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IT FDN 110 A

Module 7

https://github.com/vrplkv/IntroToProg-Python-Mod07.git

## Assignment07 task

Create a new script that demonstrates how pickling and structured error handling work.

Text

Description automatically generated

Figure 1: A screenshot of the script running from a command shell.

Text

Description automatically generated

Figure 2: A screenshot of the script running from Pycharm.

Graphical user interface, text, application, Word

Description automatically generated

Figure 3: A screenshot of the data file

## Knowledge documentation

The main objectives of this assignment were to learn and practice pickling and structured error handling.

### Pickling

Pickling, also called marshalling or flattening, is used to serialize or de-serialize python objects such as booleans, integers, floats, strings, tuples, lists, sets and dictionaries. This means storing the data in a binary format instead of plain text. Pickle can also handle mutable “reference” objects. To use pickling, I first needed to import the package. Then I opened a file using the open() function, and specify binary in the mode, such as ‘wb’ for write binary or ‘rb’ for read binary. Then pickle.dump() is used to save data to a file and pickle.load() to read the data. I found datacamp to be a useful resource on explaining pickling in simple terms, and tutorialspoint useful for simple code examples.

<https://www.datacamp.com/community/tutorials/pickle-python-tutorial>

<https://www.tutorialspoint.com/python-pickling>

### Structured Error Handling

When an error occurs in the python code, structured error handling allows you to define your own code for the error types. This is useful to give the user more friendly errors text or perform different actions to handle errors. For example, I used structured error handling to create a new .dat file if an error occurred where the file didn’t already exist. I found python-course had good example of error handling code.

<https://www.python-course.eu/python3_exception_handling.php>

## Summary

Two new concepts learned in this lesson were pickling and structured error handling. I had never used either before in coding, so it was a challenging assignment. Pickling allows storing of python objects as binary data, and structured error handling allows code to be written to handling exceptions or errors thrown by the code so that the program may continue instead of breaking with an error.