

Task 4: SoftwareDevelopmentCompany

General Introduction

In the context of the provided task, we are tasked with creating a software development company representation using Java programming language. This includes defining an interface `LegalEntity` that outlines methods for retrieving the address and VAT number, and implementing this interface in a class `SoftwareDevelopmentCompany`.

Description of Each Class

1. LegalEntity Interface

Functionality:

The `LegalEntity` interface defines two methods:

- `getAddress()`: Returns the address of a legal entity.
- `getVatNumber()`: Returns the VAT (Value Added Tax) number of a legal entity.

Goal:

The goal of this interface is to ensure that any class implementing it must provide concrete implementations for these methods. This allows for standardized access to address and VAT number information across different types of legal entities within a software system.

2. SoftwareDevelopmentCompany Class

Functionality:

The `SoftwareDevelopmentCompany` class implements the `LegalEntity` interface and represents a specific type of legal entity—a software development company.

Instance Variables:

`address`: Stores the address of the software development company.

`vatNumber`: Stores the VAT number of the company.

Constructor:

`SoftwareDevelopmentCompany(String address, String vatNumber)`: Initializes the instance variables `address` and `vatNumber` when an object of this class is instantiated. This constructor allows for creating instances of the `SoftwareDevelopmentCompany` class with specific address and VAT number values.

Implemented Methods:

`getAddress()`: Overrides the method from the `LegalEntity` interface to return the stored address of the company.

`getVatNumber()`: Overrides the method from the `LegalEntity` interface to return the stored VAT number of the company.

Goal:

The goal of the `SoftwareDevelopmentCompany` class is to encapsulate the details specific to a software development company, such as its address and VAT number, and provide methods (`getAddress()` and `getVatNumber()`) to access this information. By implementing the `LegalEntity` interface, it ensures adherence to a standard structure for legal entities within the software system.

Conclusion

In conclusion, the `LegalEntity` interface and the `SoftwareDevelopmentCompany` class work together to model and represent a software development company within a Java-based software system. The interface establishes a contract for accessing address and VAT number information, while the class provides concrete implementations and encapsulation of these details specific to a software development company. This approach supports modularity, extensibility, and maintainability of the software system by promoting standardized access to essential entity information.