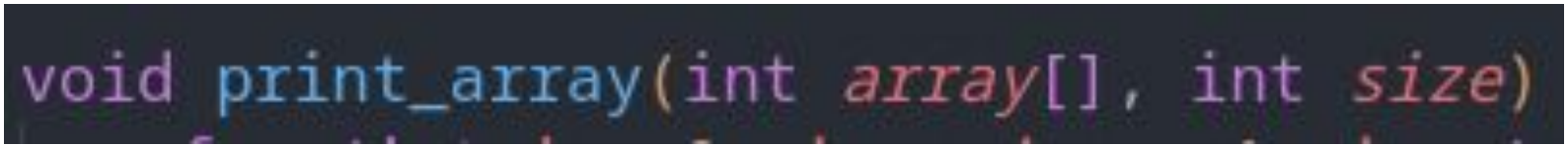
Week 5 tutorial

- 1d array
- 2d array

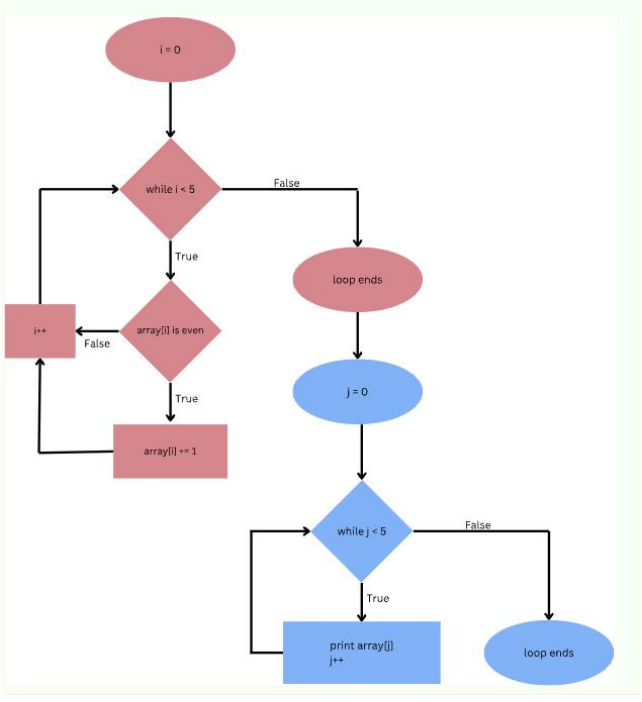
What are these?

```c
// integer array
int array[3] = {1, 2, 3};
printf("the size of array is %d\n", (int)sizeof(array));
// init an array with no elements, just size
int array1[3];
printf("the size of array1 is %d\n", (int)sizeof(array1));

int array2[] = {1, 2, 3};

double list[3] = {1.0, 2.0, 3.0};
printf("the size of list is %d\n", (int)sizeof(list));

char collections[3] = {'a', 'b', 'c'};
printf("the size of collections is %d\n", (int)sizeof(collections));
```

How to pass an array to a function



Flowchart of changing all even numbers to odd in int array



Your turn

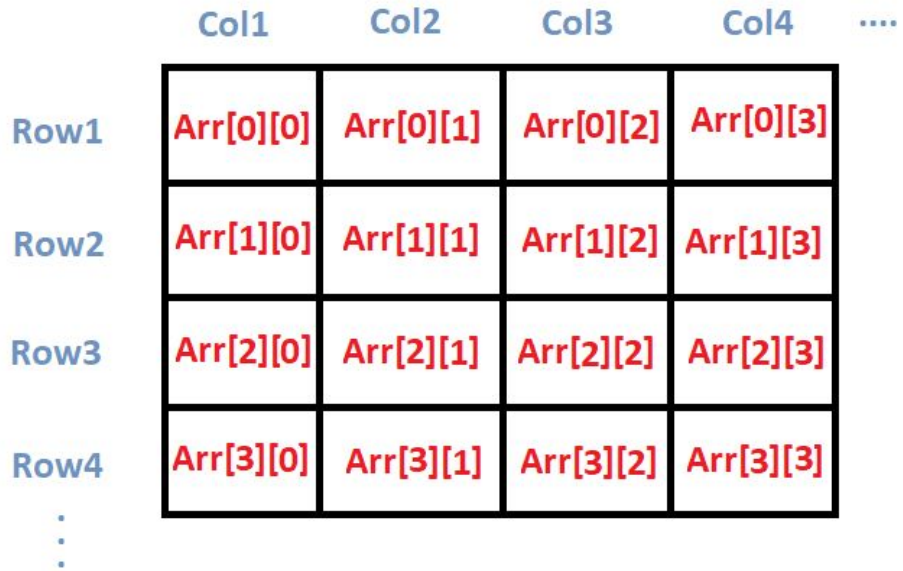
Copy Array

- Create an array of doubles with 3 elements, each with a non-zero value.
- Create another array of doubles with 10 elements where every element initialised to `0.0` .
- Create a while loop that loops through every element of the first array.
- Copy the elements of the first array into the second array (leave 0's at the end)
- Create a while loop that prints out all the elements of the second array.

Largest Character

- Create a character array with exactly 8 elements.
- Create a character variable called `largest_character` , equal to the first character of the array.
- Create a while loop to loop through the character array.
- Create an if statement to check if the current character has a higher ascii value than "largest_character"
- Print out the largest character you've found.

What is 2d array



Source: Digital Ocean