

# Test Report

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## Introduction

This test report is automatically generated and includes information automatically generated by standard testing tools as well as custom tools in order to test and report the correctness as well as the quality of the software.

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## Objective

The objective of this report is to provide important information to users and auditors in order to check and re-validate the correctness and quality of the tested software. In this automatically generated report you can confirm if the functionality of the tested software is ensured. This is especially important and helpful for software updates and major version changes. By providing these test reports we hope to help customers, partners and auditors with their software validation processes due to internal or external requirements.

## Testing Process

Our goal is to provide as many and comprehensive tests as possible in order to ensure risks As Low As Reasonably Possible (ALARP). The tests we create can be categorized into multiple non-exclusive categories such as:

- Unit Tests vs. Integration Tests vs. System Tests vs. Static Tests vs. Code Style
- Frontend vs. Backend
- Internal vs. 3rd Party
- Framework vs. Library vs. Module
- Environment dependent vs. Environment independent

In addition to these functional tests we also do performance analysis of critical components. In addition to these automated tests we also do manual tests which are not included in this report during the development process and testing environments. New tests are constantly added and old tests are improved if applicable. In case tests become redundant or no longer provide any benefit due to software changes we may remove them.

The testing rulesets can be found at:

- [PHPUnit](#)
- [PhpCS](#)
- [PhpStan](#) and [Baseline](#)
- [Eslint](#)

## Testing Summary

This section contains a brief overview about the testing results.

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4517	3820	697	84.6%
Statements	24573	22212	2361	90.4%

### Tests

Description	Total	Successful	Skippis	Warnings	Failures	Errors
Test Suits	258	251	7	0	0	0
Tests	1713	1688	25	0	0	0
Static Tests	254	13	0	0	0	241
Code Style	254	244	0	2	0	10

Total amount of assertions: **3475**

Total testing time: **23.028085s**

## Disclaimer

This test report doesn't provide any legal warrenty over completeness and correctness in case of damages of any kind.

## Tests

### Account/user manager to handle/access loaded accounts

#### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	5	0	100.0%
Statements	17	17	0	100.0%

#### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	7	7	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

#### Description

successful	The manager has the expected member variables	0.044607s
successful	The manager has the expected default values after initialization	0.042708s
successful	An account can be added to the manager	0.044705s
successful	An account can be retrieved from the manager	0.042714s
successful	An account can only be added once to the account manager (no duplication)	0.042692s
successful	An account can be removed from the account manager	0.043321s
successful	Only a valid account can be removed from the manager	0.044481s

### Base account/user representation

#### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	17	17	0	100.0%
Statements	47	47	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	14	14	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The account has the expected member variables	0.000890s
successful	The account has the expected default values after initialization	0.001388s
successful	The account names can be set and retrieved correctly	0.042858s
successful	Groups can be added to an account	0.043712s
successful	An account can have a valid email address	0.042804s
successful	The default status of the account can be changed to a different valid status	0.043634s
successful	The default type of the account can be changed to a different valid type	0.044220s
successful	Account permissions can be added	0.042556s
successful	Account permissions can be checked for existence	0.042542s
successful	An account can have it's own localization	0.045565s
successful	An account 'last activity' timestamp can be updated and retrieved	0.043891s
successful	An account can only have a valid email	0.001056s
successful	An account can only have valid account status	0.000994s
successful	An account can only have valid account types	0.001456s

## Base group representation

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	13	13	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	8	8	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The group has the expected member variables	0.000603s
successful	The group has the expected default values after initialization	0.000961s
successful	The group name and description can be set and retrieved correctly	0.000799s
successful	Group permissions can be added	0.000641s
successful	Group permissions can be checked for existence	0.000577s
successful	Group permissions can be removed	0.000774s
successful	The default status of the group can be changed to a different valid status	0.000403s
successful	A group can only have valid group status	0.000664s

## Base permission representation

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	23	23	0	100.0%
Statements	61	61	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	14	14	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The permission has the expected default values after initialization	0.002069s
successful	The unit can be set and returned correctly	0.000562s
successful	The app can be set and returned correctly	0.000347s
successful	The module can be set and returned correctly	0.000349s
successful	The from can be set and returned correctly	0.000358s
successful	The type can be set and returned correctly	0.000356s
successful	The element can be set and returned correctly	0.000375s
successful	The component can be set and returned correctly	0.000613s
successful	The permission can be set and returned correctly	0.000622s
successful	Two permissions can be checked for equality	0.000895s
successful	Correct permissions are validated	0.000410s
successful	Invalid permissions are not validated	0.000380s
successful	Correct permission flags are validated	0.000406s
successful	Invalid permission flags are not validated	0.000364s

## Clustering points/elements with the K-means algorithm

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	4	1	80.0%
Statements	72	69	3	95.8%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	0	0	0	0	2
Code Style	1	1	0	0	0	0

## Description

successful

The clustering of points and dynamic check of new points works as expected

0.002952s

## Default point in a cluster

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	7	7	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful

Coordinates of a point can be set and returned

0.000352s

successful

The group/cluster of a point can be set and returned

0.000324s

successful

The name of a point can be set and returned

0.000318s

## Match a value by using the minimum quantity of available sub values (Minimum Coin Problem)

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	14	14	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A value is matched with the minimum quantity of available coins.	0.000591s
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Job scheduling based on values/profit

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	2	1	66.7%
Statements	39	38	1	97.4%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The optimal job combination is selected to maximize the value/profit without overlapping jobs	0.000892s
successful	A job list with only one job simply returns one job	0.000397s

Default job for the job scheduling

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%



Description	Total	Covered	Uncovered	Ratio
Statements	8	8	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The job has the expected values after initialization

0.000595s

A Knapsack implementation for discrete quantities, values and costs and bounded item quantities

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	26	26	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The optimal item selection in a backpack is calculated in order to optimize the value/profit while considering the available capacity/cost limit

0.078912s

A Knapsack implementation for continuous quantities, values and costs

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	11	11	0	100.0%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

## Description

successful	The optimal item selection in a backpack is calculated in order to optimize the value/profit while considering the available capacity/cost limit [discrete quantities]	0.001157s
successful	The optimal item selection in a backpack is calculated in order to optimize the value/profit while considering the available capacity/cost limit [continuous quantities]	0.000556s

## The default backpack or basket which holds all items for the Knapsack algorithm

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	10	10	0	100.0%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The backpack has the expected values after initialization	0.000585s
successful	Items can be added to the backpack and automatically change the value and cost the backpack contains	0.000606s

## The default item to be added to the backpack or basket

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	7	7	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The item has the expected values after initialization	0.000298s
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## Maze generation

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	55	55	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A random maze can be generated	0.002507s
successful	A random maze can be rendered	0.002511s

## AStar path finding

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	38	38	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	0	0	0	0	7
Code Style	1	1	0	0	0	0

## Description

successful	The correct path is found for diagonal movement	0.031497s
successful	The correct path is found for straight movement	0.018386s
successful	The correct path is found for diagonal movement [one obstacle]	0.025861s
successful	The correct path is found for diagonal movement [no obstacle]	0.025060s

## JumpPoint path finding

### Coverage

Description	Total	Covered	Uncovered	Ratio
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Description	Total	Covered	Uncovered	Ratio
Methods	12	12	0	100.0%
Statements	290	290	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	0	0	0	0	3
Code Style	1	1	0	0	0	0

Description

successful	The correct path is found for diagonal movement	0.010357s
successful	The correct path is found for straight movement	0.015863s
successful	The correct path is found for diagonal movement [one obstacle]	0.009213s
successful	The correct path is found for diagonal movement [no obstacle]	0.013258s

Grid for path finding

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	5	0	100.0%
Statements	65	65	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	18	18	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	By default a grid is empty	0.000384s
successful	A grid can be created from an array	0.000474s
successful	A node can be set and returned from the grid	0.000393s
successful	Out of bounds nodes cannot be returned	0.000426s
successful	All horizontal neighbors can be found correctly	0.000457s
successful	All vertical neighbors can be found correctly	0.000441s
successful	No straight neighbors are found if no straight neighbors exist	0.000405s
successful	All straight neighbors can be found correctly	0.000488s
successful	All neighbors except blocked diagonal neighbors can be found correctly	0.000512s
successful	All neighbors except blocked diagonal neighbors can be found correctly	0.000511s
successful	No diagonal neighbors are found if no neighbors exist	0.000419s
successful	All diagonal neighbors can be found correctly	0.000541s
successful	All neighbors can be found correctly	0.000896s
successful	All neighbors can be found correctly even if one obstacle exists	0.000924s
successful	No diagonal neighbors are found if they are blocked on two sides	0.000789s
successful	All neighbors can be found correctly if no obstacles exists	0.000875s
successful	No diagonal neighbors are found if one obstacle exists	0.000780s
successful	All neighbors can be found correctly if no obstacles exist	0.000850s

## Heuristic for path finding

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	13	13	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
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Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The heuristics return the correct metric results	0.002013s
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Node on grid for path finding

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	10	10	0	100.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The node has the expected values after initialization	0.000340s
successful	Nodes with equal coordinates are equal	0.000359s
successful	Nodes with different coordinates are not equal	0.000344s
successful	A parent node can be set and returned	0.000404s

JumpPointNode on grid for path finding

Coverage

Description	Total	Covered	Uncovered	Ratio
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Description	Total	Covered	Uncovered	Ratio
Methods	12	12	0	100.0%
Statements	18	18	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	7	7	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The node has the expected values after initialization	0.000627s
successful	The node can be set closed and checked	0.000505s
successful	The node can be set opened and checked	0.000476s
successful	The node can be set tested and checked	0.000712s
successful	The g value cen be set and returned	0.001170s
successful	The h value cen be set and returned	0.000356s
successful	The f value cen be set and returned	0.000339s

JumpPointNode on grid for path finding

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	10	10	0	100.0%
Statements	15	15	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	6	6	0	0	0	0



Description	Total	Successful	Skipps	Warnings	Failures	Errors
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The node has the expected values after initialization	0.000742s
successful	The node can be set closed and checked	0.000597s
successful	The node can be set opened and checked	0.000437s
successful	The g value cen be set and returned	0.000353s
successful	The h value cen be set and returned	0.000448s
successful	The f value cen be set and returned	0.000342s

## Path on grid

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	49	49	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The path has the expected values after initialization	0.000378s
successful	The diagonal euclidean path length is calculated correctly	0.000506s
successful	The straight euclidean path length is calculated correctly	0.001003s

successful	The path is correctly expanded in case only jump points are defined	0.001108s
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## Bitonic sort

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	18	18	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	A list with one element returns the list with the element itself	0.000951s
successful	A list of elements can be sorted in ASC order	0.000598s
successful	A list of elements can be sorted in DESC order	0.000460s

## Bubble sort

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	13	13	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A list with one element returns the list with the element itself	0.000577s
successful	A list of elements can be sorted in ASC order	0.000334s
successful	A list of elements can be sorted in DESC order	0.000360s

## Bucket sort

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	12	12	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A list with one element returns the list with the element itself	0.000449s
successful	A list of elements can be sorted in ASC order	0.000969s
successful	A list of elements can be sorted in DESC order	0.000397s
successful	If no buckets are specified the elements cannot be sorted and an empty result is returned	0.000336s

## CocktailShaker sort

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	22	22	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A list with one element returns the list with the element itself	0.000484s
successful	A list ot elements can be sorted in ASC order	0.000392s
successful	A list ot elements can be sorted in DESC order	0.000538s

Comb sort

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	20	20	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A list with one element returns the list with the element itself	0.000499s
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successful	A list of elements can be sorted in ASC order	0.000365s
successful	A list of elements can be sorted in DESC order	0.000392s

## Cycle sort

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	0	1	0.0%
Statements	30	28	2	93.3%

### Tests

Description	Total	Successful	Skipped	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

### Description

successful	A list with one element returns the list with the element itself	0.000466s
successful	A list of elements can be sorted in ASC order	0.000747s
successful	A list of elements can be sorted in DESC order	0.000660s

## Gnome sort

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	11	11	0	100.0%

### Tests

Description	Total	Successful	Skipped	Warnings	Failures	Errors
Tests	3	3	0	0	0	0

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A list with one element returns the list with the element itself	0.000770s
successful	A list of elements can be sorted in ASC order	0.000718s
successful	A list of elements can be sorted in DESC order	0.000660s

Heap sort

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	25	25	0	100.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A list with one element returns the list with the element itself	0.000614s
successful	A list of elements can be sorted in ASC order	0.000412s
successful	A list of elements can be sorted in DESC order	0.000402s

Insertion sort

Coverage

Description	Total	Covered	Uncovered	Ratio
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Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	11	11	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A list with one element returns the list with the element itself	0.000446s
successful	A list ot elements can be sorted in ASC order	0.000352s
successful	A list ot elements can be sorted in DESC order	0.000360s

Intro sort

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	1	1	50.0%
Statements	18	17	1	94.4%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A list with one element returns the list with the element itself	0.000475s
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successful	A list of elements can be sorted in ASC order	0.003607s
successful	A list of elements can be sorted in DESC order	0.000465s

## Merge sort

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	40	40	0	100.0%

### Tests

Description	Total	Successful	Skipped	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	A list with one element returns the list with the element itself	0.000552s
successful	A list of elements can be sorted in ASC order	0.000438s
successful	A list of elements can be sorted in DESC order	0.000411s

## OddEven sort

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	19	19	0	100.0%

### Tests

Description	Total	Successful	Skipped	Warnings	Failures	Errors
Tests	3	3	0	0	0	0



Description	Total	Successful	Skipp	Warnings	Failures	Errors
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A list with one element returns the list with the element itself	0.000548s
successful	A list of elements can be sorted in ASC order	0.000330s
successful	A list of elements can be sorted in DESC order	0.000443s

Pancake sort

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	26	26	0	100.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A list with one element returns the list with the element itself	0.000498s
successful	A list of elements can be sorted in ASC order	0.000402s
successful	A list of elements can be sorted in DESC order	0.000489s

Quick sort

Coverage

Description	Total	Covered	Uncovered	Ratio
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Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	23	23	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A list with one element returns the list with the element itself	0.000491s
successful	A list ot elements can be sorted in ASC order	0.000362s
successful	A list ot elements can be sorted in DESC order	0.000389s

Selection sort

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	13	13	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A list with one element returns the list with the element itself	0.000292s
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successful	A list of elements can be sorted in ASC order	0.000361s
successful	A list of elements can be sorted in DESC order	0.000364s

## Shell sort

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	10	10	0	100.0%

### Tests

Description	Total	Successful	Skipped	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	A list with one element returns the list with the element itself	0.000948s
successful	A list of elements can be sorted in ASC order	0.000553s
successful	A list of elements can be sorted in DESC order	0.000575s

## Stooge sort

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	1	1	50.0%
Statements	18	17	1	94.4%

### Tests

Description	Total	Successful	Skipped	Warnings	Failures	Errors
Tests	3	3	0	0	0	0

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A list with one element returns the list with the element itself	0.000745s
successful	A list of elements can be sorted in ASC order	0.000752s
successful	A list of elements can be sorted in DESC order	0.000750s

Tim sort

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	0	1	0.0%
Statements	43	40	3	93.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A list with one element returns the list with the element itself	0.000846s
successful	A list of elements can be sorted in ASC order	0.002242s
successful	A list of elements can be sorted in DESC order	0.000413s

Asset manager to handle/access assets

Coverage

Description	Total	Covered	Uncovered	Ratio
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Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	12	12	0	100.0%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	7	7	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The manager has the expected member variables	0.000471s
successful	The manager has the expected default values after initialization	0.000383s
successful	An asset can be added to the manager	0.000388s
successful	An asset can be retrieved from the manager	0.000422s
successful	An asset can only be added once to the manager (no duplication unless overwritten)	0.000462s
successful	An asset can be replaced upon request	0.000383s
successful	An asset can be removed from the manager	0.000406s

## Asset manager to handle/access assets

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	4	4	0	100.0%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

Description

successful	The default http session doesn't authenticate an account	0.000622s
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Depreciation calculations

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	14	14	0	100.0%
Statements	22	22	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The straight line depreciation and reverse value calculations are correct	0.000598s
untested	The arithmetic degressive depreciation and reverse value calculations are correct	0s
untested	The arithmetic progressive depreciation and reverse value calculations are correct	0s
untested	The geometric progressive depreciation and reverse value calculations are correct	0s
untested	The geometric degressive depreciation and reverse value calculations are correct	0s

