HIBERNATE

Training Assignment

Document Code	25e-BM/HR/HDCV/FSOFT
Version	1.1
Effective Date	20/11/2012

Hanoi, 09/2019

RECORD OF CHANGES

No	Effective Date	Change Description	Reason	Reviewer	Approver
1	25/09/2019	Create assignments		VietTN	VinhNV

Contents

CODE:	ORM.L.A101
TYPE:	LONG
LOC:	NA
DURATION:	480 Minutes (completed in 2 work days)

Unit 3-6. Hibernate Mapping, Queries and Criteria, Performance, Stored Procedures with Hibernate

This assignment requires trainees having Java, Maven, SQL, File and Hibernate knowledge. Technical details are:

- Java 8
- Hibernate 4.3
- Maven 3
- You could choose any database to develop (Oracle, MySQL, SQL Server or Apache Derby)

The important note:

- Should **avoid many-to-many** design for entities and have to know the differences between **create** and **update** for the property **hbm2ddl.auto**.
- Java classes must follow naming convention rules (for examples, class names and attribute names must not have _)
- Tables must have names as required on the design (for examples, Employee table has first_name column instead of firstname)
- The DAO class should have at least 5 methods as getXxxByID, getAllXxx, updateXxxByID, deleteXxxById, insertXxx where Xxx is the model class of DAO. You could choose other verbs instead of get, update, delete, and insert. However, they should be consistent among DAO classes and meaningful.

Happy coding!

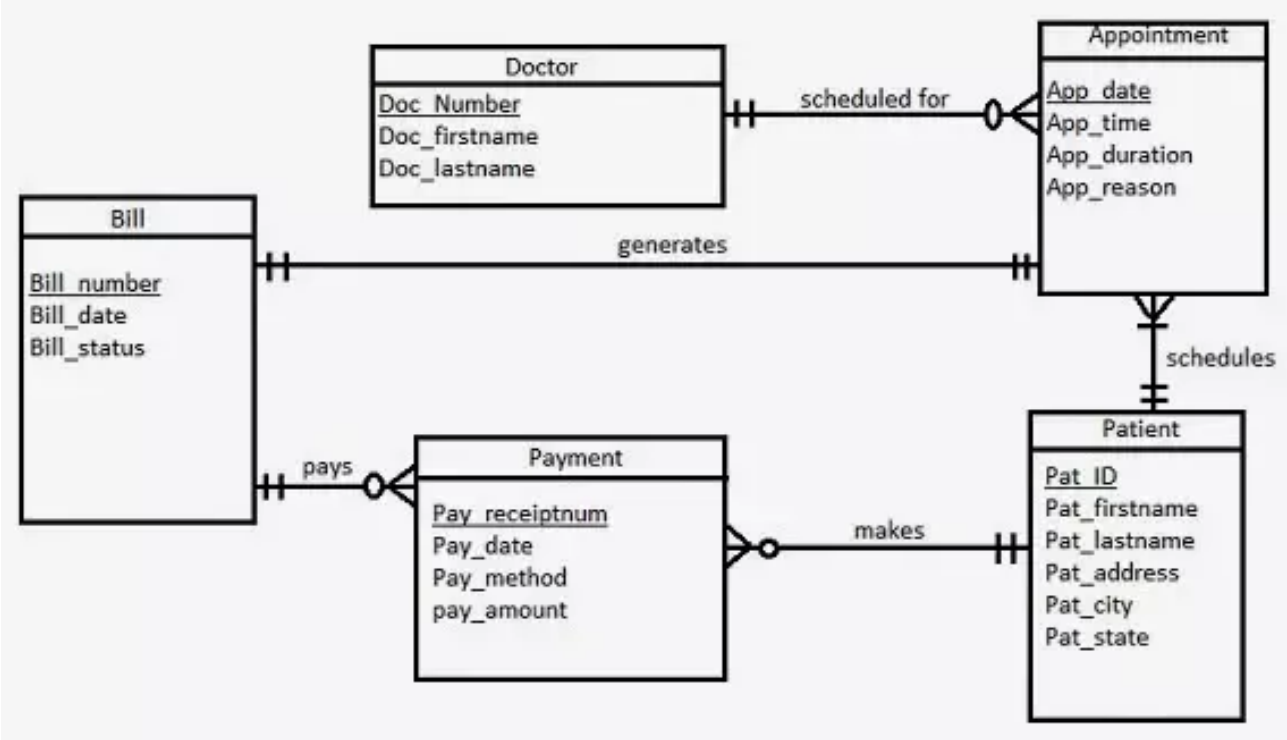
Clinic Application

Objectives:

- Able to understand and update design of ERD.
- Able to organize models and DAO classes in a Hibernate projects.
- Able to configure and update configuration for Maven and Hiberante.

Problem Descriptions:

A clinic wants to have an application to manage their patient appoinments as well as payment. The project team designed the ERD as below after asseted the requirements and clinic operations.



A patient could make only one appointment in a certain day. If they want to have new an appointment on the same day, the existing appointment will be overriden. Any new appointment should be checked with doctor schedules to avoid confliction/duplication.

A patient also could pay a bill serveral times or using different methods. For instances, they could use cash and cards to pay their bill if they want. The bill status will be paid if total payment are enough. Based on this requirement, you must update the Bill entity.

After developing CRUD operations for this project, you must simulate one senario of all activities (make appointments and pay bills). The database name should be **clinicdb**.

Assumptions:

- There are no dependencies on the development environment to use Maven.
- Choosing Appropriate Database (SQL Server, MySQL, Oracle, Derby 10.14 is downloaded and ready to use.

Technical Requirements:

- Must use Eclipse to build projects
- Must use tools with versions mentioned above

Questions to answer:

You must create the appropriate DAO classes to resolve the following requirements:

- Create five DAO classes for above models: to proceed CRUD operations
    - Create a new Doctor with 3 he's Appointment
    - Search all Bills with a specific bill_date
    - Find all Payment belong a specific Bill
- Create a method to proceed paging operation for Patient use Stored Procedure.
- Proceed paging operation for Bill use Hibernate Criteria.

The log output should not have any error.

You should see new entities by running '**SELECT**' queries after connected to **clinicdb** database.

Unit Testing Requirements:

- You must write scripts to test all of the methods that you have developed.

Non-Functional Requirements

- Use log4j to log all necessary information (info and error in exception cases)
- Error messages must define and use as final variables
- Use properties files to configure databases and log4j

Coding Quality Requirements

You must follow and guarantee below coding quality requirements:

- You must not violate more than 5 times based on the FA Checkstyle

Guidelines:

The Date or Time columns, it is recommended to use LocalDate or LocalTime to search for high accuracy.

-- THE END --