



####Apache Derby

Version 10.2

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

####Apache Derby

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Derby###

Derby#####! Derby##Java^(TM)#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

ij#####

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##### ##URL#####
#####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#####
#####

- #####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

- #####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

####Apache Derby

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

- 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
```

####Apache Derby

#####

#####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"> • derbyLocale_es.jar • derbyLocale_de_DE.jar • derbyLocale_fr.jar • derbyLocale_it.jar • derbyLocale_ja_JP.jar • derbyLocale_ko_KR.jar • derbyLocale_pt_BR.jar • derbyLocale_zh_CN.jar • derbyLocale_zh_TW.jar 	#####

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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