

**what is result? uint32\_t x = 1;**

int32\_t y = -1;  
if (x > y)  
printf("Of course.")  
else  
printf("Something is wrong!");

When the provided C code is executed, the result will be:  
**Something is wrong!**

This outcome is a result of C's rules for type promotion when comparing signed and unsigned integers.[[1]](#fn1)

**Explanation**

In the given code, the variable x is an unsigned 32-bit integer (uint32\_t) with a value of 1. The variable y is a signed 32-bit integer (int32\_t) with a value of -1.[[1]](#fn1)

When the comparison x > y is performed, the C compiler must convert the operands to a common data type. The C standard dictates that when a signed integer and an unsigned integer of the same size are compared, the signed integer is converted to an unsigned integer.[[1]](#fn1)

1. The value of y is -1. In a 32-bit system using two's complement representation, -1 is stored in binary as all ones (11111111 11111111 11111111 11111111).
2. When this binary pattern is interpreted as an *unsigned* 32-bit integer, it represents the largest possible value for that type, which is 4,294,967,295 (UINT\_MAX).[[1]](#fn1)
3. Therefore, the comparison if (x > y) effectively becomes if (1 > 4294967295).
4. This condition evaluates to false.
5. As a result, the else block is executed, printing the string "Something is wrong!".[[2]](#fn2)

⁂

1. <https://www.codeinsideout.com/blog/c-cpp/notes/>

1. <https://www.freecodecamp.org/news/if-statements-in-c/>

1. <https://www.w3schools.com/c/c_conditions.php>

1. <https://www.sololearn.com/en/Discuss/2783790/help-me-understand-the-output-of-this-code-include-stdiohint-main-int-x2int-y5printfdxy>

1. <https://forum.arduino.cc/t/multiple-comparisons-in-an-if-statement/418802>

1. <https://www.coursehero.com/file/p6unm9bo4/3Assunming-integer-is-2-byte-What-will-be-the-output-of-the-program/>

1. <https://www.geeksforgeeks.org/c/c-if-statement/>

1. <https://archive.nptel.ac.in/content/storage2/courses/downloads_new/106106133/Week_1_Questions.pdf>

1. <https://ru.scribd.com/document/413763662/Questions-1>

1. [https://cse.iitkgp.ac.in/~dsamanta/courses/pds/resources/tutorials/Practice-03 Solutions.pdf](https://cse.iitkgp.ac.in/~dsamanta/courses/pds/resources/tutorials/Practice-03%20Solutions.pdf)

1. <https://www.scribd.com/doc/52418508/c>

1. <https://www.scribd.com/document/527525464/345-FAQS-with-Ans>

1. <https://www.scribd.com/document/777700520/C-Technical-upto-Data-types>

1. <https://stackoverflow.com/questions/8222495/how-to-compare-strings-in-an-if-statement>

1. <https://www.cprogramming.com/tutorial/c/lesson2.html>

1. <https://www.geeksforgeeks.org/cpp/decision-making-c-cpp/>

1. <https://www.spsanderson.com/steveondata/posts/2024-11-07/>

1. <https://www.scribd.com/doc/78980758/c-Language-Object-Types>

1. <https://www.reddit.com/r/learnprogramming/comments/mavrvp/not_understanding_the_difference_between_if/>