

A payroll software simulation

Write a program that simulates a payroll for a company. You should be able to deal with different types of salaries (e.g. director, manager, etc) with different characteristics (e.g. contributions, seniority, pension plans) and have different capabilities (e.g. monthly payslip, P45, P60) etc.

Level 1 – F: Fail Includes **screen output** and **keyboard input** and **basic classes**. There are java source files for at least three major classes in the program. Good source comments and code indentation is expected for all implemented parts of the code

Example: The program reads and prints the names of employees and their basic salary characteristics.

Level 2 – E: Borderline Fail Includes **methods** and **variables** for at least three major classes, and all constructions above. At least 3 major methods fully implemented and working for each class

Example: As above, but also the notion of the adding and editing details employees is shown.

Level 3 – D: Bare Pass At least three major program classes will be implemented, with **methods working and well designed**, and all constructs above Use of **inheritance** with at least one superclass and three subclasses Class, method and variable naming will be clear and consistent

Example: As above, but also there is a basic simulation of the payroll system, though most details, commentary etc. may be very simple

Level 4 – C: Pass Polymorphism should be used in at least three subclasses, and all constructions above **Exception handling** is used to catch and handle at least three different types of exceptions At least four major program classes will be implemented, with methods working and well designed, Comments are clear and applied to class and method level consistently

Example: As above, but the simulation is more natural, there is a running commentary of the system with major events reported.

Level 5 – B: Satisfactory Use of **Vectors** in all parts of the program, and all constructions above. Exception handling is carried out appropriately in all parts of the program Inheritance is correctly applied to all parts of the program.

Example: As above, but all types of accounts and functionality will now be included in the simulation, e.g. P45, P60. The simulation is now mostly ruled by a basic **GUI**.

Level 6 – A: Merit Includes **file input and/or output**, and all constructions above The simulation (including player movement) will be displayed on the GUI Polymorphism will be fully implemented in all parts of the program

Example: As above, with a full GUI now controlling all aspects of the simulation, displaying different kind of salary slips ; data should be read from files.

Level 7 – A+: Distinction Includes everything required for an A grade but also **something special** (using other more advanced constructs or algorithms, or something you just read up on yourself). Make it a program someone would really want to use!

Example: ..