Assignment

- Implement a Rectangle class representing a rectangle
- Usage:
  - r = Rectangle(4, 5)
  - print(r.get_area()) # prints out 20
  - r.set_size(2, 6)
  - print(r.get_area()) # prints out 12

Assignment

- Implement the Matrix class representing a mathematical matrix
  - Try to provide implementation for sparse matrices
- Implement methods for basic operations over matrices
  - Sum, product,…
- Methods return new instances

Assignment

- Implement a simple logging library
- class Logger:
  __init__(self, name)
  def set_level(self, level)
  def log(self, level, message)
  def add_printer(self, printer)
- The log method prints out messages only if the given level is higher then the level set via set_level()
- Messages are printed via all added printers
  - Printer is an object with the method print(message)
  - Create multiple printers
    - Printing to std out, to std err, to file

Assignment

- Extend the printer to have a formatter
  - Formatter is an object with the method format(logger, message), which takes the message and returns the message prepared for printing
    - Implement multiple formatters
      - E.g., with name of the logger, with the current data and time,…
      - Current date/time
        ```
        import datetime
        print(datetime.datetime.now())
        ```