CS2400 Lab 12 (Structures)
100 Points

Objectives:

Work with structures, vector of structures, files, sorting, and formatting.

A company keeps its employee records in a file. Each line in the file includes a single employee record (id, first name, last name, & salary). Write a C++ program that prints a report of employee data. You are asked to process the data in the file by storing the records in a *vector* of structures. Your program must print the following report.

- All employee records sorted by last name.
- Find and print the total payroll.

Start by creating a directory called **`Lab12`** inside your **`2400/Labs`** directory.

Hints:

- Write a function to load the vector of structures (make sure the name is in the right format).
- Write a function to sort the vector by last name. This function can be the selection sort function given in the notes. What do you compare? What do you swap?
- Write a function to print the report. Consider using *setw*.
- Write a function to calculate and return the total payroll.

Sample input:

```
1000 George Washington 10000
2000 John Adams 15000
1212 Thomas Jefferson 34000
1313 Abraham Lincoln 45000
1515 Jimmy Carter 78000
1717 George Bush 80000
```

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Sample output:

```
Sorted by name
ID      Name                  Salary
-------------------------------------
2000    John Adams            $15000.00
1717    George Bush           $80000.00
1515    Jimmy Carter          $78000.00
1212    Thomas Jefferson      $34000.00
1313    Abraham Lincoln       $45000.00
1000    George Washington     $10000.00

Total Payroll: $262000.00
```

Grading:

- 10 points, load the vector function
- 30 points, sort by name function
- 20 points, total payroll function
- 20 points, output is displayed as indicated
- 20 points, documentations and style