

# JPA and Spring Framework Course Introduction

# Why should you study this course?

- ◆ **Career Advancement:** Learning Hibernate and Spring Framework can significantly enhance your career prospects, as these technologies are widely used in the industry.
- ◆ **In-demand Skills:** Hibernate and Spring Framework are highly sought-after skills in the software development industry. Acquiring proficiency in these areas can make you more marketable and increase your value as a developer.
- ◆ **Efficient Database Operations:** Hibernate simplifies the task of working with databases in Java applications, providing an object-relational mapping (ORM) solution.

# Why should you study this course?

- ◆ **Modular and Reusable Code:** Spring Framework provides a comprehensive programming and configuration model for modern Java-based enterprise applications.
- ◆ **Integration Capabilities:** Spring Framework offers extensive support for integrating with other technologies and frameworks, such as integrating with Java EE, cloud platforms, and various data access libraries.
- ◆ **Industry Standards:** Both Hibernate and Spring Framework have become industry standards for developing enterprise-level Java applications.
- ◆ **Community Support:** Both Hibernate and Spring Framework have large and active communities.

# Prerequisites

- ◆ **Completed:**
  - PRO192-Object-Oriented Programming
  - DBI201-Database Systems
  - PRJ301 – Java Web Development

# Course Description

- ❖ Understand the followings:
  - ❖ Basic concepts of Java FX to build Desktop Application
  - ❖ Basics of Object-Relational Mapping (ORM) with JPA and how it simplifies database interactions.
  - ❖ Spring Framework, Spring Boot, which provides a comprehensive ecosystem for building enterprise-level applications.
  - ❖ Spring Framework's dependency injection, and web frameworks to build robust and scalable applications

# Course Plan



**See course plan on FLM  
(HSF302)**

# Materials/ References

- ◆ Spring Framework Essentials (Online Course)
- ◆ Spring Framework - Core Technologies (Online Document)
- ◆ Spring Framework Specialization (Coursera Specialization)
- ◆ Hibernate ORM - An Introduction to Hibernate 6 (Online Document)
- ◆ Java FX (Online Document)
- ◆ Spring 6 & Spring Boot 3 for Beginners

# Learning Environments

- ◆ Internet
- ◆ IntelliJ IDEA/Spring Tool 4 for Eclipse/Eclipse/Visual Studio Code
- ◆ Platform : Java Development Kit 21
- ◆ Scene Builder 23



# Course Rules

- ◆ **How to conduct**
  - Prepare contents of the next session at home
  - Following lessons in classroom
  - Completing chapter assessments in time and Quizzes (via CMS)
  - **Write reports** of all labs and assignments to your notebook
- ◆ **Communication**
  - Class
  - Interchange by FU-HCM CMS, Forum
  - Discussing actively in your team and classroom
  - Free to question and answer
- ◆ **Others**
  - Off phone, no game, no chat in class
  - Use laptop under teacher's instruction

# Evaluation Strategy

- ♦ **Must attend more than 80% of contact hours.**
- ♦ **Evaluating**
  - 02 Progress Tests (PT, 10%) - 02 Assignments (AS, 10%)
  - 01 Practical Exam (PE, 25%) - 01 Group Project (GP, 25%)
  - Final Exam (FE, 30%)
  - Total score =  $10\%(PT) + 10\%(AS) + 25\%(PE) + 25\%(GP) + 30\%(FE)$
- ♦ **Pass:**
  - Every on-going assessment component  $>0$  and
  - Practical Exam  $\geq 4$  and
  - Final Exam Score  $\geq 4$  and
  - Final Result  $\geq 5$
- ♦ **Final exam retake only when not passed**

# How to study

- ◆ This course is complex knowledge (however, it's attractive and exciting), so you need to keep a tight grip on it
  - **Read**
    - On the books to get the general concept
    - Reference, study, collection from anywhere else (internet, your classmate, forum ...)
  - **Attend lectures**
    - Listen, understand, then make your notes
    - Give your explanation about some topic in lectures. Ask questions
    - Give some examples that do not exist in your book
    - Practice all the exercises, demo to make your sense
  - **After classes**
    - Discuss your classmate indirectly, on the forum
    - Analyze, design, and implement workshops and assignments. **Write reports** in your notebook
    - Build your team in yourselves to support together in studying

# Academic policy

- ◆ Cheating, plagiarism and breach of copyright are serious offenses under this Policy.
  - **Cheating**
    - Cheating during a test or exam is construed as talking, peeking at another student's paper or any other clandestine method of transmitting information.
  - **Plagiarism**
    - Plagiarism is using the work of others without citing it; that is, holding the work of others out as your own work.
  - **Breach of Copyright**
    - If you photocopy a textbook without the copyright holder's permission, you violate copyright law.

# Enjoy the Course

- ◆ Install tools for programming if needed
- ◆ Q&A