# Personal notes and tips

# for

## C# fundamentals

1. **Arrays**

* Explanation and code examples:
* Reading multiple strings from 1 line of console:

string values = Console.ReadLine();//reads the inputs

string[] selectedValues = values.Split();//splits them by space into separate strings ! you can split by , or what ever by changing content .Split(",")

Or shorter:  
string[] values = Console.ReadLine().Split();//reads the inputs and splits them by space into separate strings can use .Join for opposite “.Join(“ ”, values)”

* Reading multiple data types from many lines:  
   int n = int.Parse(Console.ReadLine());//Asking for the lenght of the array

string[] names = new string[n];//Creating an array from the data type we want

for (int i = 0; i < n; i++)//Creating a for loop to go around the array and save data in it

{

names[i] = Console.ReadLine();//Asking for input for each box of the array

}

* + Converting from string to int/double if numbers in it:

string[] selectedValues = new string[] {"1","2","3","4" };//Creating an array of strings with numbers in it

double[] toArray = new double[selectedValues.Length];//Creating new array of double/int thats is same size as the string array

for (int i = 0; i < selectedValues.Length; i++)//Creating a for loop to go around the array

{

toArray[i] = double.Parse(selectedValues[i]);//Read each box of the string array as number and save it to same position box in double/int array

}

Shorter way to read strings from 1 line and convert it to int/double if numbers in it:

Need to call function

“using System.Linq”

double[] numbers = Console.ReadLine().Split().Select(double.Parse).ToArray();//Creating a double/int array, asking for string inputs, splitting the inputs to elements of an array, select and parce it to int/double and save them to the current int/double array

* Reverce and array:

string[] arrayToReverce = Console.ReadLine().Split();//Reading input of strings and create an array

for (int i = 0; i < arrayToReverce.Length; i++)//Creating a for loop to reach each element of the array (if we want rach to half of the elements can do "arrayToReverce.Lenght/2")

{

Console.WriteLine(arrayToReverce[arrayToReverce.Length - i- 1]);//Reverce the array (print it from back to front)

}

* Printing/Accessing every each element in an Array:

int[] array = new int[10];//creating an array

for (int i = 0; i < array.Length; i++)//Making for loop to give values to each element of the array

{

array[i] = (i + 1) \* 2;//giving whatever value of each element

}

foreach (var eachIndex in array)//making for each loop to print or access each elements value also this will access the elements after they all have value but not when you give value to each

{

Console.WriteLine(eachIndex);//printing each element in the array(can do math but will apply for all elements cant filter!)

}

* Rotating an array:

string[] array = Console.ReadLine().Split();//Creating an array

int rotations = int.Parse(Console.ReadLine());//Asking for how many rotations we want

for (int i = 0; i < rotations; i++)//Making a for loop until the chosed rotations

{

string firstIndex = array[0];//Saving current first index in the array

for (int j = 0; j < array.Length-1; j++)//Making a for loop until the lengh of the array - 1(because we are moving 1 index ahead and to avoid error)

{

array[j] = array[j + 1];//save each index with the next index value

}

array[array.Length - 1] = firstIndex;//Replase the last index value with the first index value that we saved earlier

}

foreach (var item in array)//Make a foreach loop to access each index in the array

{

Console.Write($"{item} ");//print each index as finish rotated product

}