Coding Challenge

Problem Statement

Create a small application that can report data about an organization based based on the number and types of employees that are in it. Each employee will have a job function and a monthly cost based on that function.

Specific Requirements

- Developers warrant an allocation of $2000 each.
- QA Testers warrant an allocation of $1000 each.
- Managers warrant an allocation of $600 each.
- Managers can have QA Testers, Developers, and other managers report to them.
- Departments may have one or more managers at the top level.
- Users of this application should be able to:
    - Determine the monthly expense allocation warranted a manager who has various employee types reporting to him/her at least two levels deep (Manager -> Manager -> Developer). The level of depth of the hierarchy should be flexible ideally.
    - Determine the monthly expense allocation warranted a department
    - List any managers who have no people reporting to them

Example Scenario

- For the given hierarchy:
    - Manager A
        - Manager B
            - Developer
            - QA Tester
    - Manager C
        - Manager D
    - Manager E
        - Developer
- Manager A's allocation should be: $4200
- Manager B's allocation should be $3600
- Manager C's allocation should be $1200
- Manager D's allocation should be $600
- Manager E's allocation should be $2600
- The Department's allocation should be: $8000
- Manager D has no one reporting to them

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Project Details & Constraints

- No user interface is necessary to prove your project solution works. You can prove it works with Unit tests following whatever best-practices you deem appropriate.
- The project should be zipped and emailed upon completion.
- You may use any design patterns and frameworks you deem necessary to accomplish this task.
- The reviewer must be able to run the submission. This may require a build tool be installed, but should not require any infrastructure such as a web server or database.