# C Programming Exercises, Practice, Solution : Variable Type

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## C Variable Type [18 exercises with solution]

1. Write a C program which will invoke the command processor to execute a command. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Expected Output :

Is command processor available?

Command processor available!

Executing command DIR

00c40280-5e27-11e6-bd4f-71e8825f8ea3

01691610-41e1-11e6-901d-35b72ececc72

...........

ff827330-443a-11e6-9820-23e2f60d924e

file.txt

logging\_example.out

test.txt

Returned value is: 0.

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-1.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

2. Write a C program to convert a string to an unsigned long integer. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Test Data and Expected Output :

Input an unsigned number: 25

Output: 25

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-2.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

3. Write a C program to convert a string to a long integer. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Expected Output :

In decimals: 2016, 4235440, -3624422, 5947391.

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-3.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

4. Write a C program to convert a string to a double. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Expected Output :

Output= 4.00

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-4.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

5. Write a C program to generate a random number. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Test Data and Expected Output :

Guess the number (1 to 10): 6

The number is higher

Guess the number (1 to 10): 7

That is correct!

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-5.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

6. Write a C program to sort the elements of an array. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Test Data and Expected Output :

Input the number of elements to be stored in the array :5

Input 6 elements in the array :

element - 0 : 15

element - 1 : 26

element - 2 : 42

element - 3 : 82

element - 4 : 35

After sorting the array are :

15

26

35

42

82

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-6.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

7. Write a C program to integral quotient and remainder of a division. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Test Data and Expected Output :

Input numerator : 2500

Input denominator : 235

quotient = 10, remainder = 150

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-7.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

8. Write a C program to return the absolute value of a long integer. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Test Data and Expected Output :

Input 1st number (positive or negative) : 25

Input 2nd number (positive or negative) : -125

The absolute value of 1st number is : 25

The absolute value of 2nd number is : 125

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-8.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

9. Write a C program to get the environment string. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Expected Output :

The set path is: /usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin

:/bin:/usr/games:/usr/local/games

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-9.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

10. Write a C program to return the quotient and remainder of a division. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Test Data and Expected Output :

Input numerator : 2000

Input denominator : 235

quotient = 8, remainder = 120.

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-10.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

11. Write a C program to allocate a block of memory for an array. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Test Data and Expected Output :

Input the number of elements to be stored in the array :5

Input 5 elements in the array :

element 1 : 25

element 2 : 30

element 3 : 35

element 4 : 20

element 5 : 40

Values entered in the array are :

25 30 35 20 40

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-11.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

12. Write a C program to perform a binary search in an array. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Test Data and Expected Output :

Input the number of elements to be stored in the array :5

Input 5 elements in the array :

element - 1 : 25

element - 2 : 20

element - 3 : 18

element - 4 : 13

element - 5 : 15

Input a value to search : 18

18 is found in the array.

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-12.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

13. Write a C program to convert a string to an integer. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Test Data and Expected Output :

Input a number : 1972

The value Input is 1972.

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-13.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

14. Write a C program to convert a string to a double. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Test Data and Expected Output :

Input a number : 25

The original number is : 25.000000

After division by 2 the number is : 12.500000

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-14.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

15. Write a C program to set a function that will be executed on termination of a program. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Expected Output :

This is the message from main function.

Here is the message returning from newFunctionTwo.

Here is the message returning from newFunctionOne.

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-15.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

16. Write a C program to return the absolute value of an integer. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Test Data and Expected Output :

Input a positive or negative number :-25

The absolute value of the given number is : 25

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-16.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

17. Write a C program to abort the current process. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Expected Output :

File does not exist or error, in opening the file.

timeout: the monitored command dumped core

Aborted

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-17.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)

18. Write a C program to demonstrate the working of keyword long. [Go to the editor](https://www.w3resource.com/c-programming-exercises/variable-type/index.php" \l "editorr)

Expected Output :

The size of int = 4 bytes

The size of long = 8 bytes

The size of long long = 8 bytes

The size of double = 8 bytes

The size of long double = 16 byte

[Click me to see the solution](https://www.w3resource.com/c-programming-exercises/variable-type/c-variable-type-exercises-18.php" \t "C:\\Users\\ARBAB\\AppData\\Local\\Temp\\_blank)