```
FREQ:4545
<bb 2>:
global_align.0_1 = global_align;
_2 = (long int) global_align.0_1;
_3 = _2 * 2;
_4 = (long unsigned int) _3;
_5 = _4 + nbytes_18(D);
returnval_20 = malloc (_5);
if (returnval_20 == 0B)
  goto <bb 3>; [30.00%]
else
  goto <bb 4>; [70.00%]

FREQ:3182
<bb 4>:
*errorcode_21(D) = 0;

FREQ:1364
<bb 3>:
*errorcode_21(D) = 1;
goto <bb 5>; [100.00%]

FREQ:4545
<bb 5>:
true_addr_24 = (long unsigned int) returnval_20;
global_align.1_6 = global_align;
if (global_align.1_6 == 0)
  goto <bb 6>; [50.00%]
else
  goto <bb 9>; [50.00%]

FREQ:2273
<bb 9>:
if (global_align.1_6 == 1)
  goto <bb 10>; [34.00%]
else
  goto <bb 19>; [66.00%]

FREQ:1500
<bb 19>:
goto <bb 12>; [100.00%]

FREQ:10000
<bb 12>:
# adj_addr_12 = PHI <true_addr_24(19), adj_addr_26(11)>
_7 = (long unsigned int) global_align.1_6;
_8 = adj_addr_12 % _7;
if (_8 != 0)
  goto <bb 11>; [85.00%]
else
  goto <bb 13>; [15.00%]

FREQ:8500
<bb 11>:
adj_addr_26 = adj_addr_12 + 1;

FREQ:1500
<bb 13>:
# adj_addr_31 = PHI <adj_addr_12(12)>
_9 = global_align.1_6 * 2;
_10 = (long unsigned int) _9;
_11 = adj_addr_12 % _10;
if (_11 == 0)
  goto <bb 14>; [50.00%]
else
  goto <bb 15>; [50.00%]

FREQ:773
<bb 10>:
adj_addr_27 = true_addr_24 + 1;
goto <bb 15>; [100.00%]

FREQ:750
<bb 14>:
adj_addr_25 = _7 + adj_addr_12;

FREQ:2273
<bb 15>:
# adj_addr_13 = PHI <adj_addr_27(10), adj_addr_12(13), adj_addr_25(14)>
returnval_28 = (farvoid *) adj_addr_13;
mem_array_ents.7_35 = mem_array_ents;
if (mem_array_ents.7_35 > 19)
  goto <bb 17>; [54.00%]
else
  goto <bb 16>; [46.00%]

FREQ:2273
<bb 6>:
mem_array_ents.7_33 = mem_array_ents;
if (mem_array_ents.7_33 > 19)
  goto <bb 7>; [50.00%]
else
  goto <bb 8>; [50.00%]

FREQ:1227
<bb 17>:
*errorcode_21(D) = 2;

FREQ:1045
<bb 16>:
mem_array[0][mem_array_ents.7_35] = true_addr_24;
mem_array[1][mem_array_ents.7_35] = adj_addr_13;
_36 = mem_array_ents.7_35 + 1;
mem_array_ents = _36;
goto <bb 18>; [100.00%]

FREQ:1136
<bb 8>:
mem_array[0][mem_array_ents.7_33] = true_addr_24;
mem_array[1][mem_array_ents.7_33] = true_addr_24;
_34 = mem_array_ents.7_33 + 1;
mem_array_ents = _34;
goto <bb 18>; [100.00%]

FREQ:1136
<bb 7>:
*errorcode_21(D) = 2;
goto <bb 18>; [100.00%]

FREQ:4545
<bb 18>:
# _14 = PHI <returnval_20(7), returnval_28(17), returnval_28(16), returnval_20(8)>
return _14;
```

```
FREQ:1444
<bb 2>:
adj_addr_5 = (long unsigned int) mempointer_4(D);
goto <bb 9>; [100.00%]

FREQ:10000
<bb 9>:
# i_12 = PHI <0(2), i_20(8)>
mem_array_ents.13_21 = mem_array_ents;
if (i_12 < mem_array_ents.13_21)
  goto <bb 3>; [92.50%]
else
  goto <bb 10>; [7.50%]

