1. Download **VisitorPattern.java** from Blackboard under Content/Week12.

2. Your task is to implement a different scenario using the same logic in VisitorPattern.java. You can modify the lecture sample implementation. This time the scenario is based on **Companies** instead of **Employees**. Additionally, the sectors that the companies operate in will be used instead of employee types (e.g. "HomeImprovement" instead of "Director"). The three sectors that the companies operate in are **HomeImprovement, Electronics** and **Logistics.** Each company will have four attributes: **String name**, **Double yearlyIncome** (between 100K and 900K), **Integer noOfBranches** (between 1 and 100) and **Double tax**. **tax** is initialized to 0. However, it will be modified later by a visitor.

   Do not forget to add proper set/get methods.

3. We have 2 different calculations. First one is to calculate the amount of tax which will be paid to the government. Second one is to calculate the average net income for each branch of the company.

   Average net income per branch is calculated by dividing yearly net income of the company by the number of branches. Yearly net income of a company is computed by subtracting the employee wages and taxes from the yearly income.

	Employee wages	**Tax percent**
HomeImprovement	%20 of yearly income	%18 of yearly income
Electronics	%10 of yearly income	%36 of yearly income
Logistics	%25 of yearly income	%8 of yearly income

4. Your first Visitor is **TaxVisitor**. It will calculate the tax due and sets the "**tax"** attribute of the company.

   Second Visitor is **IncomePerBranchVisitor**. It will calculate average net income per branch as described in 3.

5. Test your new code. The **TaxVisitor** should visit first to set taxes.

6. Adding new ConcreteElement classes is hard in Visitor Pattern. Each new ConcreteElement gives rise to a new abstract operation on Visitor and a corresponding implementation in every ConcreteVisitor class. To prove this, add a new company type: **MobilePhone**. What other changes that you have to make so that your visitors are going to work correctly? (Mobile Phone Employee wages=%22 and Tax percent=%42)