# Module [201]

# C Arrays

## Module Overview

This module discusses how arrays are declared, initialized and used in the C language. We will then explore how arrays interact with the previously introduced elements of the C language (control structures, functions, stack...).

# Learning Outcomes

By the end of this module, you will gain the following knowledge:

## Programming Concepts

- Array data structure; continuous aggregated variables
- Constants vs. variables
- Symbolic constants and pre-compiler

## Designing Programs

- Iterative program designs as applied to arrays
- Elementary Sorting Algorithms
- Elementary Searching Algorithms

## Implementing Programs (in C)

- Declaring, initializing arrays in C
- Access elements of an array
- Multiple subscripts arrays

## Troubleshooting

- Arrays as by-reference parameters
- Memory layout of multiple subscripts arrays

# What do you have to do in this module?

You are expected to proceed through this module by following the activities in the following pages in the order they appear. The syllabus provided you with information about the purpose of each type of activity as well as how they can be best tackled. Your instructor will also provide you with more detailed information about the deadline of each task by email / announcements / ...

## Reading / Watching Assignment

The following material will have to be read (textbook chapters) or watched (screencast videos) prior to our next class meeting;

* Chapter #6: C Arrays

## Apprenticeship Exercises

Apprenticeship Exercises need to be worked on in parallel to the above. If you have questions about them, use the peer learning forums. Questions posted before the questions deadline will count toward your online participation, others won't. Make sure you do not simply watch the solutions videos instead of working on developing your programming skills. Also make sure you do watch these videos after you are done to ensure you are ok with their contents.