Array and Function

Just like regular variables, array can be passed as argument into functions

When passing array into functions, Consider:
- Passing the entire array?
Or
- Passing only one data from the array?

Function CAN’T return an entire array
DON’T do the following:

```c
int[ ] getInput(){
    int grades[5];
    return grades;
}
```
Array – Pass by Reference

The entire array is always pass by reference. There’s NO way to pass an array by value.

A single data from the array, just like regular variables, always pass by value. May pass by reference by using &

Ex:

```cpp
void updateLastEntry(string a[], int cap){
    a[cap - 1] = “zero”;
}
void updateString(string &st){
    st = “three”;
}
int main(){
    string values[3] = {“one”, “two”, “four”};
    updateLastEntry(values, 3);
    updateString(values[2]);
    return 0;
}
```
Function 1

//Write function find, that takes an int array a, //it’s capacity c, and a value v //It returns the index of first occurrence of v in //the array, return -1 when v not found.

int find(int a[], int c, int v){
    //go through all numbers in the array a
    for (int i = 0; i < c; i++){
        if (a[i] == v)
            return i;
    }
    return -1;
}
Pass 2D Array

The entire array is always pass by reference.

```c
void print2D(int a[][2], int rcap, int ccap);
void printInt(int x);

int main()
{
    int values[3][2] = {1,2,3,4,5,6};
    print2D(values, 3, 2);
    printInt(values[2][0]);
    return 0;
}
```