

# Java EE7

## Development of 3-tier applications using EJB 3.2

Školenie je určené pre Java vývojárov, architektov, ktorí majú záujem zoznámiť sa s technológiou Enterprise Java Beans a jej použitím pri vývoji trojvrstvových aplikácií. Prostredníctvom teoretického výkladu spojeného s množstvom praktických príkladov prevedieme poslucháča technológiou EJB a jej využitím pri implementácii aplikačnej biznis logiky. Poslucháč sa ďalej zoznámi s JPA technológiou pre prístup do relačnej databázy, Java Messaging, implementáciou SOAP Web služieb, REST Web služieb. Kurz ponúka aj úvod do CDI a porovnanie s EJB.

Obsah kurzu:

- **Introduction to Java EE:** architecture, components, containers, services, application packaging, programming model, specifications
- **Introduction to Enterprise Java Beans:** types of EJBs, EJB Lite, container and its services, dependency injection and JNDI lookup, packaging and deploying EJBs
- **EJB Session Beans:** session beans in 3-tier architecture, beans anatomy and lifecycle, Stateless, Stateful and Singleton beans, concurrency and asynchronous beans, writing EJB clients, Local versus Remote clients
- **Interceptors:** AOP and interceptors, type of EJB interceptors, interceptors implementation and lifecycle, invocation context
- **Messaging:** understanding messaging, Point-to-Point, Publish-Subscribe, JMS – Java Messaging Service, writing message Consumers and Producers, filtering messages, transactions and exceptions
- **EJB Message-Driven Beans:** writing MDB as message consumers, sending messages to JMS destinations
- **Timer Service:** EJB Timer service, programmatic and automatic Timers
- **EJB Security:** authentication and authorization, declarative and programmatic security, configuration, web-tier roles mapping
- **Java Persistence API:** entities, object-relational mapping, querying entities, entity lifecycle, callbacks, listeners, embeddables, inheritance mapping, integration with bean validation, persistence unit, entity manager, manipulating entities, JPQL

- **Transactions:** JTA, transaction support in EJBs, container and bean managed transactions, transaction propagation, exceptions and transactions
- **CDI Intro:** Injection and Contextual instances, Alternatives, Produces, Interceptors, Interceptor binding and Decorators, Scoped beans, Stereotypes, Events and Bean lifecycle
- **SOAP Web Services:** SOAP specification, anatomy of SOAP web services, endpoints, WSDL and mapping, handling exceptions, writing and publishing SOAP web services, invoking SOAP web services, SOAP consumer
- **RESTfull Web Services:** HTTP protocol, methods, anatomy of RESTfull Web services, HTTP method matching, writing RESTfull Web services, handling exceptions, lifecycle and callback, invoking RESTfull Web services