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## Java Data Objects (JDO)

### Overview

The Java Data Objects (JDO) API is a standard interface-based Java model abstraction of persistence, developed under the auspices of the [Java Community Process](#). The original JDO 1.0 is Java Specification Request 12 ( [JSR 12](#) ), and the current JDO 2.0 is Java Specification Request 243 ( [JSR 243](#) ). Beginning with JDO 2.0, the development of the API and the Technology Compatibility Kit (TCK) takes place within the [Apache JDO](#) open-source project.

If you are an application programmer, you can use JDO technology to directly store your Java domain model instances into the persistent store (database). Alternatives to JDO include direct file I/O, serialization, [JDBC](#), [Enterprise JavaBeans](#) (EJB), Bean-Managed Persistence (BMP) or Container-Managed Persistence (CMP) entity beans, and the [Java Persistence API](#).

The Apache JDO project is focused on building the JDO API and the TCK for compatibility testing of JDO implementations. Commercial and open-source [implementations](#) of JDO, providing the APIs used by application developers and their customers, are available for relational databases, object databases, and file systems.

### Benefits of Using JDO for Application Programming

**Ease of use:** Application programmers can focus on their domain object model and leave the details of persistence (field-by-field storage of objects) to the JDO implementation.

**Portability:** Applications written with the JDO API can be run on multiple implementations without recompiling or changing source code. Metadata, which describes persistence behavior external to the Java source code including most commonly used features of O/R mapping, is highly portable.

**Database independence:** Applications written with the JDO API are independent of the underlying database. JDO implementations support many different kinds of transactional data stores, including relational and object databases, XML, flat files, and others.

**High performance:** Application programmers delegate the details of persistence to the JDO implementation, which can optimize data access patterns for optimal performance.

**Integration with EJB:** Applications can take advantage of EJB features such as remote message processing, automatic distributed transaction coordination, and security, using the same domain object models throughout the enterprise.

### What's New

#### In Progress

**[JDO 2.1 Maintenance Release](#)** A list of changes proposed and approved for the forthcoming JDO 2.1 Maintenance Release.

#### Downloads

##### **[JDO 2.0 Specification \(JSR 243\)](#)**

Download the final release of the JDO 2.0 spec from the Java Community Process (JCP) site.

##### **[API and TCK](#)**

Download the JDO 2.0 API source and binaries along with the Technology Compatibility Kit source.

#### Resources

##### **[Javadoc](#)**

Browse the Javadoc for the JDO 2.0 API online or download it as a zip file.

##### **[JDO TCK](#)**

Get information on how to obtain, use, and see the results from the JDO Technology Compatibility Kit.

#### Community

##### **[Apache JDO](#)**

Apache JDO is a project of the Apache Software Foundation. Find out more about JDO and the Apache JDO developer community.

##### **[Bug Database](#)**

The JIRA issue repository for Apache JDO.

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