

## getchar\_unlocked() – faster input in C/C++ for Competitive Programming

`getchar_unlocked()` is similar to `getchar()` with the exception that it is not thread safe.

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Below is an example code.

```
// A simple C program to demonstrate
// working of getchar_unlocked()
#include <stdio.h>
int main()
{
    // Syntax is same as getchar()
    char c = getchar_unlocked();

    printf("Entered character is %c", c);

    return 0;
}
```

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Input: g

Output: Entered character is g

Following are some important points:

1. Since it is not thread safe, all overheads of mutual exclusion are avoided and it is faster than `getchar()`.
2. Can be especially useful for competitive programming problems with “Warning: Large I/O data, be careful with certain languages (though most should be OK if the algorithm is well designed)”.
3. There is no issue with using `getchar_unlocked()` even in multithreaded environment as long as the thread using it is the only thread accessing file object
4. One more difference with `getchar()` is, it is not a C standard library function, but a POSIX function. It may not work on Windows based compilers.
5. ***It is a known fact that `scanf()` is faster than `cin` and `getchar()` is faster than `scanf()` in general. `getchar_unlocked()` is faster than `getchar()`, hence fastest of all.***



6. Similarly, there are `getc_unlocked()`, `putc_unlocked()`, and `putchar_unlocked()` which are non-thread-safe versions of `getc()`, `putc()` and `putchar()` respectively.

```
// A simple C program to demonstrate
// working of putchar_unlocked()
#include <stdio.h>
int main()
{
    // Syntax is same as getchar()
    char c = getchar_unlocked();

    putchar_unlocked(c);

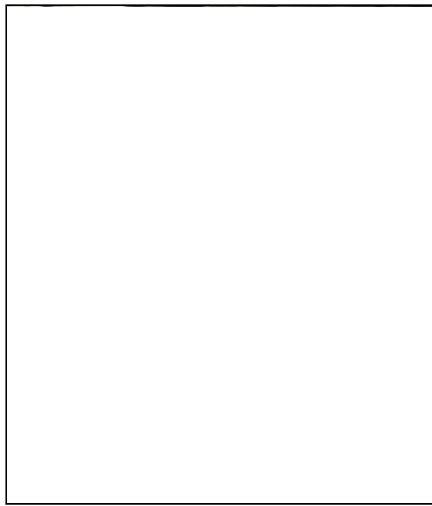
    return 0;
}
```

[Run on IDE](#)

As a reader, you may try solutions given [here](#) with `getchar_unlocked()` and compare performance.

This article is contributed by **Ayush Saluja**. Please write comments if you find anything incorrect or you share more information about the topic discussed above





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