Feedback

Mögliche Punkte

Test	Punkte
test_calloc_alloc	2
test_calloc_complex	2
test_calloc_alloc_next_fit	1.5
test_calloc_alloc_one	2
test_calloc_size_cases	1.5
test_calloc_free_complex	2.5
test_calloc_free_one	2
test_calloc_last_allocated_usage	2.5
test_calloc_oom	2
test_calloc_simple	2
test_mmu_accessed	1
test_mmu_extended	1
test_mmu_modified_011	0.5
test_mmu_modified_111	0.5
test_mmu_no_permission	1
test_mmu_not_present	1
test_mmu_offset	1.5
test_mmu_page_to_kachel	1.5
test_mmu_valid_pid	1
test_mmu_valid_ptbr	1

Erreichte Punkte

Test	Punkte
test_calloc_alloc	2.0
test_calloc_complex	2.0
test_calloc_alloc_next_fit	1.5
test_calloc_alloc_one	2.0
test_calloc_size_cases	1.5
test_calloc_free_complex	2.5
test_calloc_free_one	2.0
test_calloc_last_allocated_usage	2.5
test_calloc_oom	2.0
test_calloc_simple	2.0
test_mmu_accessed	1.0
test_mmu_extended	1.0
test_mmu_modified_011	0.5
test_mmu_modified_111	0.5

Test	Punkte
test_mmu_no_permission	1.0
test_mmu_not_present	1.0
test_mmu_offset	1.5
test_mmu_page_to_kachel	1.5
test_mmu_valid_pid	1.0
test_mmu_valid_ptbr	1.0
TOTAL	30.0

Logs

Lines longer than 400 characters are cropped! Logs longer than 300 lines are cropped!

test_mmu_modified_011.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/mmu.c tests/test_mmu_modified_011.c
2 >> Running Test (with 60 sec timeout)
3 RESULT: PASSED
```

test_calloc_oom.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/calloc.c tests/test_calloc_oom.c
2 >> Running Test (with 60 sec timeout)
3 --- Beginning of memory layout ---
4 +------------------------------+
5 | Block at:        0x55930bc64098 |
6 |   -   -   -   -   -   -   -   -   -   -   |
7 | Prev at:                   (nil) |
8 | Next at:         0x55930bc64110 |
9 | Availability:              used |
10 | Size:                        96 |
11 | Data (first 8 Bytes):            |
12 |    ASCII : A.A.A.A.A.A.A.A       |
13 |    HEX   : 0x41 0x41 0x41 0x41   |
14 |            0x41 0x41 0x41 0x41   |
15 +------------------------------+
16 | Block at:        0x55930bc64110 |
17 |   -   -   -   -   -   -   -   -   -   -   |
18 | Prev at:         0x55930bc64098 |
19 | Next at:                   (nil) |
20 | Availability:              free |
21 | Size:                         8 |
22 +------------------------------+
23 ------ End of memory layout ------
```

2

```
24
25 First allocation:
26 Expected: not NULL
27 Got      : 0x55930bc640b0
28
29 Last allocation:
30 Expected: (nil)
31 Got      : (nil)
32 RESULT: PASSED
```

test_calloc_complex.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/calloc.c tests/test_calloc_complex.c
2 >> Running Test (with 60 sec timeout)
3 Allocating three times
4 Freeing all
5 --- Beginning of memory layout ---
6 +-----------------------------+
7 | Block at:        0x558d61f860c0 |
8 |  -  -  -  -  -  -  -  -  -  -  |
9 | Prev at:                (nil) |
10 | Next at:        0x558d61f860e8 |
11 | Availability:            used |
12 | Size:                      16 |
13 | Data (first 8 Bytes):         |
14 |    ASCII : D.D.D.D.D.D.D.D    |
15 |    HEX   : 0x44 0x44 0x44 0x44 |
16 |            0x44 0x44 0x44 0x44 |
17 +-----------------------------+
18 | Block at:        0x558d61f860e8 |
19 |  -  -  -  -  -  -  -  -  -  -  |
20 | Prev at:        0x558d61f860c0 |
21 | Next at:        0x558d61f86110 |
22 | Availability:            free |
23 | Size:                      16 |
24 +-----------------------------+
25 | Block at:        0x558d61f86110 |
26 |  -  -  -  -  -  -  -  -  -  -  |
27 | Prev at:        0x558d61f860e8 |
28 | Next at:        0x558d61f86138 |
29 | Availability:            used |
30 | Size:                      16 |
31 | Data (first 8 Bytes):         |
32 |    ASCII : F.F.F.F.F.F.F.F    |
33 |    HEX   : 0x46 0x46 0x46 0x46 |
34 |            0x46 0x46 0x46 0x46 |
35 +-----------------------------+
36 | Block at:        0x558d61f86138 |
37 |  -  -  -  -  -  -  -  -  -  -  |
```

