



# ####Apache Derby

*Version 10.2*

Derby Document build:  
August 10, 2009, 1:11:20 PM (PDT)



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####Apache Derby  
Apache Software Foundation####Apache DerbyApache Derby

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## Derby###

Derby#####! Derby##Java<sup>(TM)</sup>#SQL#####(RDBMS)###  
#####Derby#####

### #####

Derby#####

#####:

- #####Java##### Derby #####Java#####(JVM)#####DBMS#####
- Web#####
- #####  
#####

### #####

Derby #Java#####  
#####Java#####(JVM)#####

## Derby#####

Derby#####Derby #####API#####

### **Derby Developer's Guide**

Derby#JDBC/  
SQL#####Derby#####Derby#####

### **Derby Reference Manual**

Derby#####SQL#####Derby#JDBC#JTA#####SQLExceptions#

### **Tuning Derby**

Derby#####  
#####Derby#####

### **Derby Tools and Utilities Guide**

i j#####

### **Derby Server and Administration Guide**

#####  
#####  
#####

### **Derby API javadoc**

#####Derby##### (J2SE#####JDBC API#javadoc#####)  
API#####Derby Reference Manual#####

## Derby#####

####Derby### JDBC #####  
 ####JDBC#####JDBC#####

## Derby#####

Derby#####  
 ###Derby#zip####tar#####Derby#Web#####  
 Web#####[http://db.apache.org/derby/derby\\_downloads.html](http://db.apache.org/derby/derby_downloads.html)##### ##URL#####  
 #####[http://db.apache.org/derby/dev/derby\\_source.html](http://db.apache.org/derby/dev/derby_source.html)#####Derby#####Subver  
 #####  
 • bin#####jar#####lib#####  
 • lib#####jar#####  
 • lib-debug#####jar#####  
 • src#####bin, lib, and lib-debug#####  
 #####bin#####  
 #####  
 • demo#####  
 • bin#####  
 • javadoc#####api#####  
 • docs#####Derby#####  
 • lib#####Derby#jar#####  
 • test#####Derby#####.  
 • frameworks#####  
 #####

## ####

####Derby#bin#####  
 #####Windows#####Unix#####  
 #####

1. #####DERBY\_HOME##Derby####(bin)#####  
 #####Derby#Windows#c:\Derby\_10#####Unix#/opt/  
 Derby\_10##### DERBY\_HOME#####

OS	####
UNIX	export DERBY_HOME=/opt/Derby_10
Windows	set DERBY_HOME=c:\Derby_10

2. #####JAVA\_HOME#####JAVA\_HOME#####JVM#Java#####

OS	####
UNIX	export JAVA_HOME=/usr/j2se
Windows	set JAVA_HOME=C:\Program Files\Java\j2se1.4.2_05

3. DERBY\_HOME /  
bin#####PATH#####Derby#####

OS	####
UNIX	export PATH="\$DERBY_HOME/bin:\$PATH"
Windows	set PATH=%DERBY_HOME%\bin;%PATH%

#####DERBY\_HOME#####  
#####bin#####PATH#####Derby#####

4. #####DERBY\_HOME#JAVA\_HOME#####DERBY\_HOME/bin  
#####PATH environment#####

#####

sysinfo

#####sysinfo#####JVM#####Derby#####

bin#####Derby#####

## Derby#####

Derby#####.

Derby###dblook# ij#

###sysinfo#####Derby#####Derby#####

##Derby#####ij#####

*Tools and Utilities Guide##Derby Reference Manual#####*

#####DERBY\_HOME /

bin#####classpath#####

DERBY\_HOME /

bin#####DBMS#####Network

Server#####

- dblook#-d#####Network Server##URL#####dblook -d  
'jdbc:derby://localhost/myDB;user=usr' #####
- ij##set  
DERBY\_OPTS=-Dij.protocol=jdbc:derby://localhost/  
#####ij# ij#####
- sysinfo##NetworkServerControl sysinfo#####

*Getting Started with*

Derby#####Derby#####Derby#####

#####Derby#####

## sysinfo###

Derby##### sysinfo##Java#####Derby#####

DERBY\_HOME/bin#####PATH#####sysinfo##### sysinfo#####class

sysinfo

## ij####



####Apache Derby

ij#####Derby#####

ij#####DERBY\_HOME/bin#####PATH#####

- ij#####  
#####

ij

ij #####CLASSPATH#####ij#####

- ij#####

ij> connect 'jdbc:derby:testdb;create=true';

