

INF201 Exercise 3

Fill out group member info and NMBU-emails.. Only one member has to upload a .ipynb and .pdf file to Canvas.

name_1: fill out 1st member's name here

name_2: Eskil Digernes

nmbu_email_1: fill out 1st member's NMBU-email here

nmbu_email_2: eskil.digernes@nmbu.no

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In [ ]: from pprint import pprint

# creat function to open file and read data
def read_student_info(file_name):
    students = []

    # open file and read data
    with open(file_name, 'r') as f:
        for line in f:
            # remove whitespace
            line = line.strip()
            # check if line is not empty and not comment
            if line and not line.startswith('#'):
                # split line by colon
                name, details = line.split(':')
                # split details by comma
                age, phone = details.split(',')
                # create dictionary
                student_dict = {
                    'name': name,
                    'age': int(age),
                    'phone': phone
                }
                students.append(student_dict)

    return students

# test function with example file from canvas
file_name = "students.txt"
students_info = read_student_info(file_name)

# print dictionary in structured way
pprint(students_info)
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[{'age': 24, 'name': 'Per', 'phone': '12345678'},
 {'age': 23, 'name': 'Kari', 'phone': '23456789'},
 {'age': 24, 'name': 'Ole', 'phone': '34567891'}]
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In [ ]: import re
from pathlib import Path

# function to extract imports from *.py in current directory
def extract_imports(file_path):
    with open(file_path, 'r') as f:
        content = f.readlines()

    # regex patterns
    import_pattern = re.compile(r'^import (\w+)')
    from_pattern = re.compile(r'^from (\w+)')

    # list to store imports
    imports = []

    # check each line for import or from
    for line in content:
        match_import = import_pattern.search(line)
        match_from = from_pattern.search(line)
        if match_import:
            imports.append(match_import.group(1))
        if match_from:
            imports.append(match_from.group(1))
    return imports

# function to display imports
def display_imports(py_file, imports):
    for imp in imports:
        print(f"{py_file.absolute()}: [{imp}]")

# check all .py files in the current directory
current_directory = Path('.')
python_files = list(current_directory.glob('*.py'))
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for py_file in python_files:  
    imports = extract_imports(py_file)  
    if imports:  
        display_imports(py_file, imports)
```

c:\Users\eskil\OneDrive\Skrivebord\INF201\Exercise 3\dummy.py: ['re']

c:\Users\eskil\OneDrive\Skrivebord\INF201\Exercise 3\dummy.py: ['pathlib']

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