

Background

There are many problems in programming which involve collections of objects which are very similar but differ in their containing ability. For example, XML has elements which are standalone and others which may contain child elements. Another common case is that of an employee hierarchy. All people in a company are employees, yet some are managers and so, in a sense, contain collections of other employees.

Problem Statement

For the following office hierarchy, provide concrete implementations of Manager and Employee. Write a test program which does two things:

- Print out an ASCII employee tree (any format you want)
- Print out the total salary requirements for the entire company.

Extra Credit: Sort employees alphabetically (hint: there is an easy way to do this)

Mega Extra Credit: Build unit tests for the code

SuperMega Extra Credit: Create the hierarchy by reading in from a properties file or json/yaml file

Please use copious comments and document fully all your assumptions and reasoning. It's better to have a clear, documented approach that doesn't compile than to have something that works but is hacked up and undocumented.

Sample output

```
Jeff
Employees of: Jeff
Dave
Employees of: Dave
    Andy
        Dan
        Jason
        Rick
        Suzanne
```

Total salary: 275000