Finance formulas

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	88	88	0	100.0%
Statements	94	94	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	42	42	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The annual percentage yield (APY) and reverse value calculations are correct	0.001431s
successful	The future value of annuity (FVA) and reverse value calculations are correct	0.000514s
successful	The future value of annuity continuous compounding (FVACC) and reverse value calculations are correct	0.000400s
successful	The annuity payment from the present value (PV) and reverse value calculations are correct	0.000382s
successful	The annuity payment from the future value (FV) and reverse value calculations are correct	0.000567s
successful	The annuity payment from the present value (PV) and reverse value calculations are correct	0.000470s
successful	The present value of the annuity is correct	0.000590s
successful	The present value annuity factor of the annuity is correct	0.000578s
successful	The due present value the annuity is correct	0.000558s
successful	The due future value the annuity is correct	0.000406s
successful	The relative market share calculations by shares and ales are correct	0.000414s
successful	The asset ratio calculations are correct	0.000371s

successful	Balance ratio calculations for DII, Receivables/Turnover, and more are correct	0.000521s
successful	Dept ratios for dept coverage, dept to equity and dept to income are correct	0.000528s
successful	Return on balance statement positions are correct (e.g. return on assets, on equity)	0.000471s
successful	Balance / P&L ratios are correct (e.g. inventory turnover, net profit margin)	0.000595s
successful	Not Implemented!!!	0.000777s
successful	Compound calculations for interest, principal and periods are correct	0.000594s
successful	Continuous compound calculations for interest, principal and periods are correct	0.000647s
successful	Calculations for interest, principal and periods are correct	0.000507s
successful	The discounted payback period is correct	0.000468s
successful	Test the correct calculation of the growth rate in order to double and vice versa	0.000514s
successful	Test the correct calculation of the growth rate in order to double and vice versa with continuous compounding	0.000486s
successful	Calculations for equivalent annual annuity are correct	0.000560s
successful	The free cash flow to equity calculation is correct (how much cash is available after expenses and dept payments)	0.000589s
successful	The free cash flow to firm calculation is correct (how much cash is available after expenses)	0.000452s
successful	The future value calculation is correct	0.000623s
successful	The future value calculation including continuous compounding is correct	0.000763s
successful	The future value factor calculation is correct	0.000633s
successful	The calculation of the geometric mean of multiple return rates is correct	0.000936s
successful	The calculation of the future value of the growing annuity is correct	0.000649s
successful	The calculation of the payment based on the future value of the growing annuity is correct	0.000611s



successful	The calculation of the present value of the growing annuity is correct	0.000596s
successful	The calculation of the payment based on the present value of the growing annuity is correct	0.000581s
successful	The calculation of the present value of the growing perpetuity is correct	0.000663s
successful	The calculation of the net present value is correct	0.001174s
successful	No cash flows in the net present value calculation result in 0	0.000366s
successful	The calculation of the real rate of return is correct	0.000371s
successful	The calculation of the net working capital is correct	0.000346s
successful	The periods to reach a future value based on the present value is calculated correctly	0.000400s
successful	The calculation of the present value is correct	0.000359s
successful	The calculation of the present value using continuous compounding is correct	0.000347s

## Loan formulas

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	6	6	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	6	6	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The loan to deposit ratio is correct	0.000498s
successful	The loan to value ratio is correct	0.000493s

successful	The balloon loan payments are correct for a given balloon	0.000361s
successful	The balloon loan residual value (balloon) is correct for given payments	0.000375s
successful	The loan payments are correct for a given interest rate and period [continuous compounding]	0.000356s
successful	The residual value is correct for a given payment amount, interest rate and period [continuous compounding]	0.000359s

## Stock & bond related formulas

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	22	22	0	100.0%
Statements	25	25	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	12	12	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The calculation the bond yield based on face value and price is correct	0.000465s
successful	The calculation of the return of the capital asset pricing model is correct	0.000352s
successful	The capital gains yield calculation is correct	0.000493s
successful	The diluted earnings per share calculation is correct	0.000353s
successful	The calculation of the absolute return for multiple holding periods is correct	0.000575s
successful	The tax equivalent yield is calculated correctly	0.000352s
successful	The net asset value is calculated correctly	0.000334s

successful	The calculation of the present value of a stock with constant growth rate is correct	0.000366s
successful	The total stock return including dividends and sales price is correct	0.000333s
successful	The calculation of the yield of a bond is correct	0.000486s
successful	The calculation of value of the zero coupon bond is correct	0.000358s
successful	The calculation of the yield of a zero coupon bond is correct	0.000385s

## Lorenz kurve

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	10	10	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The gini coefficient calculation is correct	0.000608s
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## Article affinity/correlation

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	19	19	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The highest affinities between articles purchased are calculated correctly	0.003011s
successful	The affinity of a new article is empty	0.000844s

Customer value

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

Description

untested	The simple customer life time value is correctly calculated	0s
untested	The monthly recurring revenue (MRR) is correctly calculated	0s

General marketing metrics

Coverage

Description	Total	Covered	Uncovered	Ratio
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Description	Total	Covered	Uncovered	Ratio
Methods	9	7	2	77.8%
Statements	37	35	2	94.6%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	Test the correctness of the customer retention calculation	0.000590s
successful	The profit according to Berry can be correctly calculated	0.000637s
successful	The purchase probability of customers can be calculated based on historic information using the migration model	0.002922s
successful	The CLV can be calculated using the migration model	0.001589s
successful	The migration model can be used in order to determin which buying/none-buying customer group should receive a mailing	0.001775s

Net promoter

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	5	0	100.0%
Statements	28	28	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Code Style	1	1	0	0	0	0

Description

successful	The net promoter has the expected default values after initialization	0.000462s
successful	The net promoter score, detractors, passives and promoters are correct	0.000653s

Page rank algorithm

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	24	24	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	Test the correctness of the page rank algorithm	0.000869s
successful	Test the correctness of the page rank algorithm with custom damping and starting values	0.000627s

General programming metrics

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%

Description	Total	Covered	Uncovered	Ratio
Statements	2	2	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	Test correctness of the ABC calculation	0.000467s
successful	Test correctness of CRAP score	0.000290s

Market share calculations

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	8	8	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The rank calculated with Zipf is correct	0.091170s
successful	The market share by rank calculated with Zipf is correct	0.091445s

Helper for managing options

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	5	0	100.0%
Statements	15	15	0	100.0%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	6	6	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The option helper has the expected attributes	0.000292s
successful	The option helper has the expected default values after initialization	0.000338s
successful	Options can be added to the helper	0.000351s
successful	Multiple options can be added to the helper in one go	0.000518s
successful	Multiple options can be retrieved	0.000374s
successful	Options can be overwritten/changed	0.000413s

## Pool for caches

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	17	17	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	8	8	0	0	0	0



Description	Total	Successful	Skipp	Warnings	Failures	Errors
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

## Description

successful	The pool has the expected default values after initialization	0.001022s
successful	New cache connections can be added to the pool	0.001136s
successful	Cache connections cannot be overwritten with a different cache connection	0.000461s
successful	Cache connections can be accessed with an identifier	0.000400s
successful	By default a null cache is returned if no cache connection exists for the identifier	0.000347s
successful	Cache connections can created by the pool and automatically get added but not overwritten	0.000556s
successful	Cache connections can be removed from the pool	0.000404s
successful	Removing a cache with an invalid identifier will result in no actions	0.000644s

## Factory for generating cache connections

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	0	1	0.0%
Statements	5	4	1	80.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	3	1	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

## Description

successful	The file cache can be created	0.000388s
skipped	The memcached cache can be created	0.001090s
successful	The redis cache can be created	0.001400s
successful	A invalid cache type results in an exception	0.000699s

## File cache connection

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	23	23	0	100.0%
Statements	271	271	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	21	21	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

### Description

successful	The file cache connection has the expected default values after initialization	0.000610s
successful	The connection to a dedicated cache directory can be established (none-existing directories get created)	0.000430s
successful	Different cache data (types) can be set and returned	0.001797s
successful	Cache data can bet added and returned	0.001140s
successful	Cache data cannot be added if it already exists	0.001412s
successful	Existing cache data can be replaced	0.002117s
successful	None-existing cache data cannot be replaced	0.001005s
successful	Cache data can be deleted	0.001644s
successful	The cache correctly handles general cache information	0.002397s

successful	The cache can be flushed	0.001862s
successful	Cache data can be set and returned with expiration limits	0.001152s
successful	Expired cache data can be forced to return	2.003048s
successful	Expired cache data cannot be returned	2.003140s
successful	Unexpired cache data cannot be delete if lower expiration is defined	0.001224s
successful	Expired cache data can be deleted if higher expiration is defined	2.002317s
successful	Unexpired data can be force deleted with lower expiration date	2.002027s
successful	Cache data can be flushed by expiration date	2.001335s
successful	A bad cache status will prevent all cache actions	0.000596s
successful	A invalid cache connection will throw an InvalidConnectionConfigException	0.001340s
successful	Adding a invalid data type will throw an InvalidArgumentException	0.000984s
successful	Setting a invaliddata type will throw an InvalidArgumentException	0.001116s

## Memcached connection

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	18	0	18	0.0%
Statements	75	0	75	0.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	18	0	18	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

### Description

skipped	The memcached connection has the expected default values after initialization	0.000943s
skipped	The connection to a cache can be established (none-existing directories get created)	0.000984s
skipped	Different cache data (types) can be set and returned	0.000983s
skipped	Cache data can bet added and returned	0.000995s
skipped	Cache data cannot be added if it already exists	0.001238s
skipped	Existing cache data can be replaced	0.001057s
skipped	None-existing cache data cannot be replaced	0.001133s
skipped	Cache data can be deleted	0.001401s
skipped	The cache correctly handles general cache information	0.001384s
skipped	The cache can be flushed	0.001188s
skipped	Cache data can be set and returned with expiration limits	0.001310s
skipped	Expired cache data can be forced to return	0.001214s
untested	Expired cache data cannot be returned	0s
untested	Unexpired cache data cannot be delete if lower expiration is defined	0s
untested	Expired cache data can be deleted if higher expiration is defined	0s
untested	Unexpired data can be force deleted with lower expiration date	0s
skipped	Cache data can be flushed by expiration date	0.001254s
skipped	A bad cache status will prevent all cache actions	0.001214s
skipped	Adding a invalid data type will throw an InvalidArgumentException	0.001082s
skipped	Setting a invalid data type will throw an InvalidArgumentException	0.001295s
skipped	A invalid host throws a InvalidConnectionConfigException	0.001464s
skipped	A invalid port throws a InvalidConnectionConfigException	0.001113s

## Redis cache connection

### Coverage

Description	Total	Covered	Uncovered	Ratio
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Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

Description

untested	The redis cache connection has the expected default values after initialization	0s
untested	The connection to a cache can be established (none-existing directories get created)	0s
untested	Different cache data (types) can be set and returned	0s
untested	Cache data can bet added and returned	0s
untested	Cache data cannot be added if it already exists	0s
untested	Existing cache data can be replaced	0s
untested	None-existing cache data cannot be replaced	0s
untested	Cache data can be deleted	0s
untested	The cache correctly handles general cache information	0s
untested	The cache can be flushed	0s
untested	Cache data can be set and returned with expiration limits	0s
untested	Expired cache data can be forced to return	0s
untested	Expired cache data cannot be returned	0s
untested	Unexpired cache data cannot be delete if lower expiration is defined	0s
untested	Expired cache data can be deleted if higher expiration is defined	0s
untested	Unexpired data can be force deleted with lower expiration date	0s

untested	Cache data can be flushed by expiration date	0s
untested	A bad cache status will prevent all cache actions	0s
untested	Adding a invalid data type will throw an InvalidArgumentException	0s
untested	Setting a invalid data type will throw an InvalidArgumentException	0s
untested	A invalid host throws a InvalidConnectionConfigException	0s
untested	A invalid port throws a InvalidConnectionConfigException	0s
untested	A invalid database throws a InvalidConnectionConfigException	0s

## Null cache connection if no cache is available

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	17	17	0	100.0%
Statements	17	17	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

### Description

successful	The default cache has the expected default values after initialization	0.000325s
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## CookieJar to handle http cookies

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	8	7	1	87.5%
Statements	27	26	1	96.3%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	8	8	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The cookie jar has the expected default values and functionality after initialization	0.000995s
successful	Cookie values can be set and returned	0.000684s
successful	Cookie values can be forced to overwrite	0.000581s
successful	Cookie values cannot be overwritten	0.000635s
successful	Cookie values can be removed	0.000564s
successful	None-existing cookie values cannot be removed	0.000580s
successful	Values cannot be removed from a locked cookie and throws a LockException	0.001358s
successful	A locked cookie cannot be saved and throws a LockException	0.000902s

## Pool for database connections

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	17	17	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	7	7	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

## Description

successful	The pool has the expected default values after initialization	0.000352s
successful	A database connection can be created by the pool	0.000816s
successful	Database connections cannot be overwritten	0.000439s
successful	Existing database connections can be added to the pool	0.000387s
successful	Database connections can be removed from the pool	0.000415s
successful	Invalid database connections cannot be removed	0.000377s
successful	The first connection added to the pool is the default connection	0.000384s

## Datamapper for database models

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

## Description

untested	The datamapper has the expected default values after initialization	0s
successful	The datamapper successfully creates a database entry of a model	0.182991s
untested	The datamapper successfully creates a database entry of array data	0s
successful	The datamapper successfully returns a database entry as model	0.148660s
untested	The datamapper successfully returns a database entry as array	0s



successful	The datamapper successfully updates a database entry from a model	0.518423s
untested	The datamapper successfully updates a database entry from an array	0s
successful	The datamapper successfully deletes a database entry from a model	1.122362s

## Mapper for the database schema

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	3	2	60.0%
Statements	18	14	4	77.8%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	0	0	0	0	2
Code Style	1	1	0	0	0	0

### Description

successful	The tables can be returned	0.053724s
successful	The fields of a table can be returned	0.038373s

## Database connection factory

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	10	10	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	0	0	0	0	3
Code Style	1	1	0	0	0	0

## Description

successful	The mysql connection can be successfully created	0.000441s
successful	The postgresql connection can be successfully created	0.000431s
successful	The sqlserver connection can be successfully created	0.000412s
successful	The sqlite connection can be successfully created	0.000409s
successful	A invalid database type throws a InvalidArgumentException	0.000705s

## Mysql connection

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	25	25	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	9	9	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	Valid mysql connection data result in a valid database connection	0.000937s
successful	A missing database type returns a failure	0.000425s
successful	A missing database host returns a failure	0.000598s

successful	A missing database port returns a failure	0.000454s
successful	A missing database returns a failure	0.000448s
successful	A missing database login returns a failure	0.000519s
successful	A missing database password returns a failure	0.000454s
successful	A invalid database type returns a failure	0.000558s
successful	A invalid database returns a failure	0.001186s

## Postgresql connection

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	25	25	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	8	8	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	Valid postgresql connection data result in a valid database connection	0.005137s
successful	A missing database type returns a failure	0.000934s
successful	A missing database host returns a failure	0.000441s
successful	A missing database port returns a failure	0.000413s
successful	A missing database returns a failure	0.000399s
successful	A missing database login returns a failure	0.000400s
successful	A missing database password returns a failure	0.000427s
successful	A invalid database returns a failure	0.000414s

## Postgresql connection

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	27	27	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	Valid sqlite connection data result in a valid database connection	0.000665s
successful	A missing database type returns a failure	0.000485s
successful	A missing database returns a failure	0.000423s

## Sqlserver connection

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	1	1	50.0%
Statements	24	21	3	87.5%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	9	9	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	Valid sqlserver connection data result in a valid database connection	0.006140s
successful	A missing database type returns a failure	0.000529s
successful	A missing database host returns a failure	0.000478s
successful	A missing database port returns a failure	0.000525s
successful	A missing database returns a failure	0.000470s
successful	A missing database login returns a failure	0.000487s
successful	A missing database password returns a failure	0.000453s
successful	A invalid database type returns a failure	0.000465s
successful	A invalid database returns a failure	0.000428s

## Null connection

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	1	1	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A null connection can be created as placeholder	0.000579s
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## Query builder for sql queries

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	66	46	20	69.7%
Statements	222	179	43	80.6%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	0	0	0	0	4
Code Style	1	1	0	0	0	0

## Description

untested	Mysql selects form a valid query	0s
untested	Mysql orders form a valid query	0s
untested	Mysql offsets and limits form a valid query	0s
untested	Mysql groupings form a valid query	0s
untested	Mysql wheres form a valid query	0s
untested	Mysql joins form a valid query	0s
untested	Mysql inserts form a valid query	0s
untested	Mysql deletes form a valid query	0s
untested	Mysql updates form a valid query	0s
untested	Raw queries get output as defined	0s
untested	Read only queries allow selects	0s
untested	Read only queries don't allow drops	0s
untested	Read only queries don't allow deletes	0s
untested	Read only queries don't allow creates	0s
untested	Read only queries don't allow modifications	0s
untested	Read only queries don't allow inserts	0s
untested	Read only queries don't allow updates	0s

untested	Read only queries don't allow deletes	0s
untested	Invalid select types throw a InvalidArgumentException	0s
untested	Invalid from types throw a InvalidArgumentException	0s
untested	Invalid group types throw a InvalidArgumentException	0s
untested	Invalid where operators throw a InvalidArgumentException	0s
untested	Invalid join types throw a InvalidArgumentException	0s
untested	Invalid join operators throw a InvalidArgumentException	0s
untested	Invalid order types throw a InvalidArgumentException	0s
untested	Invalid order column types throw a InvalidArgumentException	0s

