Matrix

This page contains information about class `Matrix`. Matricies are basic algebraic objects, used in math…

Initialization:

Possible variants for initialization:

- `Matrix(n: int, m: int)` — creates zero matrix with `n` rows and `m` columns;
- `Matrix(elements: list[list[any]])` — creates matrix with default values (about values here); …

Attributes:

- `n: int`, `m: int` — count of matrix rows and columns;
- `data: list[list[any]]` — matrix data; …

Methods:

- `set_value(i: int, j: int, value: any) -> None` — method sets value for `i` row and `j` column;
- `determinant() -> float` — method called for square matrix, which return its determinant;
- `Matrix.identity(n: int) -> Matrix` — static method which returns square identity matrix with size `n`; …

Overloaded:

- `Matrix + Matrix -> Matrix` — matrix addition operator;
- `Matrix * Matrix | int | float -> Matrix` — matrix multiplication operator; …

Examples

Example 1:

Matrix initialization, multiplication and determinant usage

```
matrix1 = Matrix([[1, 0, 1], [0, 1, 2]])
matrix2 = Matrix([[-1, 2], [0, 1], [2, -3]])

matrix3 = matrix1*matrix2 # Matrix([[1, -1], [4, -5]])
matrix4 = matrix2*matrix3 # Matrix([[-1, 2, 3], [0, 1, 2], [2, -3, -4]])

print(matrix3.determinant(), matrix4.determinant())
# Result: -1, 0
```

Example 2:

Something else…