

Systems Programming Lab #2 - C Programming Basics

1. Goal

The primary goal of this lab is to expand and strengthen the skills acquired in Lab #1.

2. Lab Description

For this lab, you will expand the functionality of the employee database program you developed in Lab #1.

Extra Challenge

Add the following menu option(s) **after** the QUIT option. Do not change the numeric values for the five required options implemented in Lab #1:

- Remove an employee
- Update an employee's information
- Print the M employees with the highest salaries
- Find all employees with matching last name

Additionally, you might modify your program to accept an input file that is NOT guaranteed to be in sorted order by employee ID, i.e., your program will have to do the sorting at start up.

The remove option should prompt the user to enter an employee ID number, search for that employee in the DB and if found ask the user if s/he really wants to remove. If so, the employee record should be removed from the array. Make sure to leave no holes in the array (i.e. if there are 10 employees, their info should be in array buckets 0-9).

The update option can be used to change any field of an employee. Your program should prompt the user to enter an employee ID to first find the matching employee whose data you want to change. The user should have the option of changing any or all fields.

For the print highest salaries option your program should prompt the user to enter a value for M (e.g. 5), and then print out the employee information for the M (5) employees with the highest salary. Your solution should require only one pass through the employee DB. And, remember it is important that the Employee database remain sorted by employee ID after this menu option is chosen.

For the find all with last name, your program should prompt the user to enter a value for the last name (e.g. Smith) and then return information about every employee with a matching last name. The matching should be case insensitive.

5. Submit your work

Here is what you need to deliver on the Blackboard:

- A link to your git repository such that we can clone it, build an executable and test it.

NOTE: please make sure your repository contains a README file that explains how to build an executable and execute it.