## Basic sql query grammar

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	24	5	19	20.8%
Statements	158	115	43	72.8%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

**successful** The grammar has the expected default values after initialization 0.000288s

## Mysql sql query grammar

### Coverage

Description	Total	Covered	Uncovered	Ratio
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Description	Total	Covered	Uncovered	Ratio
Methods	1	0	1	0.0%
Statements	4	3	1	75.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The grammar has the expected default values after initialization

0.000376s

SQLite sql query grammar

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	0	1	0.0%
Statements	4	3	1	75.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The grammar has the expected default values after initialization

0.000377s

Query builder for sql schemas

Coverage



Description	Total	Covered	Uncovered	Ratio
Methods	12	12	0	100.0%
Statements	49	49	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	Mysql drops form a valid query	0.000542s
successful	Mysql show tables form a valid query	0.001856s
successful	Mysql show fields form a valid query	0.001630s
successful	Mysql create tables form a valid query	0.001652s

Basic sql query grammar

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	10	3	7	30.0%
Statements	35	27	8	77.1%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The grammar has the expected default values after initialization 0.000642s

## Mysql sql schema grammar

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	4	1	80.0%
Statements	35	33	2	94.3%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful

The grammar has the expected default values after initialization 0.000646s

successful

The the grammar correctly creates and returns a database table 0.049504s

successful

The grammar correctly deletes a table 0.054404s

## SQLite sql schema grammar

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Code Style	1	1	0	0	0	0

## Description

**successful** The grammar has the expected default values after initialization 0.000389s

## Session data handler for http sessions

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	11	11	0	100.0%
Statements	39	39	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	12	12	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

## Description

**successful** The session has the expected default values after initialization 0.000629s

**successful** Session data can be set and returned 0.000600s

**successful** Session data can be forced to overwrite 0.000441s

**successful** Session data cannot be overwritten 0.000438s

**successful** Session data can be removed 0.000395s

**successful** None-existing session data cannot be removed 0.000398s

**successful** A session id can be set and returned 0.000390s

**successful** A session can be locked for changes 0.000390s

**successful** Session data can be saved 0.000390s

successful	Locked sessions cannot be saved	0.000396s
successful	A locked session cannot add or change data	0.000391s
successful	A locked session cannot remove data	0.000402s

## Session data handler for http sessions

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	9	8	1	88.9%
Statements	32	31	1	96.9%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	12	12	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The session has the expected default values after initialization	0.000601s
successful	Session data can be set and returned	0.000689s
successful	Session data can be forced to overwrite	0.000450s
successful	Session data cannot be overwritten	0.000445s
successful	Session data can be removed	0.000380s
successful	None-existing session data cannot be removed	0.000374s
successful	A session id can be set and returned	0.000374s
successful	A session can be locked for changes	0.000382s
successful	Session data can be saved	0.000388s
successful	Locked sessions cannot be saved	0.000379s
successful	A locked session cannot add or change data	0.000453s

successful	A locked session cannot remove data	0.000386s
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## File session handler

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	8	7	1	87.5%
Statements	23	22	1	95.7%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	8	8	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	A session id can be generated	0.000863s
successful	The session path can be accessed	0.000590s
successful	A invalid session path cannot be accessed	0.000457s
successful	A session can be closed	0.000435s
successful	A valid session id can store and return data	0.000539s
successful	A invalid session id doesn't return any data	0.000641s
successful	A session can be destroyed	0.000876s
successful	Sessions can be removed based on a timeout	2.000988s

## Dispatcher for executing request endpoints

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	7	7	0	100.0%

Description	Total	Covered	Uncovered	Ratio
Statements	39	39	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	8	8	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The dispatcher can dispatch a function/closure	0.000496s
successful	The dispatcher can dispatch a method as string representation of a controller	0.000716s
successful	The dispatcher can dispatch a method as array representation of a controller	0.000736s
successful	The dispatcher can dispatch a static method as string representation	0.000645s
successful	The dispatcher can dispatch multiple destinations after another	0.000543s
untested	A invalid destination type throws UnexpectedValueException	0s
successful	A invalid controller path throws a PathException	0.000804s
successful	A invalid function path throws a Exception	0.000869s
successful	A malformed dispatch path throws UnexpectedValueException	0.000913s

## Event manager for managing and executing events

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	13	12	1	92.3%
Statements	92	90	2	97.8%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	16	16	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The event manager has the expected default values after initialization	0.000372s
successful	New events can be added	0.000375s
successful	Multiple callbacks can be added to an event	0.000430s
successful	An event only gets executed if all conditions and sub conditions are met	0.000450s
successful	An event doesn't get executed if not all conditions and sub conditions are met	0.000475s
successful	None-existing events cannot be executed/triggered	0.000670s
successful	An event can be triggered with group and id regex matches	0.000536s
successful	An event can be triggered with a fixed group definition and id regex matches	0.000473s
successful	An event can be triggered with regex group matches and fixed id definition	0.000458s
successful	A invalid regex match will not triggered an event	0.000429s
successful	An event can be defined to reset after all conditions and subconditions are met. Then all conditions and sub conditions must be met again before it gets triggered again	0.000432s
untested	An event can be defined to not reset after all conditions and subconditions are met. Then an event can be triggered any time.	0s
successful	An event can be manually removed/detached	0.000418s
successful	None-existing events cannot be manually removed/detached	0.000382s
successful	An event can be defined to automatically remove itself after all conditions and subconditions are met and it is executed	0.000423s
successful	Events can be imported from a file	0.000608s
successful	Invalid event files cannot be imported and return a failure	0.000369s

## Localization manager for view templates

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	12	11	1	91.7%
Statements	65	64	1	98.5%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	7	7	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The localization manager has the expected default values after initialization	0.001651s
successful	Language data can be loaded and output as plain text or html	0.000620s
untested	Language data can be loaded from a file	0s
successful	The numeric value can be printed based on the localization	0.000582s
successful	The percentage value can be printed based on the localization	0.000581s
successful	The currency value can be printed based on the localization	0.001350s
successful	The datetime value can be printed based on the localization	0.000702s
successful	Loading language for an invalid module throws Exception	0.001363s

Localization for information such as language, currency, location, language specific formatting etc.

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	39	39	0	100.0%
Statements	133	133	0	100.0%



## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	26	26	0	0	0	0
Static Tests	1	0	0	0	0	18
Code Style	1	1	0	0	0	0

## Description

successful	The localization has the expected default values after initialization	0.000569s
successful	The language can be set and returned	0.000421s
successful	Setting a invalid language code throws InvalidEnumValue	0.000777s
successful	The country can be set and returned	0.000768s
successful	Setting a invalid country code throws InvalidEnumValue	0.000864s
successful	The timezone can be set and returned	0.000442s
successful	Setting a invalid timezone code throws InvalidEnumValue	0.000807s
successful	The currency can be set and returned	0.000400s
successful	Setting a invalid currency code throws InvalidEnumValue	0.000735s
successful	The datetime can be set and returned	0.000369s
successful	The decimal can be set and returned	0.000380s
successful	The thousands can be set and returned	0.000537s
successful	The angle can be set and returned	0.000408s
successful	Setting a invalid angle throws InvalidEnumValue	0.000912s
successful	The temperature can be set and returned	0.000382s
successful	Setting a invalid temperature throws InvalidEnumValue	0.001955s
successful	The weight can be set and returned	0.000434s
successful	The precision can be set and returned	0.000438s
successful	The length can be set and returned	0.000441s
successful	The area can be set and returned	0.001243s

successful	The volume can be set and returned	0.000496s
successful	The speed can be set and returned	0.000705s
successful	Localization data can be loaded from a locale file	0.000688s
successful	Localization data can be serialized and unserialized	0.000665s
successful	If no locale file for a specified country exists or a wild card country is used the first match of a locale file based on the defined language is loaded	0.000509s
successful	By default the english locale file will be loaded if no other locale file can be found	0.000521s
untested	Loading localization data from a file with invalid language throws InvalidEnumValue	0s

## City database mapper

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The model can be read from the database	0.001469s
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## City database model

### Coverage

Description	Total	Covered	Uncovered	Ratio
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Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	6	6	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The model has the expected and default values

0.000492s

Country database mapper

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The model can be read from the database

0.001546s

Country database model

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	8	8	0	100.0%
Statements	8	8	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The model has the expected and default values

0.000506s

Currency database mapper

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The model can be read from the database

0.001573s

Currency database model

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	7	7	0	100.0%
Statements	7	7	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The model has the expected and default values

0.000513s

Iban database mapper

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The model can be read from the database

0.001223s

Iban database model

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	4	4	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The model has the expected and default values

0.000545s

Language database mapper

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The model can be read from the database

0.001261s

Language database model

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	6	6	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The model has the expected and default values	0.000499s
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Money datatype for internal representation of money

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	9	9	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	12	12	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The datatype has the expected member variables and default values	0.000408s
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successful	The datatype returns the correct default string representation (#,###.##)	0.000386s
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successful	The datatype returns up to 4 decimal places if requested (#,###.####)	0.000393s
successful	The datatype returns the correct integer representation of a string with up to 4 decimal places also considering differences in decimal and thousands characters if requested for different localizations	0.000498s
successful	The datatype allows to modify the value by overwriting it with new string characters or integers correctly	0.000445s
successful	The datatype can print out money with different thousands, decimals and currency symbols as per definition by the user	0.000392s
successful	The string character input is correctly serialized to the numeric representation	0.000401s
successful	The string character input is correctly unserialized from a numeric representation	0.000415s
successful	The datatype correctly adds and subtracts the different money representations in string, numeric or Money type	0.000540s
successful	The datatype correctly multiplies and divides the money with numerics	0.000403s
successful	The datatype correctly handles the absolute value	0.000389s
successful	The datatype correctly handles the power operator	0.000386s

## File logger for saving log information in a local file

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	21	20	1	95.2%
Statements	159	158	1	99.4%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	15	15	0	0	0	0
Static Tests	1	0	0	0	0	10
Code Style	1	1	0	0	0	0

### Description



successful	The logger has the expected default values after initialization	0.000443s
successful	The file logger can automatically create a new instance if none exists	0.000436s
successful	A log file for the output can be specified for the file logger	0.000730s
successful	If no log file name is specified a log file per date is created	0.000486s
successful	If no logs are performed no log file will be created	0.000419s
successful	Logs with different levels get correctly stored in the log file	0.012262s
successful	Log files can be analyzed for the highest perpetrator (IP address)	0.001118s
successful	Logs can be read from the log file	0.001375s
successful	Invalid log reads return empty log data	0.001384s
successful	A line can be read from a log file	0.000798s
successful	None-existing lines return on read empty log data	0.000689s
successful	A verbose file logger automatically outputs log data	0.000540s
successful	A verbose console log outputs log data	0.000458s
successful	The logger can perform timings for internal duration logging	0.000588s
successful	A invalid log type throws a InvalidEnumValue	0.000752s

## Fibonacci functions

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	12	12	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A number can be checked if it is a fibonacci number	0.000750s
successful	A fibonacci number can be returned by index	0.000467s
successful	The binet formula returns fibonacci numbers	0.000403s
successful	The binet formula and the fibonacci formula return the same results	0.000390s

## Various math functions

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	11	10	1	90.9%
Statements	101	100	1	99.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	10	10	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The factorial of a number can be calculated	0.001625s
successful	The binomial coefficient can be calculated	0.000523s
successful	The ackerman function can be calculated	0.012362s
successful	The multiplicative inverse module can be calculated	0.000445s
successful	A number can be checked if it is odd	0.000391s
successful	A number can be checked if it is even	0.000383s
successful	The relative number can be calculated on a circular number system (e.g. month in a diverging business year)	0.000384s
successful	The error function can be correctly approximated	0.000694s

successful	The complementary error function can be correctly approximated	0.000583s
successful	The generalized hypergeometric function can be correctly calculated	0.000616s

## Gamma function

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	11	9	2	81.8%
Statements	63	60	3	95.2%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	9	9	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The gamma function can be approximated	0.000512s
successful	The gamma function can be calculated for integers	0.000443s
successful	The gamma function can be approximated with the spouge formula	0.000839s
successful	The gamma function can be approximated with the stirling formula	0.000403s
successful	The gamma function can be approximated with the lanzos formula	0.000469s
successful	The log gamma function can be approximated	0.000441s
successful	The first incomplete gamma function can be approximated	0.000501s
successful	The second incomplete gamma function can be approximated	0.000841s
successful	The regularized incomplete gamma function can be approximated	0.000485s

## Beta function

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	4	1	80.0%
Statements	49	44	5	89.8%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

untested	The beta function can be approximated	0s
successful	The log beta function can be approximated	0.001193s
successful	The incomplete beta function can be approximated	0.001226s
successful	The regularized beta function can be approximated	0.000623s

## Monotone chain

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	17	17	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

## Description

successful

A convex hull can be formed from multiple points on a plane

0.002011s

## Circle shape

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	4	4	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful

The surface can be calculated

0.000818s

successful

The perimeter can be calculated

0.000323s

successful

The radius can be calculated with the surface

0.000362s

successful

The radius can be calculated with the perimeter

0.000363s

## Ellipse shape

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	2	2	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
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Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The surface can be calculated	0.001312s
successful	The perimeter can be calculated	0.000357s

## Polygon shape

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	12	11	1	91.7%
Statements	66	64	2	97.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	8	8	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The location of a point can be checked relative to a polygon	0.000854s
successful	The interior angle can be calculated	0.000518s
successful	The exterior angle can be calculated	0.000405s
successful	The perimeter can be calculated	0.000535s
successful	The area can be calculated	0.000495s
successful	The barycenter can be calculated	0.000617s

successful

The regular area can be calculated with the side length

0.000402s

successful

The regular area can be calculated with the radius

0.000468s

## Quadrilateral shape

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	3	3	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful

The area can be calculated

0.000547s

## Rectangle shape

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	3	3	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The surface can be calculated	0.002023s
successful	The perimeter can be calculated	0.000543s
successful	The diagonal can be calculated	0.000575s

## Trapezoid shape

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	7	7	0	100.0%
Statements	7	7	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The surface can be calculated	0.001008s
successful	The perimeter can be calculated	0.000720s
successful	The height can be calculated	0.000824s
successful	The side lengths can be calculated	0.000449s

## Triangle shape

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	7	7	0	100.0%



## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The surface can be calculated	0.000490s
successful	The perimeter can be calculated	0.000532s
successful	The height can be calculated	0.000448s
successful	The hypotenuse can be calculated	0.000390s

## Cone shape

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	4	4	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The volume can be calculated	0.001087s
successful	The surface can be calculated	0.000879s
successful	The slant height can be calculated	0.001023s

successful	The height can be calculated with the volume	0.000580s
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Cuboid shape

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	2	2	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The volume can be calculated	0.000697s
successful	The surface can be calculated	0.000318s

Cylinder shape

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	3	3	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The volume can be calculated	0.000757s
successful	The surface can be calculated	0.000348s
successful	The lateral surface can be calculated	0.000376s

## Prism shape

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	3	3	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The volume can be calculated with the length	0.000489s
successful	The volume can be calculated with the radius	0.000320s
successful	The surface can be calculated	0.000466s

## Rectangular pyramid shape

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	3	3	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The volume can be calculated	0.000522s
successful	The surface can be calculated	0.000356s
successful	The lateral surface can be calculated	0.000375s

## Sphere shape

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	12	12	0	100.0%
Statements	21	21	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	6	6	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The volume can be calculated	0.000590s
successful	The surface can be calculated	0.000511s
successful	The distance on a sphere can be calculated	0.000399s
successful	The sphere can be created by its radius	0.000423s
successful	The sphere can be created by its volume	0.000399s

successful	The sphere can be created by its surface	0.000390s
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## Tetrahedron shape

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	3	3	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The volume can be calculated	0.000510s
successful	The surface can be calculated	0.000318s
successful	The face area can be calculated	0.000382s

## Matrix operations

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	37	36	1	97.3%
Statements	180	177	3	98.3%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	22	22	0	0	0	0
Static Tests	1	0	0	0	0	2