FREQ:9250
<bb 3>:
_13 = mem_array[1][i_12];
if (adj_addr_5 == _13)
  goto <bb 4>; [7.50%]
else
  goto <bb 8>; [92.50%]

FREQ:8556
<bb 8>:
i_20 = i_12 + 1;

FREQ:694
<bb 4>:
# i_2 = PHI <i_12(3)>
_14 = mem_array[0][i_2];
goto <bb 6>; [100.00%]

FREQ:4625
<bb 6>:
# j_17 = PHI <i_12(4), _15(5)>
_15 = j_17 + 1;
if (_15 < mem_array_ents.13_21)
  goto <bb 5>; [85.00%]
else
  goto <bb 7>; [15.00%]

FREQ:750
<bb 10>:
*errorcode_9(D) = 3;

FREQ:694
<bb 7>:
_19 = mem_array_ents.13_21 + -1;
mem_array_ents = _19;
mempointer_7 = (farvoid *) _14;
free (mempointer_7);
*errorcode_9(D) = 0;
goto <bb 11>; [100.00%]

FREQ:3931
<bb 5>:
_16 = mem_array[0][_15];
mem_array[0][j_17] = _16;
_18 = mem_array[1][_15];
mem_array[1][j_17] = _18;

FREQ:1444
<bb 11>:
return;
```

```
FREQ:10000
<bb 2>:
_5 = __builtin_object_size (destination_2(D), 0);
__builtin_memmove (destination_2(D), source_3(D), nbytes_4(D));
return;
```

```
FREQ:10000
<bb 2>:
mem_array_ents = 0;
return;
```

```
FREQ:10000
<bb 2>:
mem_array_ents.7_1 = mem_array_ents;
if (mem_array_ents.7_1 > 19)
  goto <bb 4>; [2.00%]
else
  goto <bb 3>; [98.00%]

FREQ:9800
<bb 3>:
mem_array[0][mem_array_ents.7_1] = true_addr_6(D);
mem_array[1][mem_array_ents.7_1] = adj_addr_8(D);
_2 = mem_array_ents.7_1 + 1;
mem_array_ents = _2;

FREQ:10000
<bb 4>:
# _3 = PHI <-1(2), 0(3)>
return _3;
```

```
FREQ:1444
<bb 2>:
goto <bb 9>; [100.00%]

FREQ:10000
<bb 9>:
# i_9 = PHI <0(2), i_16(8)>
mem_array_ents.13_8 = mem_array_ents;
if (mem_array_ents.13_8 > i_9)
  goto <bb 3>; [92.50%]
else
  goto <bb 10>; [7.50%]

FREQ:9250
<bb 3>:
_1 = mem_array[1][i_9];
if (_1 == adj_addr_15(D))
  goto <bb 4>; [7.50%]
else
  goto <bb 8>; [92.50%]

FREQ:8556
<bb 8>:
i_16 = i_9 + 1;

FREQ:694
<bb 4>:
# i_6 = PHI <i_9(3)>
_2 = mem_array[0][i_6];
*true_addr_17(D) = _2;
goto <bb 6>; [100.00%]

FREQ:4625
<bb 6>:
# j_10 = PHI <i_9(4), _5(5)>
_5 = j_10 + 1;
if (_5 < mem_array_ents.13_8)
  goto <bb 5>; [85.00%]
else
  goto <bb 7>; [15.00%]

FREQ:694
<bb 7>:
_7 = mem_array_ents.13_8 + -1;
mem_array_ents = _7;
goto <bb 10>; [100.00%]

FREQ:3931
<bb 5>:
_3 = mem_array[0][_5];
mem_array[0][j_10] = _3;
_4 = mem_array[1][_5];
mem_array[1][j_10] = _4;

FREQ:1444
<bb 10>:
# _11 = PHI <0(7), -1(9)>
return _11;
```

```
FREQ:10000
<bb 2>:
fhandle_5 = fopen (filename_3(D), "w");
if (fhandle_5 == 0B)
  goto <bb 3>; [26.74%]
else
  goto <bb 4>; [73.26%]

FREQ:2674
<bb 3>:
*errorcode_6(D) = 10;
goto <bb 5>; [100.00%]

FREQ:7326
<bb 4>:
*errorcode_6(D) = 0;

FREQ:10000
<bb 5>:
fclose (fhandle_5);
return;
```

```
FREQ:10000
<bb 2>:
fhandle_5 = fopen (fname_3(D), "w+");
