


Valgrind - Memcheck

 Unknown macro: 'html'

Excuse the ads! We need some help to keep our site up.

 Unknown macro: 'html'

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Valgrind - Memcheck

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Example

Sample code

Sample.c

```
#include <stdio.h>

int main(){
    char *p;

    p = (char *) malloc(19);
    p = (char *) malloc(12);
    free(p);
    p = (char *) malloc(16);

    return 0;
}
```

Build

- [Sample](#) .

gcc -o test -g test.c

```
lazenca0x0@ubuntu:~$ gcc -o test -g test.c
test.c: In function 'main':
test.c:8:16: warning: implicit declaration of function 'malloc' [-Wimplicit-function-declaration]
    p = (char *) malloc(19);
               ^
test.c:8:16: warning: incompatible implicit declaration of built-in function 'malloc'
test.c:8:16: note: include '<stdlib.h>' or provide a declaration of 'malloc'
test.c:12:3: warning: implicit declaration of function 'free' [-Wimplicit-function-declaration]
    free(p);
    ^
test.c:12:3: warning: incompatible implicit declaration of built-in function 'free'
test.c:12:3: note: include '<stdlib.h>' or provide a declaration of 'free'
```

Run memcheck

- **valgrind** , **Errors** .

Run valgrind

```
lazenca0x0@ubuntu:~$ valgrind --tool=memcheck --leak-check=yes --show-reachable=yes --num-callers=20 --track-
fds=yes ./test
==54123== Memcheck, a memory error detector
==54123== Copyright (C) 2002-2017, and GNU GPL'd, by Julian Seward et al.
==54123== Using Valgrind-3.13.0 and LibVEX; rerun with -h for copyright info
==54123== Command: ./test
==54123==
==54123==
==54123== FILE DESCRIPTORS: 3 open at exit.
==54123== Open file descriptor 2: /dev/pts/18
==54123==    <inherited from parent>
==54123==
==54123== Open file descriptor 1: /dev/pts/18
==54123==    <inherited from parent>
==54123==
==54123== Open file descriptor 0: /dev/pts/18
==54123==    <inherited from parent>
==54123==
==54123==
==54123== HEAP SUMMARY:
==54123==    in use at exit: 35 bytes in 2 blocks
==54123==    total heap usage: 3 allocs, 1 frees, 47 bytes allocated
==54123==
==54123== 16 bytes in 1 blocks are definitely lost in loss record 1 of 2
==54123==    at 0x4C2DBF6: malloc (vg_replace_malloc.c:299)
==54123==    by 0x40059F: main (test.c:15)
==54123==
==54123== 19 bytes in 1 blocks are definitely lost in loss record 2 of 2
==54123==    at 0x4C2DBF6: malloc (vg_replace_malloc.c:299)
==54123==    by 0x400577: main (test.c:8)
==54123==
==54123== LEAK SUMMARY:
==54123==    definitely lost: 35 bytes in 2 blocks
==54123==    indirectly lost: 0 bytes in 0 blocks
==54123==    possibly lost: 0 bytes in 0 blocks
==54123==    still reachable: 0 bytes in 0 blocks
==54123==    suppressed: 0 bytes in 0 blocks
==54123==
==54123== For counts of detected and suppressed errors, rerun with: -v
==54123== ERROR SUMMARY: 2 errors from 2 contexts (suppressed: 0 from 0)
lazenca0x0@ubuntu:~$
```

Related site

- Memcheck: <http://valgrind.org/docs/manual/mc-manual.html>
- <http://cs.ecs.baylor.edu/~donahoo/tools/valgrind/>
- <http://www.thegeekstuff.com/2011/11/valgrind-memcheck/>



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