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Code Style	1	1	0	0	0	0

## Description

successful	A matrix can return its dimension	0.000382s
successful	A matrix can be right-hand multiplied with a matrix	0.000888s
successful	A matrix can be right-hand multiplied with a scalar	0.000508s
successful	A scalar can be added to every matrix element	0.000467s
successful	A scalar can be subtracted from every matrix element	0.000479s
successful	Two matrices can be added to each other	0.000471s
successful	Two matrices can be subtracted from each other	0.000480s
successful	The determinant of a matrix can be calculated	0.000557s
successful	A symmetric matrix can be validated for symmetry	0.000461s
successful	A none-symmetric matrix cannot be validated for symmetry	0.000533s
successful	A matrix can be transposed	0.000462s
successful	A matrix equation $Ax = b$ can be solved for $x$	0.000718s
successful	The rank of a matrix can be calculated	0.000573s
successful	The upper triangular matrix can be calculated	0.000743s
successful	The matrix elements can be set and returned	0.000516s
successful	A matrix can be accessed like a 1-dimensional array	0.000771s
successful	Sub matrices can be extracted from a matrix	0.000599s
successful	Setting a matrix element outside of the dimensions throws a <code>InvalidDimensionException</code>	0.000783s
successful	Returning a matrix element outside of the dimensions throws a <code>InvalidDimensionException</code>	0.000732s
untested	Subtracting a invalid data type from a matrix throws a <code>InvalidArgumentException</code>	0s
untested	Adding a invalid data type to a matrix throws a <code>InvalidArgumentException</code>	0s

untested	Multiplying a invalid data type with a matrix throws a <code>InvalidArgumentException</code>	0s
successful	Adding a matrix with a different dimension to a matrix throws a <code>InvalidDimensionException</code>	0.000750s
successful	Subtracting a matrix from a different dimension to a matrix throws a <code>InvalidDimensionException</code>	0.000758s
successful	SMultiplying a matrix with a different n x m dimension to a matrix throws a <code>InvalidDimensionException</code>	0.000727s

## Matrix operations

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	4	4	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The identity matrix is the identity	0.000329s
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## Vector operations

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	9	9	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The vector has the expected default values after initialization	0.000491s
successful	The vector values can be set and returned	0.000454s
successful	A invalid vector throws a InvalidDimensionException	0.000416s

## Cholesky decomposition

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	3	1	75.0%
Statements	38	37	1	97.4%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The decomposition can be created and the original matrix can be computed	0.001295s
successful	The decomposition matrix has the expected values	0.000811s
successful	A matrix can be checked for symmetric positivity	0.000675s
successful	The equation $Ax = b$ can be solved	0.000637s
successful	A invalid vector throws a InvalidDimensionException	0.000977s



## Eigenvalue decomposition

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

### Description

untested	A matrix can be checked for symmetry	0s
untested	The eigenvalues can be calculated for a symmetric matrix	0s
untested	The V matrix of the decomposition can be calculated for a symmetric matrix	0s
untested	The D matrix of the decomposition can be calculated for a symmetric matrix	0s
untested	The eigenvalues can be calculated for a none-symmetric matrix	0s
untested	The V matrix of the decomposition can be calculated for a none-symmetric matrix	0s
untested	The D matrix of the decomposition can be calculated for a none-symmetric matrix	0s
untested	The decomposition can be created and the original matrix can be computed for a symmetric matrix	0s
untested	The decomposition can be created and the original matrix can be computed for a none-symmetric matrix	0s

## LU decomposition

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	7	6	1	85.7%
Statements	82	73	9	89.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	9	9	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The L matrix of the decomposition can be calculated	0.000673s
successful	The U matrix of the decomposition can be calculated	0.002118s
successful	The matrix can be checked for singularity	0.001038s
successful	The equation $Ax = b$ can be solved for a none-singular matrix	0.000997s
successful	The equation $Ax = b$ can be solved for a singular matrix	0.000814s
successful	The pivots of the decomposition can be calculated	0.000460s
successful	The decomposition can be created and the original matrix can be computed	0.000758s
successful	The determinat can be calculated	0.000455s
successful	A invalid vector throws a InvalidDimensionException	0.000870s

## QR decomposition

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	3	2	60.0%
Statements	76	73	3	96.1%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A matrix can be checked if it has a full rank	0.001718s
successful	The Q matrix of the decomposition can be calculated	0.000972s
successful	The R matrix of the decomposition can be calculated	0.000778s
successful	The decomposition can be created and the original matrix can be computed	0.000882s
successful	The equation $Ax = b$ can be solved	0.000691s

## Complex number operations

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	25	22	3	88.0%
Statements	58	53	5	91.4%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	16	16	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The complex number has the expected default values after initialization	0.000731s
successful	The real and imaginary part can be set during initialization and returned	0.000509s

successful	A complex number can be added to a complex number	0.000425s
successful	A real number can be added to a complex number	0.000391s
successful	A complex number can be subtracted from a complex number	0.000419s
successful	A real number can be subtracted from a complex number	0.000394s
successful	A complex number can be multiplied with a complex number	0.000448s
successful	A real number can be multiplied with a complex number	0.000388s
successful	A complex number can be divided by a complex number number	0.000426s
successful	A complex number can be divided by a real number	0.000393s
successful	A complex number can be conjugated	0.000387s
successful	The reciprocal of a complex number can be calculated	0.000382s
successful	A complex number can be squared	0.000808s
successful	The real power of a complex number can be calculated	0.000778s
successful	The absolute value of a complex number can be calculated	0.000412s
successful	The square root of a complex number can be calculated	0.000409s
untested	A invalid type addition throws a <code>InvalidArgumentException</code>	0s
untested	A invalid type subtraction throws a <code>InvalidArgumentException</code>	0s
untested	A invalid type cannot multiplication throws a <code>InvalidArgumentException</code>	0s
untested	A invalid type division throws a <code>InvalidArgumentException</code>	0s
untested	The power of a invalid type throws a <code>InvalidArgumentException</code>	0s

## Integer operations

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	5	0	100.0%
Statements	38	38	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	6	6	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A value can be checked to be an integer	0.000590s
successful	An integer can be factorized	0.001092s
successful	The Pollard's Roh algorithm calculates a factor of an integer	0.001990s
successful	The Fermat factorization calculates a factor of an integer	0.000411s
successful	A even number for the fermat factorization throws a InvalidArgumentException	0.000894s
successful	The greatest common divisor can be calculated	0.000589s

## Natural number operations

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	1	1	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A number can be checked to be natural	0.001633s
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## General number utilities

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	20	20	0	100.0%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A number can be checked to be perfect	0.003950s
successful	A number can be checked to be self-describing	0.000968s
successful	A number can be checked to be squared	0.000419s
successful	The amount of trailing zeros can be counted	0.000720s

## Prime number utilities

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	4	1	80.0%
Statements	50	47	3	94.0%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A number can be checked to be a prime number	0.000435s
successful	A prime number can be generated with the sieve of erathosthenes	0.000472s
successful	A number can be checked to be prime with the rabin test	0.112658s
successful	Mersenne numbers can be calculated	0.000467s
successful	A number can be checked to be a mersenne number	0.000391s

## Metric/distance calculations

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	10	10	0	100.0%
Statements	54	54	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	12	12	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The manhattan distance can be calculated	0.000673s
successful	The euclidean distance can be calculated	0.000452s
successful	The chebyshev distance can be calculated	0.000405s
successful	The octile distance can be calculated	0.000421s
successful	The minkowski distance can be calculated	0.000445s
successful	The canberra distance can be calculated	0.000619s
successful	The bray-curtis distance can be calculated	0.000443s
successful	The angular distance can be calculated	0.000706s

successful	The hamming distance can be calculated	0.000459s
successful	The ulam distance can be calculated	0.000473s
successful	Different dimension sizes for the coordinates in the hamming metric throw a InvalidDimensionException	0.000812s
successful	Different dimension sizes for the coordinates in the ulam metric throw a InvalidDimensionException	0.000786s

## Metric/distance calculations

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	8	8	0	100.0%
Statements	55	55	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	16	16	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The manhattan distance can be calculated	0.000589s
successful	The euclidean distance can be calculated	0.000608s
successful	The chebyshev distance can be calculated	0.000440s
successful	The minkowski distance can be calculated	0.000412s
successful	The canberra distance can be calculated	0.000420s
successful	The bray-curtis distance can be calculated	0.000413s
successful	The angular distance can be calculated	0.000466s
successful	The hamming distance can be calculated	0.000760s
successful	Different dimension sizes for the coordinates in the manhattan metric throw a InvalidDimensionException	0.000949s



successful	Different dimension sizes for the coordinates in the euclidean metric throw a InvalidDimensionException	0.000795s
successful	Different dimension sizes for the coordinates in the chebyshev metric throw a InvalidDimensionException	0.000631s
successful	Different dimension sizes for the coordinates in the minkowski metric throw a InvalidDimensionException	0.000698s
successful	Different dimension sizes for the coordinates in the canberra metric throw a InvalidDimensionException	0.000925s
successful	Different dimension sizes for the coordinates in the Bray Curtis metric throw a InvalidDimensionException	0.000663s
successful	Different dimension sizes for the coordinates in the angular separation metric throw a InvalidDimensionException	0.000719s
successful	Different dimension sizes for the coordinates in the hamming metric throw a InvalidDimensionException	0.000638s

## Cubic spline interpolation

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	51	51	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The spline interpolation using the first derivative is correct	0.001406s
successful	The spline interpolation using the second derivative is correct	0.001001s
successful	The spline interpolation for out of bounds values uses linear extrapolation	0.001170s

## Lagrange interpolation

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	11	11	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful

The lagrange interpolation is correct

0.000515s

## Linear interpolation

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	31	31	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful

The linear interpolation is correct

0.001226s

## Numeric integration

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	5	0	100.0%
Statements	28	28	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	Integration by summing up rectangle areas from the left side	0.004569s
successful	Integration by summing up rectangle areas from the right side	0.004858s
successful	Integration by summing up rectangle areas from the middle	0.004292s
successful	Integration by summing up trapezoid areas	0.004676s
successful	Integration by using the simpson formula	0.007989s

## Evaluator for simple math formulas

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	55	55	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
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Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	Basic formulas using +, -, *, /, () and ^ can be evaluated	0.001128s
successful	Badly formed formulas return null as result	0.000641s

## Level level regression

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	2	2	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	7	7	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The regression parameters are calculated correctly	0.000751s
successful	The slope is calculated correctly	0.000578s
successful	The elasticity is calculated correctly	0.001183s
successful	The standard error of the population is calculated correctly	0.000864s
successful	The standard error of the sample is calculated correctly	0.000828s
successful	The prediction interval is calculated correctly	0.001440s

successful

Different dimension sizes for x and y coordinates throw a  
InvalidDimensionException

0.001046s

## Level log regression

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	7	7	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful

The regression parameters are calculated correctly

0.000676s

successful

The slope is calculated correctly

0.000355s

successful

The elasticity is calculated correctly

0.000422s

successful

Different dimension sizes for x and y coordinates throw a  
InvalidDimensionException

0.000753s

## Log level regression

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	7	7	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
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Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The regression parameters are calculated correctly	0.000584s
successful	The slope is calculated correctly	0.000420s
successful	The elasticity is calculated correctly	0.000426s
successful	Different dimension sizes for x and y coordinates throw a InvalidDimensionException	0.000785s

Log log regression

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	8	8	0	100.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The regression parameters are calculated correctly	0.000616s
successful	The slope is calculated correctly	0.000948s
successful	The elasticity is calculated correctly	0.000768s

successful	Different dimension sizes for x and y coordinates throw a InvalidDimensionException	0.000884s
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## Polynomial regression

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	36	36	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The regression parameters are calculated correctly	0.000675s
successful	Different dimension sizes for x and y coordinates throw a InvalidDimensionException	0.000875s

## Naive bayes classifier for numeric values and strings/attributes

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	1	2	33.3%
Statements	63	61	2	96.8%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Code Style	1	1	0	0	0	0

## Description

successful	The classification of strings/attributes is correct	0.000789s
successful	The classification of numeric values is correct	0.000896s

## Averages

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	11	11	0	100.0%
Statements	103	103	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	16	16	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The average change of a dataset is correctly calculated	0.000345s
successful	The average mean of angles is calculated correctly	0.000664s
successful	The arithmetic mean is calculated correctly	0.000567s
successful	The weighted average is calculated correctly	0.000593s
successful	The geometric mean is calculated correctly	0.000442s
successful	The harmonic mean is calculated correctly	0.000429s
successful	The moving average is calculated correctly	0.000895s
successful	The weighted moving average is calculated correctly	0.000569s



successful	Different weight and dataset dimensions throw a InvalidDimensionException	0.000758s
successful	An empty dataset for the arithmetic mean throws a ZeroDivisionException	0.000672s
successful	An empty dataset for the moving average throws a Exception	0.000663s
successful	An empty dataset for the harmonic mean throws a ZeroDivisionException	0.000689s
successful	An empty dataset for the geometric mean throws a ZeroDivisionException	0.000789s
successful	A dataset with a 0 element throws a ZeroDivisionException	0.000662s
successful	The mode is correctly calculated	0.000428s
successful	The median is correctly calculated	0.000490s

## Correlations

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	5	0	100.0%
Statements	17	17	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The correlation coefficient (Bravis Person) is calculated correctly	0.000518s
successful	The correlation coefficient (Bravis Person) is calculated correctly on a Sample	0.000449s
successful	The autocorrelation coefficient is calculated correctly	0.000536s
successful	The portmanteau test (Box Pierce) is correct	0.001601s

successful

The portmanteau test (Ljung Box) is correct

0.001611s

## Measure of dispersion

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	15	15	0	100.0%
Statements	85	85	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	15	15	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The correlation coefficient (Bravis Person) is calculated correctly	0.000350s
successful	The standard deviation is correctly calculated	0.000429s
successful	The empirical covariance is correctly calculated	0.000406s
successful	The empirical covariance on a sample is correctly calculated	0.000687s
successful	The sample variance is correctly calculated	0.000467s
successful	The population/empirical variance is correctly calculated	0.000404s
successful	The mean deviations are correctly calculated	0.000460s
successful	The mean deviations for every dataset element is correctly calculated	0.001204s
successful	The empirical variation coefficient is correctly calculated	0.000425s
successful	The interquartile range is correctly calculated	0.000425s
successful	The empirical variation coefficient with a mean of 0 throws a ZeroDivisionException	0.000750s
successful	An empty dataset in the empirical covariance throws a ZeroDivisionException	0.001038s

successful	Different dataset sizes in the empirical covariance throw a InvalidDimensionException	0.000875s
successful	An empty dataset in the sample variance throws a ZeroDivisionException	0.001139s
successful	An empty dataset in the empirical/population variance throws a ZeroDivisionException	0.000785s

## Abstract header for requests/responses

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	5	5	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The the status code can be set and returned	0.000520s
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## Header for http requests/responses

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	16	15	1	93.8%
Statements	89	88	1	98.9%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
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Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	14	14	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The header has the expected default values after initialization	0.001012s
successful	Security policy headers get correctly identified	0.000713s
successful	Header data can be set, checked for existence and returned	0.000681s
successful	Header data can be forced to get overwritten	0.000667s
successful	By default header data doesn't get overwritten	0.000747s
successful	Header data can be removed	0.000815s
successful	None-existing header data cannot be removed	0.001034s
successful	Account data can be set and returned	0.000644s
successful	Data can be defined as downloadable	0.000593s
successful	A header can be locked	0.000426s
successful	A locked header cannot add new data	0.000500s
successful	A locked header cannot remove data	0.000800s
successful	The header can generate default http headers based on status codes	0.000691s
successful	Security header data cannot be changed once defined	0.000440s

## Request wrapper for http requests

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	25	23	2	92.0%
Statements	109	99	10	90.8%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	30	30	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

## Description

successful	The request has the expected default values after initialization	0.001419s
successful	The OS can be set and returned	0.000532s
successful	The browser can be set and returned	0.000511s
successful	The request method can be set and returned	0.000675s
successful	The route verb gets correctly inferred from the request method	0.000478s
successful	The request is correctly constructed	0.000494s
successful	The url hashes for the different paths get correctly generated	0.000506s
untested	Request data can be set and returned	0s
successful	Request data can be forcefully overwritten	0.000502s
successful	Request data is not overwritten by default	0.000520s
successful	The uri can be changed and returned	0.001106s
successful	Json data can be read from the request	0.000619s
successful	None-existing json data reads return empty data	0.001010s
successful	Invalid json data returns empty data	0.000549s
successful	List data can be read from the request	0.000712s
successful	None-existing list data reads return empty data	0.000464s
successful	Request data can be read with pattern matching	0.000540s
successful	In case of no pattern matches empty data is returned	0.000504s
successful	A request with a path can be correctly casted to a string	0.000469s
successful	A request with a path and manually added data can be correctly casted to a string	0.000480s
successful	A request with a path, query parameters and manually added data can be correctly casted to a string	0.000497s

successful	A rest request can be made from a request and the result can be read	0.185815s
successful	A request can be made with post data	0.008766s
successful	A request can be made with json data	0.001488s
successful	A request can be made with multipart data	0.001922s
successful	If no locale can be identified en_US is returned	0.001285s
successful	A none-mobile request is recognized as none-mobile	0.001811s
successful	If the OS type is unknown a unknown OS type is returned	0.002277s
successful	If the browser type is unknown a unknown browser type is returned	0.002045s
successful	A invalid https port throws a OutOfRangeException	0.001007s
successful	A Invalid route verb throws a Exception	0.000894s

