

drill-1.cpp – the first part of the drill exercise from Chapter 18

1. Define a global **int** array **ga** of ten **ints** initialized to 1, 2, 4, 8, 16, etc.
2. Define a function **f0** taking an **int** array argument and an **int** argument indicating the number of elements in the array.
3. In **f0**:
 - a. Define a local **int** array **la** of ten **ints**.
 - b. Copy the values from **ga** into **la**.
 - c. Print out the elements of **la**.
 - d. Define a pointer **p** to **int** and initialize it with an array allocated on the free store with the same number of elements as the argument array.
 - e. Copy the values from the argument array into the free-store array.
 - f. Print out the elements of the free-store array.
 - g. Deallocate the free-store array.
4. In **main()**:
 - a. Call **f0** with **ga** as its argument.
 - b. Define an array **aa** with ten elements, and initialize it with the first ten factorial values (1, 2*1, 3*2*1, 4*3*2*1, etc.).
 - c. Call **f0** with **aa** as its argument.

drill-2.cpp – the second part of the drill exercise from Chapter 18

Standard library **vector** drill:

1. Define a global **vector<int>** **gv**; initialize it with ten **ints**, 1, 2, 4, 8, 16, etc.
2. Define a function **f0** taking a **vector<int>** argument.
3. In **f0**:
 - a. Define a local **vector<int>** **lv** with the same number of elements as the argument **vector**.
 - b. Copy the values from **gv** into **lv**.
 - c. Print out the elements of **lv**.
 - d. Define a local **vector<int>** **lv2**; initialize it to be a copy of the argument **vector**.
 - e. Print out the elements of **lv2**.
4. In **main()**:
 - a. Call **f0** with **gv** as its argument.
 - b. Define a **vector<int>** **vv**, and initialize it with the first ten factorial values (1, 2*1, 3*2*1, 4*3*2*1, etc.).
 - c. Call **f0** with **vv** as its argument.

Exercises

1. Write a function, `char* strdup(const char*)`, that copies a C-style string into memory it allocates on the free store. Do not use any standard library functions. Do not use subscripting; use the dereference operator `*` instead.
2. Write a function, `char* findx(const char* s, const char* x)`, that finds the first occurrence of the C-style string `x` in `s`. Do not use any standard library functions. Do not use subscripting; use the dereference operator `*` instead.