

# Final Project

***OJDC***

*Online Japanese Dictionary Collection*

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資訊工程學系三年級 A 班

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# Introduction to OJDC

Briefly Talking about this Project

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# What is OJDC

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- ***Web Application:***  
A brief website based on a Django web application
- ***Dictionary Collection:***  
Look up Japanese words from various online dictionaries once

# Why is OJDC

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- ***Convenience***

Easily look up a certain word from various online Japanese dictionaries

- ***Self-Learning***

Learn how to make a simple little Python application

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# What makes OJDC work

Techniques and Resources Used inside this Project

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# Programming Language

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*Python v3.9.6*

# Web Application Framework

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*Django v4.0*

# Database Management System

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*SQLite 3*

# Web Crawler Python Package

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*PyQuery v1.4.3*

# Front-End Framework

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***Material Design for Bootstrap v5 v3.10.1***

# Webpage Icons Library

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***Font Awesome v6.0.0-beta3***



# IDE & Text Editor

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***PyCharm v2021.2.2***

***Visual Studio Code v1.63.2***

# Webpage Browser

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***Google Chrome v96.0.4664.110 (64-bit)***

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# How does OJDC work

Brief Descriptions about Processes in this Application

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# Program Processes

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## ***Users***

Users Interacting with Webpages



## ***Server***

Server Handling Queries & Processing Web Crawler



## ***Online Dictionaries***

Looking Up Words & Returning Results in Webpages

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# Problems Encountered

Some Important Problems Encountered while Programming

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# URL Encoding

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- Perform the ***Percent-Encoding*** on reserved or non-ASCII characters (i.e. UTF-8) in URLs
- For instance, 物語 → ***%E7%89%A9%E8%AA%9E***
- In Python, it is implemented by ***urllib.parse.quote()*** and ***urllib.parse.quote\_plus()***

# Relative Links

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- Some hyperlinks (to webpages or images) are relative (that is, ***lack of their host names***)
- In PyQuery, it is handled by ***pyquery.PyQuery().make\_links\_absolute()***

# Data Carrier

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- In Python v3.9.6, there are many choices to be simple **data carriers**
  - `class`
  - `namedtuple`
  - `NamedTuple`
  - `dataclass`
- In this project, I chose ***dataclass*** because I want to try new things

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# Demo Time

Some Basic Operations in this Application

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# Thank You for Listening

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