## Response wrapper for http responses

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	7	7	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The response has the expected default values after initialization	0.000372s
successful	The response can be json serialized	0.000398s
successful	Data can be set and returned for the response	0.000400s

## Response wrapper for http responses

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	10	9	1	90.0%
Statements	47	46	1	97.9%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	11	11	0	0	0	0
Static Tests	1	0	0	0	0	2
Code Style	1	1	0	0	0	0

### Description

successful	The response has the expected default values after initialization	0.000459s
successful	Response data can be set and returned	0.000436s
successful	Response data can be removed	0.000411s
successful	None-existing response data cannot be removed	0.000429s
successful	Response data can be turned into an array	0.000668s
successful	A response with json as content-type is automatically rendered as json data	0.000598s
successful	Json data can be decoded from the response data	0.000515s
successful	A html response can be forced to minimize the content by removing newlines and whitespaces	0.000614s
successful	None-html responses cannot be forced to minimize the content by removing newlines and whitespaces	0.000541s
successful	Invalid response data results in an empty array	0.000802s
successful	Invalid response data results in an empty render	0.000484s

## Rest request wrapper

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	0	2	0.0%
Statements	70	45	25	64.3%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	0	0	0	0	2
Code Style	1	1	0	0	0	0

Description

successful	A get request successfully returns the expected result	0.030283s
successful	A post request with data successfully returns the expected result	0.213216s
successful	A put request with data successfully returns the expected result	0.212011s
successful	A delete request with data successfully returns the expected result	0.194415s
successful	A get request with data successfully returns the expected result	0.200883s

Form element generator

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	5	0	100.0%
Statements	44	44	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	14	14	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0



## Description

successful	A text input element can be generated	0.000659s
successful	A text input element can be generated with a custom value	0.000579s
successful	A datetime input element can be generated with custom formatting	0.000938s
successful	A checkbox element can be generated	0.000584s
successful	A checkbox element can be generated with a localized label element	0.000447s
successful	A radio element can be generated	0.000411s
successful	A radio element can be generated with a localized label element	0.000545s
successful	A label element can be generated	0.000435s
successful	A localized label element can be generated	0.000405s
successful	A textarea element can be generated	0.000420s
successful	A textarea element can be generated with a custom value	0.000402s
successful	A select element can be generated	0.000407s
successful	A localized select element can be generated	0.000407s
successful	A missing or invalid element type generates a INVALID output	0.000417s

## Html head

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	13	13	0	100.0%
Statements	47	47	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	9	9	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

## Description

successful	The head has the expected default values after initialization	0.001690s
successful	The title can be set and returned	0.001383s
successful	The style can be set and returned	0.000642s
successful	The script can be set and returned	0.000465s
successful	The language can be set and returned	0.000405s
successful	The assets can be set and rendered	0.000472s
successful	The assets can be set and rendered at the end of the document	0.000428s
successful	The assets can be set and rendered with attributes	0.000422s
successful	The assets can be set and rendered at the end of the document with attributes	0.000408s

## Html meta data

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	14	14	0	100.0%
Statements	36	36	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	9	9	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The meta data has the expected default values after initialization	0.000448s
successful	A keyword can be added and returned	0.000599s
successful	The author can be set and returned	0.000527s
successful	The charset can be set and returned	0.000447s

successful	The description can be set and returned	0.000433s
successful	A property can be set and returned	0.001015s
successful	A itemprop can be set and returned	0.000500s
successful	A name can be set and returned	0.000425s
successful	The meta data can be rendered	0.000490s

## Module info file manager

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	15	15	0	100.0%
Statements	27	27	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	A info file can be correctly loaded	0.000654s
successful	A info file can be modified	0.000701s
successful	A invalid info file path load throws a PathException	0.000756s
successful	A invalid info file path update throws a PathException	0.000791s
successful	A invalid change data throws a InvalidArgumentException	0.000785s

## Manager for the module system

### Coverage

Description	Total	Covered	Uncovered	Ratio
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Description	Total	Covered	Uncovered	Ratio
Methods	29	17	12	58.6%
Statements	205	185	20	90.2%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	14	14	0	0	0	0
Static Tests	1	0	0	0	0	11
Code Style	1	1	0	0	0	0

Description

successful	The module manager has the expected attributes	0.000634s
successful	Invalid module initializations returns a null module	0.001057s
successful	Unknown modules return a null module	0.000469s
successful	Unknown modules cannot get activated, deactivated	0.002673s
successful	A module can be installed and its status can be changed	0.101422s
successful	A module can be re-initialized	0.023815s
successful	A module is automatically loaded for its URIs	0.002200s
successful	Active modules can be returned	0.002088s
successful	Modules can be checked to be active	0.002321s
successful	Modules can be checked to be running	0.000659s
successful	All available modules can be returned	0.002758s
successful	Installed modules can be returned	0.002774s
successful	The valid module can be returned	0.000572s
successful	A module can be uninstalled	0.101370s

Abstract module

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	15	15	0	100.0%
Statements	106	106	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	12	12	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The constant values of the abstract module are overwritten by the extension	0.000370s
successful	The name of the module can be returned	0.000435s
successful	The dependencies of the module can be returned	0.000439s
successful	The providing of the module can be returned	0.000433s
successful	A invalid language or theme returns in an empty localization/language dataset	0.000662s
successful	The module can automatically generate a json response based on provided data for the frontend	0.000592s
successful	The module can automatically generate a json response based on provided data	0.000654s
successful	A model can be created	0.141904s
successful	Multiple models can be generated	0.145530s
successful	A model can be updated	0.174715s
successful	A model can be deleted	0.166061s
successful	A model relation can be created	0.169347s

Basic module functionality

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	7	7	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A invalid module method call will create an error log	0.000743s
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Manager for install/update packages

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	13	12	1	92.3%
Statements	81	80	1	98.8%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	6	6	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	0	0	1	0	0

Description

successful	A package can be installed	1.230989s
successful	A package which didn't get extracted cannot be loaded and throws a PathException	0.002584s

successful	A invalid package cannot be installed and throws a Exception	0.001853s
successful	A invalid package key doesn't validate the package	0.003167s
successful	A invalid package content doesn't validate the package	0.003370s
successful	The temporarily extracted package can be cleaned up	0.004766s

## Router for web requests

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	3	1	75.0%
Statements	49	46	3	93.9%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	13	13	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The route result for an empty request is empty	0.001013s
successful	A none-existing routing file cannot be imported	0.000729s
successful	A existing routing file can be imported	0.001065s
successful	A matching route returns the destinations	0.001343s
successful	Invalid routing verbs don't match even if the route matches	0.001128s
successful	Routes can be added dynamically	0.000692s
successful	Routes which require a CSRF token can only match with a CSRF token	0.000639s
successful	Routes which require a CSRF token don't match without a CSRF token	0.000593s
successful	Routes only match if the permissions match	0.000879s

successful	Routes don't match if the permissions don't match	0.001211s
successful	A data validation pattern validates matches correctly	0.001807s
successful	A data validation pattern invalidates mismatches	0.001305s
successful	A uri can be used for data population	0.000606s

## Router for socket requests

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	33	33	0	100.0%

### Tests

Description	Total	Successful	Skipped	Warnings	Failures	Errors
Tests	7	7	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	0	0	1	0	0

### Description

successful	The route result for an empty request is empty	0.001148s
successful	A non-existing routing file cannot be imported	0.000736s
successful	A existing routing file can be imported	0.000697s
successful	A matching route returns the destinations	0.000948s
successful	Routes can be added dynamically	0.000495s
successful	Routes only match if the permissions match	0.000723s
successful	Routes don't match if the permissions don't match	0.001333s

## Basic php source code security inspection

### Coverage



Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	15	15	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	9	9	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	A file with unicode characters gets correctly identified	0.000641s
successful	A file with no unicode characters gets correctly identified	0.000604s
successful	A file with no disabled functions gets correctly identified	0.000473s
successful	A file with deprecated functions gets correctly identified	0.000515s
successful	A file with no deprecated functions gets correctly identified	0.000754s
successful	A file hash comparison is successful if the file generates the same hash	0.000596s
successful	A file hash comparison is unsuccessful if the file generates a different hash	0.000523s
successful	Two equal strings validate as the same	0.000452s
successful	Two different strings don't validate as the same	0.000570s

Address type

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	6	6	0	100.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	7	7	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The address has the expected attributes	0.001032s
successful	The address has the expected default values after initialization	0.000676s
successful	The fao can be set and returned	0.000449s
successful	The recipient can be set and returned	0.000486s
successful	The location can be set and returned	0.000433s
successful	The address can be turned into array data	0.000420s
successful	The address can be json serialized	0.000443s

## Enum array type

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	9	9	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	9	9	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A valid enum name returns the enum value	0.000732s
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successful	A valid enum name can be validated	0.000434s
successful	A invalid enum name doesn't validate	0.000409s
successful	All enum name/value pairs can be returned	0.000414s
successful	A valid enum value can be checked for existence	0.000421s
successful	A invalid enum value doesn't validate	0.000390s
successful	The amount of enum values can be returned	0.000433s
successful	A random enum value can be returned	0.000538s
successful	A invalid enum name throws a OutOfBoundsException	0.000939s

## Enum type

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	8	8	0	100.0%
Statements	15	15	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	12	12	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	A valid enum name returns the enum value	0.000455s
successful	A valid enum value returns the enum name	0.000424s
successful	A valid enum name can be validated	0.001278s
successful	A invalid enum name doesn't validate	0.000467s
successful	All enum name/value pairs can be returned	0.000434s
successful	A valid enum value can be checked for existence	0.000458s

successful	A invalid enum value doesn't validate	0.000423s
successful	The amount of enum values can be returned	0.000588s
successful	A random enum value can be returned	0.000407s
successful	Binary flags validate if they are set	0.000467s
successful	Binary flags don't validate if they are not set	0.000438s
successful	A invalid enum name throws a OutOfBoundsException	0.000939s

## Heap

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	18	18	0	100.0%
Statements	90	90	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	16	16	0	0	0	0
Static Tests	1	0	0	0	0	2
Code Style	1	1	0	0	0	0

### Description

successful	A list of elements can be turned into a heap	0.000582s
successful	Elements get correctly pushed to the heap	0.000499s
successful	A element can be added to a heap at the correct position	0.000629s
successful	Heap elements get returned in the correct order	0.001222s
successful	Heap elements get returned in the correct order by using a custom comparator	0.001421s
successful	The heap can be turned into an array	0.000569s
successful	Heap elements can be replaced	0.000592s
successful	A heap element can be returned while adding a new one	0.000556s

successful	The heap can be checked if it contains certain elements	0.000585s
successful	The heap can be checked if it contains certain custom elements	0.000862s
successful	A heap item can be updated if it exists while maintaining the correct order	0.000715s
successful	The first heap element can be returned without removing it	0.000469s
successful	The n smallest elements can be returned from the heap	0.000472s
successful	The n largest elements can be returned from the heap	0.000526s
successful	The heap can be cleared of all elements	0.001375s
successful	The heap can be checked if it has elements	0.000906s

## Iban type

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	19	19	0	100.0%
Statements	32	32	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

### Description

successful	A iban can be correctly parsed into its different components	0.002005s
successful	A iban can be serialized and unserialized	0.001097s
successful	A invalid iban country code throws a IllegalArgumentException	0.001526s
successful	A invalid iban length throws a IllegalArgumentException	0.001138s
successful	A invalid iban checksum throws a IllegalArgumentException	0.001426s

## Location type

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	11	11	0	100.0%
Statements	26	26	0	100.0%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	11	11	0	0	0	0
Static Tests	1	0	0	0	0	13
Code Style	1	1	0	0	0	0

## Description

successful	The location has the expected attributes	0.000764s
successful	The location has the expected default values after initialization	0.000570s
successful	The postal can be set and returned	0.000406s
successful	The type can be set and returned	0.000393s
successful	The city can be set and returned	0.000434s
successful	The country can be set and returned	0.000415s
successful	The address can be set and returned	0.000411s
successful	The state can be set and returned	0.000386s
successful	The geo location can be set and returned	0.000575s
successful	The location can be turned into an array	0.000511s
successful	The location can be json serialized	0.000471s

## DateTime type with additional functionality

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	17	16	1	94.1%

Description	Total	Covered	Uncovered	Ratio
Statements	69	67	2	97.1%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	16	16	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The smart datetime extends the datetime	0.000579s
successful	The smart datetime can be formatted like the datetime	0.000466s
successful	The smart datetime can be modified and creates a new smart datetime	0.000607s
successful	The days of the month can be returned	0.000429s
successful	The week day index of the first day of the month can be returned	0.000428s
successful	A smart datetime can be created from a datetime	0.000443s
successful	A smart datetime can be returned of the last day of the month	0.000431s
successful	A smart datetime can be returned of the first day of the month	0.000786s
successful	A smart datetime can be returned of the first day of the week	0.000500s
successful	A smart datetime can be returned of the last day of the week	0.000739s
successful	A smart datetime can be returned of the end of the day	0.000458s
successful	A smart datetime can be returned of the start of the day	0.000439s
successful	A date or year can be checked if it is a leap year	0.000496s
successful	The day of the week index can be returned from a date	0.000548s
successful	A invalid day of the week returns a negative week index	0.000449s
successful	A calendar sheet is returned containing all days of the month and some days of the previous and next month	0.000833s

## Graph implementation

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	38	33	5	86.8%
Statements	234	224	10	95.7%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	13	13	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The graph has the expected default values after initialization	0.001450s
successful	A graph can be set as directed	0.000701s
successful	A node can be added to a graph and returned	0.000504s
successful	The existence of a node in a graph can be checked	0.000435s
successful	A graph can be checked for bridges	0.000810s
successful	Multiple bridges are correctly identified in a graph	0.000606s
successful	A graph without bridges is correctly classified	0.000768s
successful	Edges can be added and returned from a graph	0.000782s
successful	An edge can be found by two edge ids	0.000684s
successful	The existence of cycles in undirected graphs can be checked	0.000751s
successful	The existence of cycles in directed graphs can be checked	0.000805s
successful	The cost of a graph can be calculated	0.000611s
successful	The Kruskal minimal spanning tree can be created	0.001208s

## Node in a graph

### Coverage



Description	Total	Covered	Uncovered	Ratio
Methods	12	12	0	100.0%
Statements	32	32	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	8	8	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The node has the expected default values after initialization	0.000380s
successful	The node data can be set and returned	0.000432s
successful	Two equal nodes are equal	0.000402s
successful	Two different nodes are not equal	0.000419s
successful	An edge for a node can be defined	0.000439s
successful	An edge for a node can be defined by key	0.001059s
successful	A node relationship can be defined	0.000510s
successful	All neighbors of a node can be returned	0.000534s

Edge between nodes

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	8	8	0	100.0%
Statements	13	13	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
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Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The edge has the expected default values after initialization	0.001544s
successful	An edge can be directed	0.000682s
successful	An edge weight can be set and returned	0.000480s
successful	Two edge weights can be compared	0.000480s

Map which associates multiple keys with the same value

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	23	23	0	100.0%
Statements	118	118	0	100.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	43	43	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The map has the expected default values and functionality after initialization	0.001213s
successful	Elements with multiple optional keys can be added	0.000653s
successful	Elements with multiple optional keys can be returned if any of the keys matches	0.000464s

successful	Elements can be forcefully overwritten	0.000451s
successful	By default elements are not overwritten	0.000469s
successful	If a element with partially matching keys is already in the map it will be only added for the new key	0.000784s
successful	If all keys exist in the map no new element will be created	0.000544s
successful	Values can be set/replaced by key	0.000805s
successful	Values cannot be set/replaced if the key doesn't exist	0.000466s
successful	A key cannot be remapped to a none-existing key	0.000470s
successful	A key can be remapped to the value of an existing key	0.000517s
successful	If no more keys are associated with a value after a remap the value is removed from the map	0.000508s
successful	All keys of the map can be returned	0.000459s
successful	All values of the map can be returned	0.000446s
successful	Sibling keys can be found	0.000475s
successful	If a key doesn't exist or has no siblings no siblings are returned	0.000439s
successful	A key for a value can be removed	0.000470s
successful	If the last key of a value is removed the value is also removed from the map	0.000504s
successful	If a key doesn't exist it cannot be removed	0.000606s
successful	Elements with multiple required keys can be added	0.001232s
successful	Elements with multiple required keys can be returned if all match	0.000452s
successful	Elements with multiple required keys cannot be returned if they don't match exactly	0.000921s
successful	Elements with multiple required and ordered keys can be added	0.000525s
successful	Elements with multiple required ordered keys can be if all match in the correct order	0.000512s
successful	Elements with multiple required keys cannot be returned if they don't match exactly in the correct order	0.000458s
successful	Elements with multiple required keys can be forcefully overwritten	0.000530s

successful	Elements with multiple required ordered keys can be forcefully overwritten	0.000529s
successful	An element cannot be added to for multiple required keys if the keys already exist in a different order	0.000811s
successful	If a element with partially matching multiple keys is already in the map it will be only added for the new key	0.000718s
successful	Adding differently ordered keys for multiple required keys will create a new entry in the map	0.000785s
successful	If all keys for multiple required keys exist in the map no new element will be created	0.000622s
successful	If all keys for multiple required ordered keys exist in the map no new element will be created	0.000489s
successful	Values can be set/replaced by multiple required keys	0.000665s
successful	Values cannot be set/replaced if the multiple required keys don't match or exist	0.000734s
successful	Values can be set/replaced by multiple required ordered keys if the order is correct	0.000496s
successful	Values cannot be set/replaced if the multiple required ordered keys don't match or exist in the correct order	0.000478s
successful	Multiple keys cannot be remapped	0.000466s
successful	All sibling key combinations can be found for multiple required keys	0.000493s
successful	For multiple required ordered keys don't exist any siblings	0.000436s
successful	A multiple required key combination for a value can be removed	0.000695s
successful	If a multiple required key combination doesn't exist it cannot be removed	0.000596s
successful	A multiple required ordered key combination for a value can be removed	0.000523s
successful	If a multiple required ordered key combination doesn't exist it cannot be removed	0.000484s

