

Glossary

Common Terms Used in the Java EE & Frameworks Tutorials

Backing Bean – a managed bean that is associated with the UI view. A number of sources consider the terms “managed bean” and “backing bean” synonymous.

Context Dependency Injection (CDI) – a software design pattern in which configuration details are stored in a container and “injected” into components of the application at the point of utilization. CDI enables more efficient and secure storage of connection strings which include usernames and passwords.

Controller – a component of the MVC architecture responsible for handling requests within the system.

Dispatcher – a component of some MVC architectures. It is responsible for view management and navigation.

Expression Language (EL) – EL provides the communication link between JSF UI components and their corresponding application logic (commonly managed beans).

Foreign Key (FK) – an attribute of a database column set on a supporting table used to link the supporting table to a primary key in a primary table. Linked tables increase query performance. Unlike the PK, the FK does not have the requirements to be non-null and unique.

Front Controller – a software design pattern which is an optional component of the MVC architecture that can be used to manage communications with multiple controllers and views.

Inversion of Control (IoC) – a software design pattern in which control is relegated to higher level container elements instead of at the lowest level of the code. IoC is a technique common to frameworks in which the framework invokes methods of the application code.

JavaBean – a class which satisfies the following three requirements:

1. Contains a public, no-argument constructor (this can be by default)
2. Contains private getters and setters
3. Is serializable

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JavaServer Faces (JSF) – a specification of a framework used to build component-based web applications.

Java Web Server – software (e.g. Glassfish, Tomcat) hosted on a server that provides runtime support for multiple Java web technologies. The servlet container is part of the web server suite of services.

Managed Bean – a JavaBean that is managed by a JSF servlet container.

Model – a component of the MVC architecture responsible for data storage (persistent and volatile).

Model-View-Controller (MVC) – a software design pattern which utilizes a controller to manage communication with a model (data) and view (user presentation).

Primary Key (PK) – an attribute of a database column set on a primary table used to link the primary table to a foreign key in a supporting table. Linked tables increase query performance. The PK must be non-null and unique.

PrimeFaces – a component suite which can be used in conjunction with JSF to enable rich user interfaces. It accesses the jQuery library to accomplish much of its functionality.

Referential Integrity – a quality that when set, ensures row cannot be deleted in a parent table if a dependent row in a child table exists. Conversely, a row in the child table cannot be inserted unless a related row in the parent table exists.

Servlet Container – part of Java web server software (e.g. WildFly, Glassfish, Tomcat) that processes web requests and responses. This is commonly “Catalina” or a Catalina-based derivative. In WildFly it is called Undertow.

Spring-MVC – a framework implementing the MVC design pattern. It relies heavily on the front controller and dispatch controller design patterns.

View – a component of the MVC architecture responsible for rendering the user presentation.