#####testdb#####

####ij#####SQL#####

- ij#####

ij> exit;

ij#####Derby Tools and Utilities Guide#####

## classpath###

classpath

###JVM###Java#####classpath#####Derby#####

CLASSPATH#####Java#####JVM#####

#####CLASSPATH#####Derby

#DERBY\_HOME/

bin#####classpath#####

### setEmbeddedCP

setEmbeddedCP

#####derby.jar#derbytools.jar#classpath#####

### setNetworkServerCP

The setNetworkServerCP#network

server#####derby.jar#derbynet.jar#classpath#####

### setNetworkClientCP

setNetworkClientCP#network

client#####derbyclient.jar#derbytools.jar#classpath#####

classpath#####

#####classpath#####

- UNIX###echo \$CLASSPATH#####

- Windows###echo %CLASSPATH%#####

ij#sysinfo#####Derby Tools and Utilities Guide#####

## JDBC#####

####JDBC#####classpath#####Java#####JDBC#####  
#####Derby Developer's Guide#Derby Tools and Utilities  
Guide#####

## Derby#####

Derby#####Derby#####  
#####classpath#####URL#####  
####Derby Developer's Guide###Derby#####

## #####

#####  
#####JVM###Derby#####Derby#

## #####/#####

#####/#####Derby#####  
Derby#####(#####Derby#####  
###Java#####Derby#####  
#####Derby#####Derby Server and Administration Guide#####

## #####

Derby#####  
• org.apache.derby.jdbc.EmbeddedDriver  
#####JVM#Derby#####  
• org.apache.derby.jdbc.ClientDriver  
#####

## #####URL

Derby#####URL#####  
#####URL#####  
jdbc:derby:databaseName;URLAttributes  
#####  
• databaseName  
#####  
• URLAttributes  
#####URL#####;locale=ll\_CC#;create=true####  
#####Derby Developer's Guide#####  
Derby#####URL#####

####Apache Derby

```
jdbc:derby://<server>[:<port>]/databaseName[;URLAttributes=<value>[;...]]
```

```
<server>#<port>#####(###IP###)#####databaseName#####  
URLAttributes#####  
#####Derby Server and  
Administration Guide
```

#####

#####Derby#####

##

Derby#####Derby#####  
#####/#####

SQL###

SQL#####BNF#####  
BNF#####

##	##
	#### #####
[ ]	#####
*	#####0#####SQL#####
{ }	[ ] #### *#####
( ) . ,	#####

SQL#####

```
CREATE [ UNIQUE ] INDEX IndexName
ON TableName ( SimpleColumnName [ , SimpleColumnName ] * )
```

Java#####java#####

```
java org.apache.derby.tools.ij
```

#####JVM#####JVM#####JVM#####

##

#####SQL##OS#####Java#####

# 1. Derby #####

##	##	#
#####	#####	keys#####
#####	#####	C:\derby
#####	#####	Employees####
#####	#####	CREATE TABLE tableName
SQL ##	## #####/### ##	SELECT city_name FROM Cities

####Apache Derby

##	##	#
Java#####	## #####/### ##	Connection conn = DriverManager.getConnection ( "jdbc:derby:Sample" )
#####	## #####/### ##	java org.apache.derby.tools.ij
#####	## #####/### ##	--#####
SQL(####)#####	#####	CREATE TABLE#####

## Derby#####

#####Derby#####

## Derby#####

#####Derby#####

### # 2. Derby#####

#####	###
##### #####/ #####	
derby.jar	#####
##### #####classpath#####/ #####	
derbytools.jar	Derby#####(ij, dblook #import/export#)#####
derbyrun.jar	Derby#####jar#####
#####	
derbynet.jar	Derby#####
#####	
derbyclient.jar	Derby#####
#####	
<ul style="list-style-type: none"> <li>derbyLocale_es.jar</li> <li>derbyLocale_de_DE.jar</li> <li>derbyLocale_fr.jar</li> <li>derbyLocale_it.jar</li> <li>derbyLocale_ja_JP.jar</li> <li>derbyLocale_ko_KR.jar</li> <li>derbyLocale_pt_BR.jar</li> <li>derbyLocale_zh_CN.jar</li> <li>derbyLocale_zh_TW.jar</li> </ul>	#####

## Derby#####

JDK 1.3 #####Derby

#####classpath#####(JDK  
1.4#####)

- LDAP (*Derby Developer's Guide*#####)
- JTA (*Derby Reference Manual*#####)
- JDBC 2.0## (*Derby Reference Manual*#####)

## Derby#####

Derby##### /bin #####

Derby#####

- *bin/dblook*

dblook#####

- *bin/ij*

ij#####

- *bin/NetworkServerControl*

NetworkServerControl#####

- *bin/setEmbeddedCP*

Derby#####classpath#####

- *bin/setNetworkClientCP*

Derby#####classpath#####

- *bin/setNetworkServerCP*

Derby#####classpath#####

- *bin/startNetworkServer*

#####

- *bin/stopNetworkServer*

#####

- *bin/sysinfo*

sysinfo#####

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