## Priority queue

### Coverage

Description	Total	Covered	Uncovered	Ratio
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Description	Total	Covered	Uncovered	Ratio
Methods	17	17	0	100.0%
Statements	57	57	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	16	16	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

## Description

successful	The queue has the expected default values and functionality after initialization	0.000885s
successful	Queue elements can be added with the default value of 1.0 and returned	0.000605s
successful	Queue elements can be added with a priority	0.000529s
successful	The priority queue returns the correct amount of elements it holds	0.000456s
successful	A queue element can be removed	0.000753s
successful	A none-existing queue element id cannot be removed	0.000719s
successful	A removed or none-existing queue element returns a empty data	0.000595s
successful	The priority of all queue elements can be uniformly increased	0.000703s
successful	The priority or a queue element can be changed	0.000560s
successful	The queue can be serialized and unserialized	0.000521s
successful	A queue element can be popped from the que which also removes it from the queue	0.000469s
successful	A FIFO queue returns the elements in FIFO order	0.000672s
successful	A LIFO queue returns the elements in LIFO order	0.000661s
successful	A highest queue returns the elements in highest priority order	0.000664s
successful	A lowest queue returns the elements in lowest priority order	0.000854s

successful	A invalid priority queue type throws a InvalidEnumValue	0.000965s
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## Directory handler for local file system

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	37	32	5	86.5%
Statements	188	181	7	96.3%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	39	39	0	0	0	0
Static Tests	1	0	0	0	0	6
Code Style	1	1	0	0	0	0

### Description

successful	A directory can be created	0.000823s
successful	A directory can be checked for existence	0.000705s
successful	An existing directory cannot be overwritten	0.000541s
successful	A directory can be forced to be created recursively	0.000577s
successful	By default a directory is not created recursively	0.000481s
successful	The name of a directory is just its name without its path	0.000951s
successful	The basename is the same as the name of the directory	0.000622s
successful	The dirname is the same as the name of the directory	0.000448s
successful	The parent of a directory can be returned	0.000449s
successful	The full absolute path of a directory can be returned	0.000428s
successful	The directories creation date can be returned	0.000575s
successful	The directories last change date can be returned	0.000995s
successful	A directory can be deleted	0.000961s

successful	A none-existing directory cannot be deleted	0.000691s
successful	The size of a directory can be returned	0.000882s
successful	The size of a none-existing directory is negative	0.000538s
successful	The recursive size of a directory is equals or greater than the size of the same directory none-recursive	0.000593s
successful	The permission of a directory can be returned	0.000454s
successful	The permission of a none-existing directory is negative	0.000426s
successful	A directory can be copied recursively	0.000931s
successful	A directory can be forced to be copied to a different location even if the destination already exists	0.001285s
successful	By default a directory is not overwritten on copy	0.003161s
successful	A directory can be moved/renamed to a different path	0.000736s
successful	By default a directory is not overwritten on move	0.000591s
successful	A directory can be forced to be moved/renamed to a different path even if the destination already exists	0.001015s
successful	The amount of files in a directory can be returned recursively	0.000428s
successful	The amount of files in a directory can be returned none- recursively	0.000544s
successful	The amount of files of a none-existing directory is negative	0.000505s
successful	All files and sub-directories of a directory can be listed	0.001056s
successful	All files of a directory can be listed by file extension	0.000565s
successful	The owner of a directory can be returned	0.001005s
successful	Invalid directory names and paths can be sanitized	0.000593s
successful	A none-existing directory returns a empty list of files and sub- directories	0.000634s
successful	A none-existing directory returns a empty list of files for the extension	0.000449s
successful	A invalid directory cannot be copied to a new destination	0.000424s
successful	A invalid directory cannot be moved to a new destination	0.000322s
successful	Reading the creation date of a none-existing directory throws a PathException	0.001102s

successful	Reading the last change date of a none-existing directory throws a PathException	0.001169s
successful	Reading the owner of a none-existing directory throws a PathException	0.001028s

## File handler for local file system

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	40	39	1	97.5%
Statements	100	99	1	99.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	41	41	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	A file without content can be created	0.000893s
successful	A file cannot be created if it already exists	0.000626s
successful	A file with content can be created	0.000587s
successful	A file cannot be replaced if it doesn't exists	0.000383s
successful	A file cannot be appended if it doesn't exists	0.000446s
successful	A file cannot be prepended if it doesn't exists	0.000546s
successful	A file can be checked for existence	0.000460s
successful	A file can be replaced with a new one	0.016127s
successful	The set alias works like the replace flag	0.015120s
successful	A file can be appended with additional content	0.008501s
successful	The append alias works like the append flag	0.019052s



successful	A file can be prepended with additional content	0.006528s
successful	The prepend alias works like the prepend flag	0.004714s
successful	The content of a file can be read	0.000684s
successful	The parent directory of a file can be returned	0.000493s
successful	The extension of a file can be returned	0.001330s
successful	The name of a file can be returned	0.000447s
successful	The basename of a file can be returned	0.000428s
successful	The file name of a file can be returned	0.000367s
successful	The file path of a file can be returned	0.000366s
successful	The count of a file is always 1	0.000342s
successful	The directories creation date can be returned	0.001199s
successful	The directories last change date can be returned	0.000805s
successful	A file can be deleted	0.000645s
successful	A none-existing file cannot be deleted	0.000617s
successful	The size of a file can be returned	0.000588s
successful	The permission of a file can be returned	0.000410s
successful	The permission of a none-existing file is negative	0.000453s
successful	A file can be copied to a different location	0.000702s
successful	A file cannot be copied to a different location if the destination already exists	0.002008s
successful	A file can be forced to be copied to a different location even if the destination already exists	0.001653s
successful	A file can be moved to a different location	0.000869s
successful	A file cannot be moved to a different location if the destination already exists	0.000628s
successful	A file can be forced to be moved to a different location even if the destination already exists	0.000677s
successful	The size of a none-existing file is negative	0.000370s
successful	A none-existing file cannot be copied	0.000471s

successful	A none-existing file cannot be moved	0.000457s
successful	Reading the content of a none-existing file throws a PathException	0.000869s
successful	Reading the created date of a none-existing file throws a PathException	0.000729s
successful	Reading the last change date of a none-existing file throws a PathException	0.000787s
successful	Reading the owner of a none-existing file throws a PathException	0.000835s

## Directory & File handler for local file system

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	9	9	0	100.0%
Statements	25	25	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	77	77	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	A directory can be created	0.000858s
successful	A directory can be checked for existence	0.001017s
successful	An existing directory cannot be overwritten	0.000498s
successful	A directory can be forced to be created recursively	0.000557s
successful	The name of a directory is just its name without its path	0.000470s
successful	The basename is the same as the name of the directory	0.000447s
successful	The dirname is the same as the name of the directory	0.000477s

successful	The parent of a directory can be returned	0.000466s
successful	The full absolute path of a directory can be returned	0.000453s
successful	The directories creation date can be returned	0.000549s
successful	The directories last change date can be returned	0.000721s
successful	A directory can be deleted	0.000715s
successful	A none-existing directory cannot be deleted	0.000957s
successful	The size of a directory can be returned	0.000509s
successful	The size of a none-existing directory is negative	0.000388s
successful	The recursive size of a directory is equals or greater than the size of the same directory none-recursive	0.000585s
successful	The permission of a directory can be returned	0.000435s
successful	The permission of a none-existing directory is negative	0.000442s
successful	A directory can be copied recursively	0.001103s
successful	A directory can be moved/renamed to a different path	0.000579s
successful	The amount of files in a directory can be returned recursively	0.001214s
successful	The amount of files in a directory can be returned none-recursively	0.000783s
successful	The amount of files of a none-existing directory is negative	0.001258s
successful	All files and sub-directories of a directory can be listed	0.000999s
successful	A none-existing directory returns a empty list of files and sub-directories	0.000690s
successful	A invalid directory cannot be copied to a new destination	0.000501s
successful	A invalid directory cannot be moved to a new destination	0.000444s
successful	Reading the creation date of a none-existing directory throws a PathException	0.001415s
successful	Reading the last change date of a none-existing directory throws a PathException	0.000807s
successful	Reading the owner of a none-existing directory throws a PathException	0.000735s
successful	A file cannot be created if it already exists	0.000547s

untested	Invalid names and paths can be sanitized	0s
successful	A file with content can be created	0.000955s
successful	A file cannot be replaced if it doesn't exists	0.000607s
successful	A file cannot be appended if it doesn't exists	0.000516s
successful	A file cannot be prepended if it doesn't exists	0.000541s
successful	A file can be checked for existence	0.000806s
successful	A file can be replaced with a new one	0.002154s
successful	The set alias works like the replace flag	0.001774s
successful	A file can be appended with additional content	0.014027s
successful	The append alias works like the append flag	0.014761s
successful	A file can be prepended with additional content	0.002355s
successful	The prepend alias works like the prepend flag	0.000957s
successful	The content of a file can be read	0.001194s
successful	The parent directory of a file can be returned	0.000728s
successful	The extension of a file can be returned	0.000670s
successful	The name of a file can be returned	0.000798s
successful	The basename of a file can be returned	0.000649s
successful	The file name of a file can be returned	0.000480s
successful	The file path of a file can be returned	0.000456s
successful	The count of a file is always 1	0.000437s
successful	The directories creation date can be returned	0.000609s
successful	The directories last change date can be returned	0.000534s
successful	A file can be deleted	0.001203s
successful	A none-existing file cannot be deleted	0.000759s
successful	The size of a file can be returned	0.001024s
successful	The permission of a file can be returned	0.000751s
successful	The permission of a none-existing file is negative	0.000478s

successful	A file can be copied to a different location	0.000702s
successful	A file cannot be copied to a different location if the destination already exists	0.000593s
successful	A file can be forced to be copied to a different location even if the destination already exists	0.000664s
successful	A file can be moved to a different location	0.000705s
successful	A file cannot be moved to a different location if the destination already exists	0.000624s
successful	A file can be forced to be moved to a different location even if the destination already exists	0.001414s
successful	The size of a none-existing file is negative	0.000675s
successful	A none-existing file cannot be copied	0.000682s
successful	A none-existing file cannot be moved	0.000477s
successful	Reading the content of a none-existing file throws a PathException	0.000877s
successful	Reading the created date of a none-existing file throws a PathException	0.000857s
successful	Reading the last change date of a none-existing file throws a PathException	0.000756s
successful	Reading the owner of a none-existing file throws a PathException	0.001005s
successful	Writing data to a destination which looks like a directory throws a PathException	0.001358s
successful	Reading data from a directory throws a PathException	0.000884s
successful	Trying to run list on a file throws a PathException	0.000710s
successful	Setting data to a destination which looks like a directory throws a PathException	0.000752s
successful	Appending data to a destination which looks like a directory throws a PathException	0.000741s
successful	Prepending data to a destination which looks like a directory throws a PathException	0.000820s
successful	Reading the extension of a destination which looks like a directory throws a PathException	0.000766s

## Directory handler for a ftp server

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	43	31	12	72.1%
Statements	245	222	23	90.6%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	31	31	0	0	0	0
Static Tests	1	0	0	0	0	4
Code Style	1	1	0	0	0	0

## Description

successful	A directory can be created	0.004502s
successful	A directory can be checked for existence	0.001112s
successful	An existing directory cannot be overwritten	0.005767s
successful	A directory can be forced to be created recursively	0.005627s
successful	By default a directory is not created recursively	0.003279s
successful	The name of a directory is just its name without its path	0.000769s
successful	The basename is the same as the name of the directory	0.000457s
successful	The dirname is the same as the name of the directory	0.000421s
successful	The parent of a directory can be returned	0.000433s
successful	The full absolute path of a directory can be returned	0.000433s
successful	The directories creation date can be returned	0.004079s
successful	The directories last change date can be returned	0.005029s
successful	A directory can be deleted	0.004337s
successful	A none-existing directory cannot be deleted	0.000715s
successful	The size of a directory can be returned	0.002850s
successful	The size of a none-existing directory is negative	0.000787s

successful	The recursive size of a directory is equals or greater than the size of the same directory none-recursive	0.003132s
successful	The permission of a directory can be returned	0.001336s
successful	The permission of a none-existing directory is negative	0.000678s
successful	A directory can be copied recursively	0.022285s
successful	A directory can be moved/renamed to a different path	0.048361s
successful	The amount of files in a directory can be returned recursively	0.002761s
successful	The amount of files in a directory can be returned none-recursively	0.001160s
successful	The amount of files of a none-existing directory is negative	0.000644s
successful	All files and sub-directories of a directory can be listed	0.003108s
successful	A none-existing directory returns a empty list of files and sub-directories	0.000971s
successful	A invalid directory cannot be copied to a new destination	0.001537s
successful	A invalid directory cannot be moved to a new destination	0.000901s
successful	Reading the creation date of a none-existing directory throws a PathException	0.001102s
successful	Reading the last change date of a none-existing directory throws a PathException	0.001090s
successful	Reading the owner of a none-existing directory throws a PathException	0.000982s

## File handler for a ftp server

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	42	39	3	92.9%
Statements	120	117	3	97.5%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	41	41	0	0	0	0

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Static Tests	1	0	0	0	0	7
Code Style	1	1	0	0	0	0

## Description

successful	A file without content can be created	0.002274s
successful	A file cannot be created if it already exists	0.002539s
successful	A file with content can be created	0.002592s
successful	A file cannot be replaced if it doesn't exists	0.001126s
successful	A file cannot be appended if it doesn't exists	0.001053s
successful	A file cannot be prepended if it doesn't exists	0.001224s
successful	A file can be checked for existence	0.002156s
successful	A file can be replaced with a new one	0.010649s
successful	The set alias works like the replace flag	0.002807s
successful	A file can be appended with additional content	0.004903s
successful	The append alias works like the append flag	0.005028s
successful	A file can be prepended with additional content	0.003502s
successful	The prepend alias works like the prepend flag	0.003872s
successful	The content of a file can be read	0.002171s
successful	The parent directory of a file can be returned	0.000973s
successful	The extension of a file can be returned	0.000525s
successful	The name of a file can be returned	0.001408s
successful	The basename of a file can be returned	0.000818s
successful	The file name of a file can be returned	0.000621s
successful	The file path of a file can be returned	0.000506s
successful	The count of a file is always 1	0.000431s
successful	The directories creation date can be returned	0.002173s
successful	The directories last change date can be returned	0.004431s



successful	A file can be deleted	0.002256s
successful	A none-existing file cannot be deleted	0.000821s
successful	The size of a file can be returned	0.002208s
successful	The permission of a file can be returned	0.003588s
successful	The permission of a none-existing file is negative	0.001430s
successful	A file can be copied to a different location	0.009642s
successful	A file cannot be copied to a different location if the destination already exists	0.005854s
successful	A file can be forced to be copied to a different location even if the destination already exists	0.006622s
successful	A file can be moved to a different location	0.010976s
successful	A file cannot be moved to a different location if the destination already exists	0.004907s
successful	A file can be forced to be moved to a different location even if the destination already exists	0.006384s
successful	The size of a none-existing file is negative	0.000778s
successful	A none-existing file cannot be copied	0.000749s
successful	A none-existing file cannot be moved	0.000801s
successful	Reading the content of a none-existing file throws a PathException	0.003485s
successful	Reading the created date of a none-existing file throws a PathException	0.001471s
successful	Reading the last change date of a none-existing file throws a PathException	0.001311s
successful	Reading the owner of a none-existing file throws a PathException	0.001744s