```
38 | Prev at:          0x558d61f86110 |
39 | Next at:          0x558d61f86160 |
40 | Availability:              used |
41 | Size:                        16 |
42 | Data (first 8 Bytes):           |
43 |   ASCII : G.G.G.G.G.G.G.G       |
44 |   HEX   : 0x47 0x47 0x47 0x47    |
45 |           0x47 0x47 0x47 0x47    |
46 +-------------------------------+
47 | Block at:         0x558d61f86160 |
48 |   -  -  -  -  -  -  -  -  -  -    |
49 | Prev at:         0x558d61f86138 |
50 | Next at:                   (nil) |
51 | Availability:              free |
52 | Size:                    1048392 |
53 +-------------------------------+
54 ------ End of memory layout ------
55 Expected block count: 5
56 Final block count   : 5
57 Concatenating data
58 Expected: DDDDDDDDDDFFFFFFFFFFGGGGGGGGGG
59 Found   : DDDDDDDDDDFFFFFFFFFFGGGGGGGGGG
60 Freeing everything
61 Initial memory    : 1048552
62 Final free memory: 1048552
63 Expected block count: 1
64 Final block count   : 1
65 RESULT: PASSED
```

test_mmu_extended.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/mmu.c tests/test_mmu_extended.c
2 >> Running Test (with 60 sec timeout)
3 RESULT: PASSED
```

test_mmu_no_permission.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/mmu.c tests/test_mmu_no_permission.c
2 >> Running Test (with 60 sec timeout)
3 RESULT: PASSED
```

test_calloc_simple.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/calloc.c tests/test_calloc_simple.c
2 >> Running Test (with 60 sec timeout)
3 Doing three allocations
```

```
 4  --- Beginning of memory layout ---
 5  +------------------------------+
 6  | Block at:        0x55d9efcd50f0 |
 7  | - - - - - - - - - - |
 8  | Prev at:                (nil) |
 9  | Next at:         0x55d9efcd5110 |
10  | Availability:            used |
11  | Size:                       8 |
12  | Data (first 8 Bytes):         |
13  |   ASCII : A.A.A.A._._._._    |
14  |   HEX   : 0x41 0x41 0x41 0x41  |
15  |           0x00 0x00 0x00 0x00  |
16  +------------------------------+
17  | Block at:        0x55d9efcd5110 |
18  | - - - - - - - - - - |
19  | Prev at:         0x55d9efcd50f0 |
20  | Next at:         0x55d9efcd5130 |
21  | Availability:            used |
22  | Size:                       8 |
23  | Data (first 8 Bytes):         |
24  |   ASCII : B.B._._._._._    |
25  |   HEX   : 0x42 0x42 0x00 0x00  |
26  |           0x00 0x00 0x00 0x00  |
27  +------------------------------+
28  | Block at:        0x55d9efcd5130 |
29  | - - - - - - - - - - |
30  | Prev at:         0x55d9efcd5110 |
31  | Next at:         0x55d9efcd5158 |
32  | Availability:            used |
33  | Size:                      16 |
34  | Data (first 8 Bytes):         |
35  |   ASCII : C.C.C.C.C.C.C.C    |
36  |   HEX   : 0x43 0x43 0x43 0x43  |
37  |           0x43 0x43 0x43 0x43  |
38  +------------------------------+
39  | Block at:        0x55d9efcd5158 |
40  | - - - - - - - - - - |
41  | Prev at:         0x55d9efcd5130 |
42  | Next at:                (nil) |
43  | Availability:            free |
44  | Size:                     384 |
45  +------------------------------+
46  ------ End of memory layout ------
47  Comparing order of memory
48
49  Expected: AAAABBCCCCCCCC
50  Found   : AAAABBCCCCCCCC
51
52  Freeing all allocations
53
```

```
54 Total memory at start: 512
55 Total memory at end  : 512
56
57 Final block count: 1
58 Expected         : 1
59 RESULT: PASSED
```

test_calloc_alloc.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/calloc.c tests/test_calloc_alloc.c
2 >> Running Test (with 60 sec timeout)
3 Expected: 0x557650b65080
4 Found   : 0x557650b65080
5 RESULT: PASSED
```

test_calloc_size_cases.log

```
1  clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
      out/test src/calloc.c tests/test_calloc_size_cases.c
2  >> Running Test (with 60 sec timeout)
3  In this test, the storage has the space for exactly four
      8-byte-allocations + 3 memblocks.
4  Allocating left block L.
5  Checking allocation...
6  Checking order
7   Expected: L#
8   Ok.
9  checking memory variables...
10   ok
11
12 Trying to allocate Block B. It should be too large.
13 Checking order
14  Expected: L#
15  Ok.
16 checking memory variables...
17  OK.
18
19 Trying to allocate Block C with size 8. It should be small
     enough for a new memblock to be created.Checking order
20  Expected: LC#
21  Ok.
22 checking memory variables...
23  OK.
24
25 Trying to allocate Block D with Size 16. It should fit, and
     the remaining space is too small for a new free block
26 thus, the remaining storage should be allocated to
     BChecking order
```