if (fhandle_5 == 0B)
  goto <bb 3>; [26.74%]
else
  goto <bb 4>; [73.26%]

FREQ:2674
<bb 3>:
*errorcode_6(D) = 13;
goto <bb 5>; [100.00%]

FREQ:7326
<bb 4>:
*errorcode_6(D) = 0;

FREQ:10000
<bb 5>:
return fhandle_5;
```

```
FREQ:10000
<bb 2>:
fclose (fhandle_2(D));
*errorcode_4(D) = 0;
return;
```

```
FREQ:10000
<bb 2>:
*errorcode_5(D) = 0;
offset.14_1 = (long int) offset_7(D);
_2 = fseek (fhandle_8(D), offset.14_1, 0);
if (_2 == -1)
  goto <bb 3>; [30.50%]
else
  goto <bb 4>; [69.50%]

FREQ:6950
<bb 4>:
nelems_11 = nbytes_10(D) & 65535;
_15 = __builtin_object_size (buffer_12(D), 0);
if (0 != 0)
  goto <bb 5>; [79.76%]
else
  goto <bb 9>; [20.24%]

FREQ:5543
<bb 5>:
_16 = __builtin_constant_p (nelems_11);
if (_16 == 0)
  goto <bb 7>; [33.00%]
else
  goto <bb 6>; [67.00%]

FREQ:3714
<bb 6>:
if (0 != 0)
  goto <bb 8>; [33.00%]
else
  goto <bb 9>; [67.00%]

FREQ:3895
<bb 9>:
_19 = __fread_alias (buffer_12(D), 1, nelems_11, fhandle_8(D));

FREQ:1226
<bb 8>:
_18 = __fread_chk_warn (buffer_12(D), 18446744073709551615, 1, nelems_11, fhandle_8(D));
goto <bb 10>; [100.00%]

FREQ:1829
<bb 7>:
_17 = __fread_chk (buffer_12(D), 18446744073709551615, 1, nelems_11, fhandle_8(D));
goto <bb 10>; [100.00%]

FREQ:6950
<bb 10>:
# _20 = PHI <_17(7), _18(8), _19(9)>
if (nelems_11 != _20)
  goto <bb 11>; [69.50%]
else
  goto <bb 12>; [30.50%]

FREQ:4830
<bb 11>:
*errorcode_5(D) = 11;

FREQ:3050
<bb 3>:
*errorcode_5(D) = 14;
goto <bb 12>; [100.00%]

FREQ:10000
<bb 12>:
return;
```

```
FREQ:10000
<bb 2>:
*errorcode_5(D) = 0;
offset.15_1 = (long int) offset_7(D);
_2 = fseek (fhandle_8(D), offset.15_1, 0);
if (_2 == -1)
  goto <bb 3>; [47.12%]
else
  goto <bb 4>; [52.88%]

FREQ:5288
<bb 4>:
nelems_11 = nbytes_10(D) & 65535;
writecode_14 = fwrite (buffer_12(D), 1, nelems_11, fhandle_8(D));
if (nelems_11 == writecode_14)
  goto <bb 5>; [37.68%]
else
  goto <bb 6>; [62.32%]

FREQ:4712
<bb 3>:
*errorcode_5(D) = 14;
goto <bb 6>; [100.00%]

FREQ:1993
<bb 5>:
*errorcode_5(D) = 12;

FREQ:10000
<bb 6>:
return;
```

```
FREQ:10000
<bb 2>:
__printf_chk (1, "ERROR CONDITION\nContext: %s\n", errorcontext_2(D));
__printf_chk (1, "Code: %d", errorcode_3(D));
return;
```

```
FREQ:10000
<bb 2>:
exit (1);
```

```
FREQ:10000
<bb 2>:
_1 = clock ();
_4 = (long unsigned int) _1;
return _4;
```

```
FREQ:10000
<bb 2>:
_1 = clock ();
_2 = (long unsigned int) _1;
_6 = _2 - startticks_5(D);
return _6;
```

```
FREQ:10000
<bb 2>:
_2 = tickamount_1(D) / 1000000;
return _2;
```

```
FREQ:10000
<bb 2>:
_1 = (double) tickamount_2(D);
_3 = _1 / 1.0e+6;
return _3;
```