## Storage handler for the different storage handler types

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	20	20	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

## Description

successful	By default the local storage handler is returned	0.000645s
successful	The pre-defined storage handlers can be returned by their name	0.000470s
successful	Storages can be registered and returned	0.000458s
successful	Registered storage handlers cannot be overwritten	0.000425s
successful	A invalid or none-existing storage throws a Exception	0.001717s

## Storage handler for the different storage handler types

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	7	7	0	100.0%
Statements	86	86	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	File extensions can be categorized	0.001036s
successful	A relative path can be turned into an absolute path	0.000553s

successful

Permissions can be turned into octal values

0.000450s

successful

The encoding of a file can be changed

0.000951s

## System information

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	1	3	25.0%
Statements	43	32	11	74.4%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

### Description

successful

Test if it is possible to get information about the available RAM and usage

0.008616s

successful

Test if it is possible to get information about the CPU usage

0.007409s

## Http uri / url

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	19	19	0	100.0%
Statements	67	67	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	17	17	0	0	0	0

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The http url has the expected default values after initialization	0.000501s
successful	A url can be validated	0.000363s
untested	The url schema can be parsed correctly from a url	0s
successful	The host can be parsed correctly from a url	0.000469s
successful	The username can be parsed correctly from a url	0.000460s
successful	The password can be parsed correctly from a url	0.000505s
successful	The base can be parsed correctly from a url	0.000462s
successful	The url can be turned into a string	0.001039s
successful	The authority can be parsed correctly from a url	0.000437s
successful	The user info can be parsed correctly from a url	0.000519s
successful	The root path can be set and returned	0.000606s
successful	The path offset can be set and returned	0.000416s
successful	The subdomain can be parsed correctly from a url	0.000545s
successful	The query data can be parsed correctly from a url	0.000495s
successful	The fragment data can be parsed correctly from a url	0.000384s
successful	The path data can be parsed correctly from a url	0.000813s
successful	The route can be parsed correctly from a url	0.000472s
successful	A invalid uri cannot get parsed	0.000485s

## Argument uri / uri

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	21	20	1	95.2%

Description	Total	Covered	Uncovered	Ratio
Statements	56	55	1	98.2%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	9	9	0	0	0	0
Static Tests	1	0	0	0	0	2
Code Style	1	1	0	0	0	0

## Description

successful	The argument uri has the expected default values after initialization	0.000827s
successful	A uri can be validated	0.000445s
successful	The path can be parsed correctly from a uri	0.000604s
successful	The path offset can be set and returned	0.000462s
successful	The route can be parsed correctly from a uri	0.000472s
successful	The query data can be parsed correctly from a uri	0.000524s
successful	The fragment can be parsed correctly from a uri	0.000472s
successful	The uri can be turned into a string	0.000637s
successful	The root path can be set and returned	0.000723s

## Http uri / url factory

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	8	8	0	100.0%
Statements	89	89	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
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Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	12	12	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The http url factory has the expected default values after initialization	0.000572s
successful	Data can be set to the factory and returned	0.001129s
successful	Data can be forcefully overwritten	0.000449s
successful	By default data is not overwritten in the factory	0.000447s
successful	Data can be removed/cleared from the factory	0.000431s
successful	None-existing data cannot be cleared from the factory	0.000422s
successful	Data can be removed from the factory by category	0.000503s
successful	All data can be removed from the factory with a wildcard	0.000458s
successful	Data can be removed from the factory with regular expression matches	0.000514s
successful	Data which doesn't match the regular expression is not removed	0.000374s
successful	A url can be build with the defined factory data and/or build specific data	0.000720s
successful	The uri factory can be set up with default values from a url and build with these default values	0.001040s

## LZW compression

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	1	1	50.0%
Statements	39	37	2	94.9%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful

A string can be LZW compressed and uncompressed

0.001629s

## Currency converter

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	4	1	80.0%
Statements	32	31	1	96.9%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	6	6	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful

A currency can be converted from euro to another currency

0.178016s

successful

A currency can be converted to euro from another currency

0.000574s

successful

A currency can be converted from one currency to another currency

0.055769s

successful

A currency conversion from eur to a invalid currency throws a InvalidArgumentException

0.003406s

successful

A currency conversion from a invalid currency to eur throws a InvalidArgumentException

0.001903s

successful	A currency conversion from a invalid currency to a invalid currency throws a InvalidArgumentException	0.002252s
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## File size converter

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	12	12	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	A byte number can be converted to a string representation	0.001122s
successful	A kilobyte number can be converted to a string representation	0.000595s

## IP converter

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	5	5	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0



Description	Total	Successful	Skipps	Warnings	Failures	Errors
Code Style	1	1	0	0	0	0

Description

successful	An ip can be converted to a float	0.000504s
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Measurement converter

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	22	22	0	100.0%
Statements	1019	1019	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	33	33	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	Temperatures can be converted	0.001171s
successful	Weights can be converted	0.002670s
successful	Lengths can be converted	0.007854s
successful	Areas can be converted	0.001978s
successful	Volumes can be converted	0.027391s
successful	Speeds can be converted	0.026112s
successful	Times can be converted	0.003163s
successful	Angles can be converted	0.002901s
successful	Pressures can be converted	0.004327s

successful	Energies can be converted	0.001331s
successful	Filesizes can be converted	0.001411s
successful	Invalid conversion from unknown temperature throws a InvalidArgumentException	0.000961s
successful	Invalid conversion to unknown temperature throws a InvalidArgumentException	0.000840s
successful	Invalid conversion from unknown weight throws a InvalidArgumentException	0.000905s
successful	Invalid conversion to unknown weight throws a InvalidArgumentException	0.001305s
successful	Invalid conversion from unknown length throws a InvalidArgumentException	0.000943s
successful	Invalid conversion to unknown length throws a InvalidArgumentException	0.000984s
successful	Invalid conversion from unknown area throws a InvalidArgumentException	0.000896s
successful	Invalid conversion to unknown area throws a InvalidArgumentException	0.002013s
successful	Invalid conversion from unknown volume throws a InvalidArgumentException	0.001238s
successful	Invalid conversion to unknown volume throws a InvalidArgumentException	0.002594s
successful	Invalid conversion from unknown speed throws a InvalidArgumentException	0.001006s
successful	Invalid conversion to unknown speed throws a InvalidArgumentException	0.000905s
successful	Invalid conversion from unknown time throws a InvalidArgumentException	0.000929s
successful	Invalid conversion to unknown time throws a InvalidArgumentException	0.000968s
successful	Invalid conversion from unknown angle throws a InvalidArgumentException	0.002065s
successful	Invalid conversion to unknown angle throws a InvalidArgumentException	0.001522s
successful	Invalid conversion from unknown pressure throws a InvalidArgumentException	0.001097s

successful	Invalid conversion to unknown pressure throws a InvalidArgumentException	0.000910s
successful	Invalid conversion from unknown energy throws a InvalidArgumentException	0.001142s
successful	Invalid conversion to unknown energy throws a InvalidArgumentException	0.001043s
successful	Invalid conversion from unknown filesize throws a InvalidArgumentException	0.000965s
successful	Invalid conversion to unknown filesize throws a InvalidArgumentException	0.000878s

## File size types

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	7	7	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	File sizes can get automatically formatted according to their size	0.002544s
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## Numeric converter

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	5	0	100.0%
Statements	51	51	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	Arabic numbers can be converted to roman numbers	0.001289s
successful	Roman numbers can be converted to arabic numbers	0.001642s
successful	Letters can be converted to numbers	0.000885s
successful	Numbers can be converted to letters	0.000493s
successful	Numbers can be converted between bases	0.000558s

## Data can be encoded with huffman

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	41	41	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	Encoding and decoding empty data results in an empty output	0.000921s
successful	Data can be huffman encoded and decoded	0.002847s

## Dictionary for the huffman encoding

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	54	54	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	Only single characters can be returned from the dictionary. Multiple characters throw a <code>InvalidArgumentException</code>	0.001548s
successful	A none-existing character throws a <code>InvalidArgumentException</code>	0.001099s
successful	Only single characters can be set in the dictionary. Multiple characters throw a <code>InvalidArgumentException</code>	0.000808s
successful	Dictionary elements cannot be overwritten and throw a <code>InvalidArgumentException</code>	0.000936s
successful	Invalid dictionary values throw a <code>InvalidArgumentException</code>	0.000997s

## Caesar text encoding/decoding

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	22	22	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
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Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful

Text can be encoded and decoded with the ceasar encoding

0.002381s

## Gray text encoding/decoding

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	5	5	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful

Text can be encoded and decoded with the gray encoding

0.000850s

## XOR text encoding/decoding

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	10	10	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

Text can be encoded and decoded with the xor encoding

0.000613s

Git utilities

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful

The git path can be returned

0.000592s

Git author

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	8	8	0	100.0%
Statements	13	13	0	100.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The author has the expected default values after initialization	0.000594s
successful	The author name and email can be set during initialization and returned	0.001021s
successful	The commit count can be set and returned	0.000554s
successful	The addition count can be set and returned	0.000462s
successful	The removal count can be set and returned	0.000471s

Git branch

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	4	4	0	100.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The branch has the expected default values after initialization	0.000534s
successful	The branch name can be set during initialization and returned	0.000353s

Git commit



## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	18	18	0	100.0%
Statements	40	40	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	13	13	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The commit has the expected default values after initialization	0.002594s
successful	A file can be added and returned	0.000720s
successful	A file can only be added one time	0.000776s
successful	A file can be removed	0.000662s
successful	A none-existing file cannot be removed	0.000509s
successful	A change can be added and returned	0.000533s
successful	Adding the same change throws a Exception	0.000992s
successful	A commit message can be set and returned	0.000506s
successful	The author can be set and returned	0.000469s
successful	The branch can be set and returned	0.000603s
successful	The tag can be set and returned	0.000534s
successful	The date can be set and returned	0.000634s
successful	The repository can be set and returned	0.000542s

## Git repository

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The repository has the expected default values after initialization	0.000398s
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Git repository

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	6	6	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The tag has the expected default values after initialization	0.001242s
successful	The tag name can be set during initialization and returned	0.000656s
successful	The message can be set and returned	0.000646s

## Csv file settings

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	34	34	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	0	0	0	0	3
Code Style	1	1	0	0	0	0

### Description

untested	The delimiter in a csv file can be guessed	0s
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## Spreadsheet database mapper

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	3	1	75.0%
Statements	95	93	2	97.9%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	9	9	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

### Description

successful	Data can be inserted into a database from an ods files	0.105473s
successful	Data can be inserted into a database from a xls files	0.080796s
successful	Data can be inserted into a database from a xlsx files	0.081817s
successful	Data can be updated in a database from an ods files	0.201909s
successful	Data can be updated in a database from a xls files	0.115225s
successful	Data can be updated in a database from a xlsx files	0.372768s
successful	Data can be inserted into an ods files from a database	0.082013s
successful	Data can be inserted into a xls files from a database	0.069681s
successful	Data can be inserted into a xlsx files from a database	0.121151s

## Gz archive

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	24	24	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	Data can be gz packed and unpacked	0.001015s
successful	A gz archive cannot be overwritten	0.000841s
successful	A none-existing source cannot be unpacked	0.000506s
successful	A destination cannot be overwritten	0.001035s

## TarGz archive

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	17	17	0	100.0%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	Data can be tar gz packed and unpacked	0.003850s
successful	A tar gz archive cannot be overwritten by default	0.004872s
successful	A none-existing source cannot be unpacked	0.000562s
successful	A destination cannot be overwritten	0.011960s

## Tar archive

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	43	43	0	100.0%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

## Description

successful	Data can be tar packed and unpacked	0.013426s
successful	Extracting invalid tar files fail	0.000862s
successful	A tar archive cannot be overwritten by default	0.004202s
successful	A none-existing source cannot be unpacked	0.000504s
successful	A destination cannot be overwritten	0.008528s

## Zip archive

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	45	45	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	6	6	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

## Description

successful	Data can be zip packed and unpacked	0.002143s
successful	The output of the zip archive needs to be properly defined	0.000499s
successful	Extracting invalid zip files fail	0.000865s
successful	A zip archive cannot be overwritten by default	0.000839s
successful	A none-existing source cannot be unpacked	0.001041s
successful	A destination cannot be overwritten	0.000954s

## Array data serializer as code

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	23	23	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	An array can be encoded and decoded as php code	0.000728s
successful	A value can be encoded and decoded into php code	0.001189s

Array randomizer

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	12	12	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	An array can be randomized using the yates algorithm	0.000713s
successful	An array can be randomized using the knuth algorithm	0.000373s

## Date time randomizer

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	2	2	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful

A random date time can be generated

0.001679s

## File extension randomizer

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	4	4	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description



successful

A random file extension can be generated

0.000922s

## Random number generator

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	6	6	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	6	6	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The bsd random number generator starts with the correct sequence	0.000517s
successful	The same bsd seed generates the same random number	0.000335s
successful	Different bsd seeds generate different random numbers	0.002006s
successful	The msvcrt random number generator starts with the correct sequence	0.000810s
successful	The same msvcrt seed generates the same random number	0.000427s
successful	Different msvcrt seeds generate different random numbers	0.000829s

## Random name generator

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	2	2	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful

Random female and male names can be generated

0.001391s

## Random phone number generator

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	18	18	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful

Random phone numbers can be generated

0.000914s

## Random string generator

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	6	6	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful

Random strings can be generated

0.019101s

## Random text generator

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	4	1	80.0%
Statements	103	101	2	98.1%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful

Random text can be generated

0.005879s

## Cron job

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	4	4	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The cron job has the expected default values after initialization	0.001054s
successful	A cron job can be created from an array and rendered	0.000911s

## Cron handler

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	6	6	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The cron handler has the expected default values after initialization	0.001673s
successful	The cron binary location path can be guessed	0.000613s
successful	A cron job can be created and returned	0.130829s
successful	A none-existing cron name cannot be returned	0.025849s
successful	A cron job can be updated	0.165627s

successful	A cron job can be deleted	0.094102s
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## Cron handler

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	27	25	2	92.6%
Statements	99	89	10	89.9%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	17	17	0	0	0	0
Static Tests	1	0	0	0	0	17
Code Style	1	1	0	0	0	0

### Description

successful	The interval has the expected default values after initialization	0.001122s
successful	The start date can be set during initialization and returned	0.000589s
successful	The start date can set and returned	0.000437s
successful	The end date can set and returned	0.000620s
successful	The maximum execution duration can set and returned	0.000519s
successful	An execution minute can be added and returned	0.000622s
successful	An execution minute can be overwritten	0.000616s
successful	An execution hour can be added and returned	0.000464s
successful	An execution hour can be overwritten	0.000468s
successful	An execution year can be added and returned	0.000448s
successful	An execution year can be overwritten	0.000539s
successful	An execution day of month can be added and returned	0.000434s
successful	An execution day of month can be overwritten	0.000438s

successful	An execution day of week can be added and returned	0.000446s
successful	An execution day of week can be overwritten	0.000617s
successful	A interval can be serialized	0.000500s
successful	A serialized interval can be unserialized	0.000554s

## Scheduler abstraction

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The scheduler has the expected default values after initialization	0.000497s
successful	The scheduler binary location path can be guessed	0.000452s

## Scheduler factory for creating cron/task handlers

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	0	1	0.0%
Statements	4	2	2	50.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
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Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The correct scheduler is crated depending on the operating system	0.000507s
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Job/task abstraction

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	14	14	0	100.0%
Statements	25	25	0	100.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	7	7	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	The task abstraction has the expected default values after initialization	0.000757s
successful	The command can be set and returned	0.001107s
successful	The interval can be set and returned	0.000477s
successful	The status can be set and returned	0.000426s
successful	The comment can be set and returned	0.000437s
successful	The last runtime can be set and returned	0.000431s

successful

The next runtime can be set and returned

0.000427s

## Task factory for creating cron jobs/tasks

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	0	1	0.0%
Statements	4	2	2	50.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful

The correct task is crated depending on the operating system

0.000520s

## Task schedule handler

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	6	0	6	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description



skipped	The task handler has the expected default values after initialization	0.001396s
skipped	The task binary location path can be guessed	0.001189s
skipped	A task can be created and returned	0.001362s
skipped	A none-existing task name cannot be returned	0.001059s
skipped	A task can be updated	0.001115s
skipped	A task can be deleted	0.001041s