```
27   Expected: LCD
28   Ok.
29 checking memory variables...
30   OK.
31
32
33 Passed test.
34 RESULT: PASSED
```

test__mmu__accessed.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/mmu.c tests/test_mmu_accessed.c
2 >> Running Test (with 60 sec timeout)
3 RESULT: PASSED
```

test__calloc__free__one.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/calloc.c tests/test_calloc_free_one.c
2 >> Running Test (with 60 sec timeout)
3 allocating one block of requested size 16
4 freeing block
5 checking if lsb is unset: LSB is set
6 checking if memory variables are as expected: Memory
     Variables Ok.
7 ### passed Test ###
8 RESULT: PASSED
```

test__mmu__page__to__kachel.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/mmu.c tests/test_mmu_page_to_kachel.c
2 >> Running Test (with 60 sec timeout)
3 RESULT: PASSED
```

test__mmu__modified__111.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/mmu.c tests/test_mmu_modified_111.c
2 >> Running Test (with 60 sec timeout)
3 RESULT: PASSED
```

test__calloc__alloc__one.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/calloc.c tests/test_calloc_alloc_one.c
2 >> Running Test (with 60 sec timeout)
```

```
 3 allocating one block of requested size 14
 4 checking if lsb is set
 5 LSB is set
 6 checking if size got rounded up
 7 size is 16
 8 checking if memory variables are as expected
 9 Memory Variables Ok.
10 ### passed Test ###
11 RESULT: PASSED
```

test_mmu_valid_ptbr.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
      out/test src/mmu.c tests/test_mmu_valid_ptbr.c
2 >> Running Test (with 60 sec timeout)
3 RESULT: PASSED
```

test_mmu_valid_pid.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
      out/test src/mmu.c tests/test_mmu_valid_pid.c
2 >> Running Test (with 60 sec timeout)
3 RESULT: PASSED
```

test_mmu_not_present.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
      out/test src/mmu.c tests/test_mmu_not_present.c
2 >> Running Test (with 60 sec timeout)
3 RESULT: PASSED
```

test_calloc_free_complex.log

```
 1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
      out/test src/calloc.c tests/test_calloc_free_complex.c
 2 >> Running Test (with 60 sec timeout)
 3 This test checks the correct freeing of Elments. The
      storage has space for three 8-byte allocations + 3
      Memblocks.
 4 Creating 3 blocks.
 5 Checking order
 6  Expected: ABC
 7  Ok.
 8 checking memory variables...
 9  ok
10 Freeing B.
11 Checking order
12  Expected: A#C
```

```
13  Ok.
14 checking memory variables...
15  ok
16 Freeing C.
17 Checking order
18  Expected: A#
19  Ok.
20 checking memory variables...
21  ok
22 Freeing A.
23 Checking order
24  Expected: #
25  Ok.
26 checking memory variables...
27  ok
28 RESULT: PASSED
```

test_calloc_last_allocated_usage.log

```
 1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
     out/test src/calloc.c
     tests/test_calloc_last_allocated_usage.c
 2 >> Running Test (with 60 sec timeout)
 3 This test checks the correct usage of last_element. The
     storage has space for three 8-byte allocations + 3
     Memblocks.
 4 Creating 3 blocks.
 5 --- Beginning of memory layout ---
 6 +-----------------------------+
 7 | Block at:        0x55d02ed0d0a8 |
 8 |  -  -  -  -  -  -  -  -  -  -  |
 9 | Prev at:                  (nil) |
10 | Next at:         0x55d02ed0d0c8 |
11 | Availability:            used |
12 | Size:                       8 |
13 | Data (first 8 Bytes):         |
14 |    ASCII : L.L.L.L.L.L.L.L    |
15 |    HEX   : 0x4c 0x4c 0x4c 0x4c  |
16 |            0x4c 0x4c 0x4c 0x4c  |
17 +-----------------------------+
18 | Block at:        0x55d02ed0d0c8 |
19 |  -  -  -  -  -  -  -  -  -  -  |
20 | Prev at:         0x55d02ed0d0a8 |
21 | Next at:         0x55d02ed0d0e8 |
22 | Availability:            used |
23 | Size:                       8 |
24 | Data (first 8 Bytes):         |
25 |    ASCII : M.M.M.M.M.M.M.M    |
26 |    HEX   : 0x4d 0x4d 0x4d 0x4d  |
27 |            0x4d 0x4d 0x4d 0x4d  |
```

