

C Memory Address

Topics : [C](#)

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Every variable in C is stored in a memory location or address, which can be accessed using the & (address-of) operator. Here's an example code snippet that shows how to print the memory address of a variable:

```
#include <stdio.h>

int main() {
    int num = 10;

    printf("The memory address of num is: %p", &num);

    return 0;
}
```

Let's go over this code line by line:

- We first include the standard input/output library `stdio.h`.
- In the `main()` function, we declare an integer variable called `num` and initialize it with the value 10.
- We use the `printf()` function to print the memory address of `num` using the `%p` format specifier. The `&` operator is used to get the address of the variable `num`.
- Finally, we return 0 to indicate successful execution of the program.

When you run this program, it will print the memory address of `num` in hexadecimal format, something like `0x7fff5fbff8bc`.

Note that the memory address of a variable can change each time the program is executed, depending on factors like the operating system, memory allocation scheme, etc. Also, be careful when working with memory addresses as invalid use of memory addresses can lead to program crashes and other errors.