## Array utilities

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	16	16	0	100.0%
Statements	105	105	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	17	17	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	Array values can be set and returned with a path	0.000670s
successful	A invalid array path returns null	0.000607s
successful	Test recursively if a value is in an array	0.000514s
successful	An array element can be removed by its path	0.001815s
successful	Deleting an invalid array path returns the original array	0.000451s
successful	The recursive sum of all values in an array can be calculated	0.000445s
successful	A multi-dimensional array can be flatten to a one-dimensional array	0.000425s
successful	The sum of an array can be calculated	0.000433s

successful	An array can be checked if it contains multiple defined elements	0.000474s
successful	An array can be checked if it contains multiple defined elements	0.000430s
successful	An array can be checked if it has an element and returns its index	0.000476s
successful	An array can be turned into a csv string	0.000464s
successful	A none-existing argument in an array returns a negative value	0.000417s
successful	The argument value in an array can be returned	0.000418s
successful	A none-existing argument in an array returns null	0.000421s
untested	All array values in an array can be potentiated by an integer	0s
untested	All array values in an array can be potentiated by a float	0s
successful	All array values in an array can be square rooted	0.000653s
successful	All array values in an array can be turned into their absolute value	0.000513s

## Color utilities

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	9	9	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	A integer can be converted to rgb	0.000585s
successful	Rgb can be converted to a integer	0.000378s

## Image utilities

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	3	3	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful

Base64 image data can be decoded to an image0.001404s

## Numeric utilities

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	3	3	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful

Integers can be unsigned right shifted

0.000973s

## Permutation utilities

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	23	23	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful

An array can be permuted

0.000725s

successful

Two string can be checked if they are a permutation of each other

0.000684s

successful

A string can be checked if it is a palindrome

0.000482s

successful

An array can be permuted with a permutation key

0.000418s

successful

A none-existing permutation key throws a  
OutOfBoundsException

0.000832s

## String comparison / dictionary

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	8	8	0	100.0%
Statements	71	71	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A string can be matched with a dictionary entry	0.002657s
successful	A string doesn't match a dictionary entry if it is very different	0.002181s
successful	A new dictionary entry can be created and returned	0.001003s

## String utilities

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	10	10	0	100.0%
Statements	145	145	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	11	11	0	0	0	0
Static Tests	1	0	0	0	0	3
Code Style	1	1	0	0	0	0

## Description

successful	The entropy of a string can be calculated	0.000684s
successful	A string can be checked if it starts with a defined string	0.000502s
successful	A string can be checked if it ends with a defined string	0.000603s
untested	The first character of a multi-byte string can be turned into upper case	0s

untested	The first character of a multi-byte string can be turned into lower case	0s
untested	A multi-byte string can be trimmed	0s
untested	A multi-byte string can be right-trimmed	0s
untested	A multi-byte string can be left-trimmed	0s
successful	A string can be checked if it contains at least one defined string element	0.000713s
successful	The amount of a defined characters in the beginning of a string can be counted	0.000471s
successful	A string creates a integer hash	0.000541s
successful	The same string creates the same hash	0.000560s
successful	Different strings create different hashes	0.000948s
successful	Various data types can be stringified	0.000573s
successful	Stringify/rendering a unknown data type returns null	0.000460s
successful	The difference between two strings can be evaluated	0.003860s

## Multi-Byte string utilities

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	12	11	1	91.7%
Statements	68	63	5	92.6%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	12	12	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	The entropy of a string can be calculated	0.000743s
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successful	A multi-byte string can be checked if it starts with a defined string	0.000431s
successful	A multi-byte string can be checked if it ends with a defined string	0.000428s
successful	A string can be checked for multi-byte characters	0.000472s
successful	The first character of a multi-byte string can be turned into upper case	0.000804s
successful	The first character of a multi-byte string can be turned into lower case	0.000792s
successful	A multi-byte string can be trimmed	0.000788s
successful	A multi-byte string can be right-trimmed	0.000505s
successful	A multi-byte string can be left-trimmed	0.000513s
successful	A multi-byte string can be checked if it contains at least one defined string element	0.000471s
successful	The characters of a multi-byte string can be counted	0.000482s
successful	The previous boundary of a utf-8 encoded quoted printable is identified correctly	0.000449s

## Test utilities

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	20	20	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	4	4	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	A member value can be returned	0.000784s
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successful	Invalid member variable returns null	0.000470s
successful	A member value can be set and returned	0.000556s
successful	A none-existing member variable cannot be set	0.000531s

## Datetime validator

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	1	1	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

### Description

successful	A date time string can be validated	0.000425s
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## Json validator

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	69	69	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	6	6	0	0	0	0
Static Tests	1	0	0	0	0	1



Description	Total	Successful	Skipp	Warnings	Failures	Errors
Code Style	1	1	0	0	0	0

## Description

successful	A json string can be validated	0.001592s
successful	A json string can be validated against a template definition	0.003457s
successful	A json string can be validated against a template definition with additional data	0.001512s
successful	A json string cannot be validated against a template definition with additional data if an exact match is enforced	0.000856s
successful	A json string cannot be validated against a template definition with missing data if an exact match is enforced	0.000946s
successful	A json string cannot be validated against a template definition if it doesn't match the template	0.000831s

## BIC validator

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	1	1	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

## Description

successful	A BIC can be validated	0.000915s
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## Credit card validator

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	22	22	0	100.0%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	A credit card can be validated	0.000968s
successful	A invalid type cannot be validated	0.000715s

## Iban validator

## Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	4	4	0	100.0%
Statements	46	46	0	100.0%

## Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	0	0	0	0	2
Code Style	1	1	0	0	0	0

## Description

untested	A iban can be validated	0s
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## Email validator

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	7	7	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful

A email can be validated

0.000382s

## Hostname validator

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	0	1	0.0%
Statements	11	10	1	90.9%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	0	0	0	0	7
Code Style	1	1	0	0	0	0

### Description

untested

A hostname can be validated

0s

## IP validator

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	3	3	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

successful	A ip can be validated	0.000767s
successful	A ip4 can be validated	0.001066s
successful	A ip6 can be validated	0.000682s

## General validator

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	26	26	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	7	7	0	0	0	0
Static Tests	1	0	0	0	0	1

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Code Style	1	1	0	0	0	0

Description

successful	A string can be checked if it contains a substring	0.000635s
successful	A string can be checked if it has a certain length	0.000611s
successful	A value can be checked if it is in range	0.000715s
successful	A value can be checked to be of a defined type	0.000600s
successful	The error message and error code have the expected default values	0.000597s
successful	Custom validators can be specified in order to validate a value	0.000701s
successful	A value can be checked to match a regular expression	0.000613s

Version handler

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	1	1	0	100.0%

Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

successful	Versions can be compared with each other	0.000502s
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View for response rendering

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	14	14	0	100.0%
Statements	47	47	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	30	30	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The view has the expected default values after initialization	0.000775s
successful	The view data can be checked for existence	0.000631s
successful	The view can output text from the localization manager	0.000588s
successful	The view can output html escaped text from the localization manager	0.000581s
successful	The numeric value can be printed based on the localization	0.000766s
successful	The percentage value can be printed based on the localization	0.000765s
successful	The currency value can be printed based on the localization	0.000896s
successful	The datetime value can be printed based on the localization	0.000762s
successful	View data can be set and returned	0.000543s
successful	View data can be added and returned	0.000518s
successful	View data cannot be added if it already exists	0.000538s
successful	View data can be removed	0.000599s
successful	None-existing view data cannot be removed	0.000592s
successful	The request can be returned	0.000625s
successful	The response can be returned	0.000626s
successful	Text can be html escaped	0.000630s

successful	Views can be added and returned from a view	0.000621s
successful	None-existing views cannot be returned	0.000720s
successful	Views can be removed	0.000565s
successful	None-existing views cannot be removed	0.000536s
successful	A view can be forcefully overwritten	0.000596s
successful	By default a view is not overwritten	0.000545s
successful	A view template can be rendered	0.000655s
successful	A view template can be serialized	0.000965s
successful	A view can be turned into an array containing the rendered templates	0.000892s
successful	Rendering a invalid template throws a PathException	0.001671s
successful	Serializing a invalid template throws a PathException	0.001486s
successful	Getting the text without defining a module throws a InvalidModuleException exception	0.001417s
successful	Getting the text with an invalid template path throws a InvalidModuleException exception	0.002564s
successful	Getting the text without defining a template throws a InvalidThemeException exception	0.001448s

## View for pagination

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	8	8	0	100.0%
Statements	12	12	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	The pagination view has the expected default values after initialization	0.001235s
successful	The max pages can be set and returned	0.000527s
successful	The pages can be set and returned	0.000463s
successful	The page can be set and returned	0.000452s
successful	The results can be set and returned	0.000521s

## Application abstraction

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	2	2	0	100.0%
Statements	5	5	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful	Application values can be set and returned	0.000330s
successful	Application values cannot be overwritten	0.000448s

## Class autoloader

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	5	4	1	80.0%
Statements	29	26	3	89.7%



## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

successful

Classes can be checked for existence

0.000491s

## Admin module - general module information

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

## Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	11	11	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

## Description

successful

The module can be installed, deactivated and activated

0.091010s

successful

The mappers are valid

0.002530s

successful

The mappers match the models

0.003190s

successful

The database schema definition is valid

0.022737s

successful

The database schema is correctly setup in the database

0.039997s

successful

The mapper matches the database setup

0.000804s

successful	The module info file has the correct structure	0.000969s
successful	The dependencies got installed	0.001067s
successful	The routes got installed and the endpoints are defined	0.006168s
successful	The hooks got installed and the endpoints are defined	0.000929s
successful	The navigation got installed	0.000272s

## Admin api controller

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	30	30	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

### Description

successful	Application settings can be read from the database	0.002852s
successful	Application settings can be set in the database	0.012194s
successful	A user can be returned	0.003067s
successful	A user group can be updated	0.015957s
successful	A user group can be found by name	0.003026s
successful	A user group can be created and deleted	0.013164s
successful	A invalid user group cannot be created	0.002249s
untested	A user can be added to a user group	0s
successful	A permission can be added to a user group	0.008473s

successful	A group permission can be returned	0.002299s
successful	A user group permission can be created and deleted	0.010522s
successful	A permission with missing data cannot be added to a user group	0.001489s
successful	A invalid permission type cannot be added to a user group	0.001316s
successful	A user group permission can be updated	0.011693s
successful	A user can be updated	0.010982s
successful	A user can be found by name	0.002841s
successful	A user and profile for the user can be created	0.065412s
successful	A user can be deleted	0.058519s
successful	A invalid user cannot be created	0.001404s
untested	A user group can be added to a user	0s
successful	A permission can be added to a user	0.007594s
successful	A user permission can be returned	0.003147s
successful	A user permission can be created and deleted	0.015031s
successful	A permission with missing data cannot be added to a user	0.002340s
successful	A invalid permission type cannot be added to a user	0.002160s
successful	A user permission can be updated	0.008062s
successful	A user and user group can be found by name	0.003814s
successful	The status of a module can be updated	0.156468s
successful	A missing module cannot be updated	0.001393s
successful	A invalid module status cannot update a module	0.001696s
successful	A invalid module cannot be updated	0.003278s
successful	A module can be re-initialized	0.065949s

## Account database mapper

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%

Description	Total	Covered	Uncovered	Ratio
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

Description

successful	The model can be created and read from the database	0.008139s
successful	A empty user password results in a failed login	0.001066s
successful	A invalid user password results in a failed login	0.044683s
successful	A valid user name and password results in a successful login	0.001626s
successful	A invalid user name results in a failed login	0.045071s

Account permission

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

Description

successful

The account permission has the expected default values after initialization

0.000588s

## Account model

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	2	2	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

## Description

successful

The account has the expected default values after initialization

0.000396s

successful

The login tries can be set and returned

0.000439s

## Group mapper

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Code Style	0	0	0	0	0	0

Description

successful

All groups which have permissions for a module can be returned

0.007093s

Group permission

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

Description

successful

The group permission has the expected default values after initialization

0.000361s

Group model

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	3	3	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

Description

successful	The group has the expected default values after initialization	0.000387s
successful	The description can be set and returned	0.000489s
successful	The creator can be set and returned	0.000512s

Localization database mapper

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	1	1	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

Description

successful	The model can be created and read from the database	0.006800s
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Module container

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%

Description	Total	Covered	Uncovered	Ratio
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	5	5	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

Description

successful	The module has the expected default values after initialization	0.000438s
successful	The name can be set and returned	0.000839s
untested	The description can be set and returned	0s
successful	The status can be set and returned	0.000676s
successful	The module can be serialized	0.000861s
successful	A invalid status throws a InvalidEnumValue exception	0.000903s

Auditor api controller

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	15	15	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0



## Description

untested	Audit logs for create statements can be created	0s
untested	Audit logs for update statements can be created	0s
untested	Audit logs for delete statements can be created	0s

## Audit model

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	10	10	0	100.0%
Statements	20	20	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

## Description

untested	The model has the expected default values after initialization	0s
untested	The model can be initialized correctly	0s

## News api controller

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

### Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
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Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

Description

untested	A news article can be created	0s
untested	A news article can be returned	0s
untested	A news article can be updated	0s
untested	A news article can be deleted	0s

News article

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	14	14	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

Description

successful	The model has the expected default values after initialization	0.000492s
successful	The cretor can be correctly set and returned	0.000508s
successful	The title can be correctly set and returned	0.000488s
successful	The content can be correctly set and returned	0.000453s

successful	The plain content can be correctly set and returned	0.000469s
successful	The publish date can be correctly set and returned	0.000522s
successful	The featured flag can be correctly set and returned	0.000454s
successful	The language can be correctly set and returned	0.000598s
successful	The status can be correctly set and returned	0.000555s
successful	The type can be correctly set and returned	0.001376s
successful	The model can be correctly serialized	0.000600s
successful	A invalid status throws a InvalidEnumValue exception	0.000993s
successful	A invalid type throws a InvalidEnumValue exception	0.000881s
successful	A invalid language throws a InvalidEnumValue exception	0.000873s

## News article mapper

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	0	0	0	0	0	0

### Description

untested	The model can be created and read from the database	0s
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## Report model

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%
Statements	17	17	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

untested	The model has the expected default values after initialization	0s
untested	The creator can be set and returned correctly	0s
untested	The title can be set and returned correctly	0s
untested	The status can be set and returned correctly	0s
untested	The description can be set and returned correctly	0s
untested	The raw description can be set and returned correctly	0s
untested	The template can be set and returned correctly	0s
untested	The source can be set and returned correctly	0s
untested	Report data can be turned into an array	0s
untested	Report data can be json serialized	0s

Report database mapper

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

untested	The model can be created and read from the database	0s
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Template model

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	14	14	0	100.0%
Statements	33	33	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

untested	The model has the expected default values after initialization	0s
untested	The unit can be set and returned correctly	0s
untested	The creator can be set and returned correctly	0s
untested	The title can be set and returned correctly	0s
untested	The status can be set and returned correctly	0s
untested	The template can be set as standalone and returned correctly	0s
untested	The description can be set and returned correctly	0s

untested	The raw description can be set and returned correctly	0s
untested	The expected report files can be set and returned correctly	0s
untested	The source can be set and returned correctly	0s
untested	The data storage type can be set and returned correctly	0s
untested	Template data can be turned into an array	0s
untested	Template data can be json serialized	0s

## Template database mapper

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	1	0	100.0%
Statements	5	5	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

untested	The model can be created and read from the database	0s
untested	The newest model can be read from the database	0s

## Wiki application

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	3	3	0	100.0%
Statements	4	4	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

untested	The model can be created and read from the database	0s
untested	The name can be correctly set and returned	0s

Wiki application mapper

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

untested	The model can be created and read from the database	0s
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Wiki category

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	6	6	0	100.0%

Description	Total	Covered	Uncovered	Ratio
Statements	18	18	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	0	0	0	0	1
Code Style	1	1	0	0	0	0

Description

untested	The model can be created and read from the database	0s
untested	The application can be correctly set and returned	0s
untested	The name can be correctly set and returned	0s
untested	The path can be correctly set and returned	0s
untested	The parent can be correctly set and returned	0s

Wiki category mapper

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	1	0	1	0.0%
Statements	4	0	4	0.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description



untested	The model can be created and read from the database	0s
untested	The model can be created and read from the database with a parent category	0s

## Wiki document

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	11	11	0	100.0%
Statements	23	23	0	100.0%

### Tests

Description	Total	Successful	Skipp	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

### Description

untested	The model can be created and read from the database	0s
untested	The application can be correctly set and returned	0s
untested	The name can be correctly set and returned	0s
untested	The content can be correctly set and returned	0s
untested	The raw content can be correctly set and returned	0s
untested	The status can be correctly set and returned	0s
untested	The category can be correctly set and returned	0s
untested	The language can be correctly set and returned	0s
untested	A tag can be correctly added and returned	0s

## Wiki document mapper

### Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	1	1	0	0	0	0

Description

untested

The model can be created and read from the database

0s

Form manager

Coverage

Description	Total	Covered	Uncovered	Ratio
Methods	0	0	0	100.0%
Statements	0	0	0	100.0%

Tests

Description	Total	Successful	Skipps	Warnings	Failures	Errors
Tests	0	0	0	0	0	0
Static Tests	1	1	0	0	0	0
Code Style	2	1	0	0	0	10