

Arrays

What's an array?

An Array is a place where you can store many pieces of data at once.

Index:	0	1	2	3	4	5
Content	6	50000	1212			

How do I use an array?

- To get to any element in an array, you have to provide an index (integer) to that spot.
- In C, arrays are zero-indexed.
 - The index *****STARTS AT ZERO*****, not one.
 - Never try and index outside of the array!
 - Negative numbers are automatically out-of-bounds.
- After you index an element in an array, you can just use it like any other variable.
 - Assigning a number into the first spot in an array:
`myArr[0] = num;`
 - Assigning a variable the value in the second location my array:
`num = myArr[1];`
 - Printing the fourth element in my array:
`printf("%d\n", myArr[3]);`
- Declaring an array:
`<type> <variable name>[size of array]`
`int myInts[5];`
`char characters[10];`

Questions

1. I declared an array like this: `int myInts[5];`
How can I access the last element in this array? (Write a small statement.)
2. What could you use an array of chars for?
 1. What's a "string"? (You can ask the internet.)
3. I said earlier that once you index an array, you can use it just like any other variable. So, how would you use the first element in an array inside of a `scanf`? (Assume it is an int array).
4. Write a loop to print every integer in an array called "myInts".

Program

I want you to write me a program that takes in some numbers from the user and then print them all back out after the user finishes entering them.

Follow these specs:

1. Start the amount of numbers at 5, but you **must** use a constant so it can be changed quickly.
2. You must use for loops.

Sample Runs (Input is in **bold**)

```
Please enter some numbers: 1 2 3 4 5
You entered:
1
2
3
4
5
```

Handin

Email me your answers to the questions for both parts and the source code for your program. No need to attach it, just paste it directly into the email. If I don't respond to your email than you got it right!