

Lab Activity 8

Software Company Scenario

A software house employs programmers each of whom has an expertise in a particular programming language, e.g. Cobol, C++ or Java. All programmers are paid a basic monthly salary of around 1000 pounds per month. However, it may vary from programmer to programmer. As they are in demand a 10% enhancement of the basic salary is paid to each programmer that specializes in Java. However, programmers may change their specialist language and their salary enhancement should change accordingly. For example, after suitable training, a Cobol programmer could become a Java programmer.

When a new programmer joins the staff a more experienced programmer is assigned to him as a mentor. Both must specialize in the same programming language. The basic idea behind this practice is that the new recruit (the mentee) will benefit from the experience of the mentor. As this is extra work for the mentor he is awarded 5% of current salary enhancement for every mentee under his supervision. When a programmer no longer needs a mentor the mentor's salary is changed accordingly. For administrative purposes each employee has a name and a unique payroll number.

You are required to develop software that supports the administration of the company. As a minimum it should produce a detailed report on each programmer and a total monthly salary bill for the company.

The report should show for each programmer:

- his payroll number and name
- the specialist programming language and current monthly salary
- together with:
- details of any programmers that he is mentoring or is mentored by.
- Think of an intelligent implementation of any data structure (Stack/ QUEUE)