FPT Education
FPT UNIVERSITY

Java

Hibernate 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 Objectives

Course Description

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

Course Plan

See course plan on FLM

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 or Sping Tool 4 for Eclipse/Visual Studio Code
- Platform : Java Development Kit 20

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%(GR)+30% (FE)
- **Pass:**
  - Every on-going assessment component >0 and
  - Practical Exam >=4 and
  - Final Exam Score >=4 and
  - Final Result >=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