

This lab requires you to practice object-oriented programming and using arrays of objects in C++. Please write a C++ program with the following:

1. Class Employee. Create a class used to create Employee objects.
 - a. Data fields: Employee ID, Social Security Number, Last Name, First Name, Years of Service, pay rate and hours worked.
 - b. Methods: Constructors, accessors and mutators (getters and setters), print employee payroll info
2. Main method. Write a “driver” for your program.
 - a. Create an array of 10 employees.
 - i. The array should be declared in main, i.e Employee empArray[10];
 - ii. Parameterized constructors should be called to create Employee objects in each element of the array.
 - b. Make function calls and method calls to do the following:
 - i. Change employee info (SSN should be immutable.)
 - ii. Print a list of employees sorted alphabetically by last name. You can implement a scheme to always maintain your array in sorted order (find the correct position and shift as needed when constructing employee objects) OR by implementing a sorting algorithm such as BubbleSort.
 - iii. Print a weekly payroll report, assuming a tax rate of 10% for everyone. The payroll report should list all employees ordered by last name, their pay rate, hours worked, gross pay, tax amount and net pay.
 - iv. Calculate the mean and median years of service for all employees.

Notes:

Part of the purpose of the program is object-oriented design. For example, some of the functions will be stand-alone, while others will be defined as members of the Employee class. Determine which is most appropriate.

Data fields (attributes) should be declared as private. Public accessors and mutators can see and modify data fields in objects, as appropriate.

Assume all employees are current, and you won't have any new hires, retirements or resignations.