

## **TDD Example (Backend)**

### **Overview**

You are a developer with an insurance company and has been assigned to develop a backend API using Spring Boot and Java 8 and above. This system is about managing a list of commercial companies buying work safety insurance for their workers as mandated by the authority.

### **User Story 1 – Create new client**

As an insurance company admin, I can create new clients and their corresponding workers and their premium.

Validation rules:

- Company must have at least one worker.
- The premium for each worker must be greater zero.
- Company ID and Worker ID must be unique.
- Same worker cannot be in more than one companies.

### **User Story 2 – Add new worker and premium to a company**

As an insurance company admin, I can add a worker to an existing client and its premium.

Validation rules:

- Company ID cannot be empty
- The premium for each worker must be greater than zero.
- Company ID and Worker ID cannot be modified.
- Return error if Company ID is not found in the system

### **User Story 3 – Remove worker from an existing company**

As an insurance company admin, I can remove a worker to an existing client and its premium.

Validation rules:

- Company ID and worker ID cannot be empty
- The premium for each worker must be greater than zero.
- Company ID and Worker ID cannot be modified.
- Return error if Company ID and/or Worker ID cannot be found in the system.

### User Story 4 – Update the premium of a worker

As an insurance company admin, I can update the value of a worker's premium.

Validation rules:

- Company ID and worker ID cannot be empty.
- The premium for each worker must be greater than zero.
- Company ID and Worker ID cannot be modified.
- Return error if Company ID and/or Worker ID cannot be found in the system.

### Entity Diagram

