

Report: Salaries of a Company – Java Implementation

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Program Overview

The goal of this program is to manage the salaries of a company's workers.

Class Structure

- **Worker class:**

Represents a single worker with three attributes: name, base salary, and compensation. It includes methods to calculate the total salary for that worker and to print their details.

- **Payroll class:**

Manages a list of workers. It provides methods to calculate the global total salary, apply a global tax rate, and print a payroll summary that includes both individual and company-level information.

- **Main class:**

Serves as the entry point of the program. It creates example workers, stores them in a list, initializes a Payroll object with a given tax rate, and then prints the payroll summary.

Data Structure Choice

The program stores workers in an `ArrayList`, which is a dynamic data structure. This means we do not need to reserve exactly 100 slots in advance. The list grows automatically as new workers are added.

Using an **`ArrayList`** is efficient when we need quick access and iteration through workers, which is the main requirement of this program.

A `LinkedList` would only be more suitable if we needed to frequently insert or remove workers in the middle of the list, which is not the case here.

Extensibility

The design makes it easy to adapt to future changes. For example, if the calculation of total salary changes (e.g., new tax rules or additional bonuses), modifications can be made in the `Payroll` or `Worker` classes without affecting the rest of the program.