a file:  
`import codecs`

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import codecs  
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import codecs
foutput = codecs.open('my_file.txt', 'w', 'utf-8')
content_str_1 = 'this is the first line n'
content_str_2 = 'this is the second line n'
```

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# Exercises

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- Exercise 1: Write a translator English → Spanish.
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- Example:

```
english_filename = 'english_text.txt'  
dictionary_filename = 'dictionary_en-es.txt'  
spanish_filename = 'spanish_text.txt'
```

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- Exercise 1: Write a translator English  $\rightarrow$  Spanish.
- Download file 'dictionary\_en-es.txt' from DropBox.
- Download file 'english\_text.txt' from DropBox.

- Example:

```
english_filename = 'english_text.txt'  
dictionary_filename = 'dictionary_en-es.txt'  
spanish_filename = 'spanish_text.txt'  
Translate(english_filename, dictionary_filename,  
spanish_filename)
```

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- Exercise 2: Write a translator English  $\rightarrow$  Spanish that reorders adjectives and nouns.

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- Example:  

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- Example:

```
english_filename = 'english_text_tagged.txt'  
dictionary_filename = 'dictionary_en-es.txt'  
spanish_filename = 'spanish_text.txt'  
TranslateAndReorderEnEs(english_filename,  
dictionary_filename, spanish_filename)
```

# Exercises

- Exercise 3: Write a translator English  $\rightarrow$  Japanese that reorders verbs to the end of sentences.

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- Download file 'dictionary\_en-ja.txt' from DropBox.

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- Exercise 3: Write a translator English → Japanese that reorders verbs to the end of sentences.
- E.g. I eat delicious food →
- Download file 'dictionary\_en-ja.txt' from DropBox.
- Download file 'english\_text\_tagged.txt' from DropBox.

# Exercises

- Exercise 3: Write a translator English → Japanese that reorders verbs to the end of sentences.
- E.g. I eat delicious food →
- Download file 'dictionary\_en-ja.txt' from DropBox.
- Download file 'english\_text\_tagged.txt' from DropBox.
- Example:  

```
english_filename = 'english_text_tagged.txt'  
dictionary_filename = 'dictionary_en-ja.txt'  
japanese_filename = 'japanese_text.txt'
```

# Exercises

- Exercise 3: Write a translator English → Japanese that reorders verbs to the end of sentences.
- E.g. I eat delicious food →
- Download file 'dictionary\_en-ja.txt' from DropBox.
- Download file 'english\_text\_tagged.txt' from DropBox.
- Example:

```
english_filename = 'english_text_tagged.txt'  
dictionary_filename = 'dictionary_en-ja.txt'  
japanese_filename = 'japanese_text.txt'  
TranslateAndReorderEnJa(english_filename,  
dictionary_filename, japanese_filename)
```

# Homework

- 1 Please try to write the translators.



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Contact:

- You can visit me on Mondays (any time) at 308.
  - Ask programming questions.
  - Ask about natural language processing.
  - Talk in English.
- You can also write me at:
  - `martinez.gomez.pascual@ocha.ac.jp`