```
28 +-------------------------------+
29 | Block at:        0x55d02ed0d0e8 |
30 |  -  -  -  -  -  -  -  -  -  -  |
31 | Prev at:         0x55d02ed0d0c8 |
32 | Next at:                 (nil) |
33 | Availability:            used |
34 | Size:                       8 |
35 | Data (first 8 Bytes):         |
36 |    ASCII : R.R.R.R.R.R.R.R     |
37 |    HEX   : 0x52 0x52 0x52 0x52 |
38 |            0x52 0x52 0x52 0x52 |
39 +-------------------------------+
40 ------ End of memory layout ------
41 Checking order
42  Expected: LMR
43  Ok.
44 Freeing M.
45 Checking order
46  Expected: L#R
47  Ok.
48 Reallocating M.
49 Checking order
50  Expected: LMR
51  Ok.
52 Freeing L.
53 Checking order
54  Expected: #MR
55  Ok.
56 Freeing M.
57 Checking order
58  Expected: #R
59  Ok.
60 Reallocating L. This checks test case
61 Checking order
62  Expected: L#R
63  Ok.
64 RESULT: PASSED
```

test__mmu__offset.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
    out/test src/mmu.c tests/test_mmu_offset.c
2 >> Running Test (with 60 sec timeout)
3 RESULT: PASSED
```

test__calloc__alloc__next__fit.log

```
1 clang -Wno-everything -Wfatal-errors -fcommon -std=c11 -o
    out/test src/calloc.c tests/test_calloc_alloc_next_fit.c
```

```
 2 >> Running Test (with 60 sec timeout)
 3 This test checks the correct implementation of the next fit
      algorithm.
 4  An # in the Test output marks a free block.
 5 Creating 4 blocks - A B C D, each of size 8. Storage has
      exactly the space needed.
 6 --- Beginning of memory layout ---
 7 +-----------------------------+
 8 | Block at:        0x55de71d480a8 |
 9 |  -  -  -  -  -  -  -  -  -  -   |
10 | Prev at:                 (nil) |
11 | Next at:        0x55de71d480c8 |
12 | Availability:            used |
13 | Size:                       8 |
14 | Data (first 8 Bytes):         |
15 |   ASCII : A.A.A.A.A.A.A.A      |
16 |   HEX   : 0x41 0x41 0x41 0x41  |
17 |           0x41 0x41 0x41 0x41  |
18 +-----------------------------+
19 | Block at:        0x55de71d480c8 |
20 |  -  -  -  -  -  -  -  -  -  -   |
21 | Prev at:        0x55de71d480a8 |
22 | Next at:        0x55de71d480e8 |
23 | Availability:            used |
24 | Size:                       8 |
25 | Data (first 8 Bytes):         |
26 |   ASCII : B.B.B.B.B.B.B.B      |
27 |   HEX   : 0x42 0x42 0x42 0x42  |
28 |           0x42 0x42 0x42 0x42  |
29 +-----------------------------+
30 | Block at:        0x55de71d480e8 |
31 |  -  -  -  -  -  -  -  -  -  -   |
32 | Prev at:        0x55de71d480c8 |
33 | Next at:        0x55de71d48108 |
34 | Availability:            used |
35 | Size:                       8 |
36 | Data (first 8 Bytes):         |
37 |   ASCII : C.C.C.C.C.C.C.C      |
38 |   HEX   : 0x43 0x43 0x43 0x43  |
39 |           0x43 0x43 0x43 0x43  |
40 +-----------------------------+
41 | Block at:        0x55de71d48108 |
42 |  -  -  -  -  -  -  -  -  -  -   |
43 | Prev at:        0x55de71d480e8 |
44 | Next at:                 (nil) |
45 | Availability:            used |
46 | Size:                       8 |
47 | Data (first 8 Bytes):         |
48 |   ASCII : D.D.D.D.D.D.D.D      |
49 |   HEX   : 0x44 0x44 0x44 0x44  |
```

```
50 |              0x44 0x44 0x44 0x44  |
51 +-------------------------------+
52 ------ End of memory layout ------
53 Checking order
54  Expected: ABCD
55  Ok.
56 Freeing A,C, and D.
57 Checking order
58  Expected: #B#
59  Ok.
60 Reallocating CD.
61 Checking order
62  Expected: #BCD
63  Ok.
64 Freeing CD.
65 Checking order
66  Expected: #B#
67  Ok.
68 Reallocating C.
69 Checking order
70  Expected: #BC#
71  Ok.
72 Reallocating D.
73 Freeing C.
74 Reallocating A.
75 Checking order
76  Expected: AB#D
77  Ok.
78 RESULT: PASSED
```