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Hash Function for  
String data in C#

Socket Programming in  
C#

C# | Copying the entire  
ArrayList to 1-D Array  
starting at the specified  
index

C# |  
Char.GetHashCode()  
Method with Examples







## C# Program to print all permutations of a given string

A permutation, also called an "arrangement number" or "order," is a rearrangement of the elements of an ordered list  $S$  into a one-to-one correspondence with  $S$  itself. A string of length  $n$  has  $n!$  permutation.

Source: Mathworld(<http://mathworld.wolfram.com/Permutation.html>)

Below are the permutations of string ABC.

ABC ACB BAC BCA CBA CAB

**Recommended: Please solve it on “PRACTICE” first, before moving on to the solution.**

## C#

```
// C# program to print all
// permutations of a given string.
using System;

class GFG {
    /**
     * permutation function
     * @param str string to
     *   calculate permutation for
     * @param l starting index
     * @param r end index
     */
    private static void permute(String str,
                                int l, int r)
    {
        if (l == r)
            Console.WriteLine(str);
        else {
            for (int i = l; i <= r; i++) {
                str = swap(str, l, i);
                permute(str, l + 1, r);
                str = swap(str, l, i);
            }
        }
    }

    /**
     * Swap Characters at position
     * @param a string value
     */
}
```





```
* @param i position 1
* @param j position 2
* @return swapped string
*/
public static String swap(String a,
                           int i, int j)
{
    char temp;
    char[] charArray = a.ToCharArray();
    temp = charArray[i];
    charArray[i] = charArray[j];
    charArray[j] = temp;
    string s = new string(charArray);
    return s;
}

// Driver Code
public static void Main()
{
    String str = "ABC";
    int n = str.Length;
    permute(str, 0, n - 1);
}

// This code is contributed by mits
```

### Output:

ABC  
ACB  
BAC  
BCA  
CBA  
CAB



Please refer complete article on [Write a program to print all permutations of a given string](https://www.geeksforgeeks.org/c-program-to-print-all-permutations-of-a-given-string-2/) for more details!



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