

OJAV-1 - OBJECT-ORIENTED ANALYSIS AND DESIGN USING UML

Categoria: **Java**

INFORMAZIONI SUL CORSO



Durata:
5 Giorni



Categoria:
Java



Qualifica Istruttore:
Oracle Certified
Professional



Dedicato a:
Sviluppatore



Produttore:
Oracle

OBIETTIVI

Descrivere l'object-oriented processo di sviluppo software, compresi metodologie object-oriented e flussi di lavoro
I requisiti del sistema tramite interviste con le parti interessate

Analizzare i requisiti di sistema per determinare i casi di utilizzo e modello di dominio del dominio del problema (il modello Requisiti)

Creare un'architettura di sistema (il modello di architettura) a supporto dei requisiti non funzionali (NFR) e dei vincoli di sviluppo

Creare un progetto di sistema (il modello di soluzione) a supporto dei requisiti funzionali (FRS)

PREREQUISITI

Prerequisites:

Prerequisiti obbligatori:

Understand object-oriented concepts and methodology
Demonstrate a general understanding of programming, preferably using the Java programming language
Understand the fundamentals of the systems development process
Java Programming Language, Java SE 6 (SL-275-SE6)

[Ritorno all'inizio](#)

Course Objectives:

CONTENUTI

Examining Object-Oriented Concepts and Terminology

Describe the important object-oriented (OO) concepts

Describe the fundamental OO terminology

Introducing Modeling and the Software Development Process

Describe the Object-Oriented Software Development (OOSD) process

Describe how modeling supports the OOSD process

Describe the benefits of modeling software

Explain the purpose, activities, and artifacts of the following OOSD workflows (disciplines): Requirements Gathering, Requirements Analysis, Architecture, Design, Implementation, Testing & Deployment

Creating Use Case Diagrams

Justify the need for a Use Case diagram

Identify and describe the essential elements in a UML Use Case diagram

Develop a Use Case diagram for a software system based on the goals of the business owner

Develop elaborated Use Case diagrams based on the goals of all the stakeholders

Recognize and document use case dependencies using UML notation for extends, includes, and generalization

Describe how to manage the complexity of Use Case diagrams by creating UML packaged views

Creating Use Case Scenarios and Forms

Identify and document scenarios for a use case

Create a Use Case form describing a summary of the scenarios in the main and alternate flows

Describe how to reference included and extending use cases.

Identify and document non-functional requirements (NFRs), business rules, risks, and priorities for a use case

Identify the purpose of a Supplementary Specification Document

Creating Activity Diagrams

Identify the essential elements in an Activity diagram

Model a Use Case flow of events using an Activity diagram

Determining the Key Abstractions

Identify a set of candidate key abstractions

Identify the key abstractions using CRC analysis

Constructing the Problem Domain Model

Identify the essential elements in a UML Class diagram

Construct a Domain model using a Class diagram

Identify the essential elements in a UML Object diagram

Validate the Domain model with one or more Object diagrams

Transitioning from Analysis to Design using Interaction Diagrams

Explain the purpose and elements of the Design model

Identify the essential elements of a UML Communication diagram

Create a Communication diagram view of the Design model

Identify the essential elements of a UML Sequence diagram

Create a Sequence diagram view of the Design model

Modeling Object State Using State Machine Diagrams

Model object state

Describe the essential elements of a UML State Machine diagram

Applying Design Patterns to the Design Model

Define the essential elements of a software pattern

Describe the Composite pattern

Describe the Strategy pattern

Describe the Observer pattern

Describe the Abstract Factory pattern

Introducing Architectural Concepts and Diagrams

Distinguish between architecture and design

Describe tiers, layers, and systemic qualities

Describe the Architecture workflow

Describe the diagrams of the key architecture views

Select the Architecture type

Create the Architecture workflow artifacts

Introducing the Architectural Tiers

- Describe the concepts of the Client and Presentation tiers
- Describe the concepts of the Business tier
- Describe the concepts of the Resource and Integration tiers
- Describe the concepts of the Solution model

Refining the Class Design Model

- Refine the attributes of the Domain model
- Refine the relationships of the Domain model
- Refine the methods of the Domain model
- Declare the constructors of the Domain model
- Annotate method behavior
- Create components with interfaces

Overview of Software Development Processes

- Explain the best practices for OOSD methodologies
- Describe the features of several common methodologies
- Choose a methodology that best suits your project
- Develop an iteration plan

Overview of Frameworks

- Define a framework
- Describe the advantages and disadvantages of using frameworks
- Identify several common frameworks
- Understand the concept of creating your own business domain frameworks

Course Review

- Review the key features of object orientation
- Review the key UML diagrams
- Review the Requirements Analysis (Analysis) and Design workflows
- Developing Architectures for Enterprise Java Applications (SL-425)

INFO

Materiale didattico: Materiale didattico ufficiale Oracle in formato digitale

Costo materiale didattico: incluso nel prezzo del corso a Calendario

Natura del corso: Operativo (previsti lab su PC)