

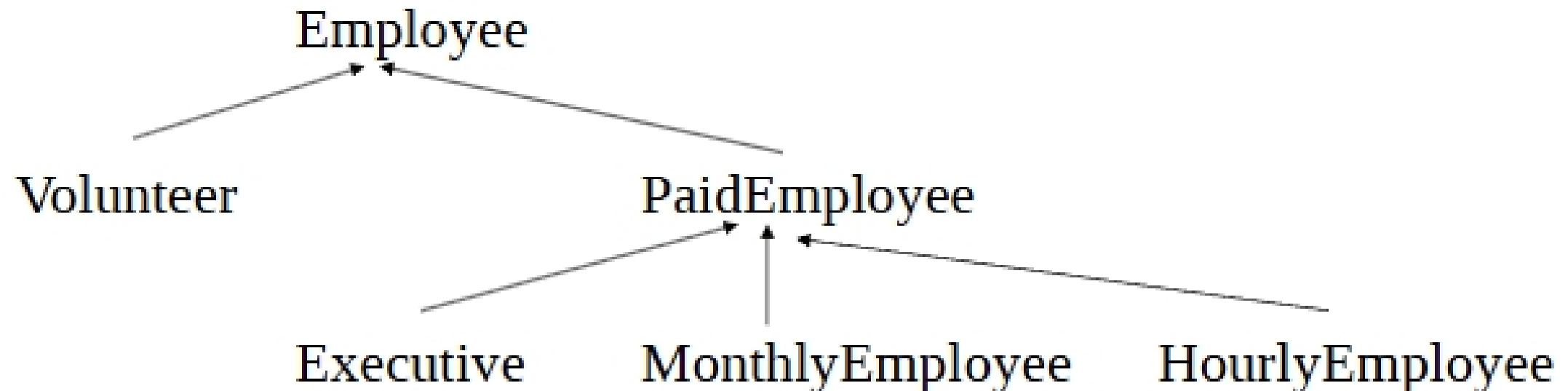
# Case Study - Employee

- In this case study, we will design a class hierarchy for the employees of a firm using inheritance.
- In this design, we will see how to create classes and how to set up inheritance relations among these classes.
- We will use abstract classes.
- We will use polymorphic references, and polymorphic method invocation.

# Case Study – Problem Definition

- A firm has employees.
- An employee can be a volunteer or a paid employee.
- Each employee has a name and an address.
- We should be able to get a string representation of an employee.
- Each employee should be associated with an earning method to evaluate his/her monthly earnings (whether 0 or not, this method must be available).
- A volunteer is not paid (his/her earnings is zero).
- A paid employee has to have a social security number.
- A paid employee can be an executive, a monthly-employee, or a hourly-employee.
- A monthly-employee has a monthly salary.
- An executive has a monthly salary and a bonus for that month.
- A hourly-employee earnings depends on how many hours he/she worked on that month (there is a wage per hour for him/her).

# A Class Hierarchy



- The inheritance relations among classes.
- Now let us look at the details of each class.