

- Setup DB server(eg. Apache Derby)

1. Download from https://db.apache.org/derby/releases/release-10_15_2_0.cgi,

2. Unzip to C:\Derby_10

3. Optional:

Windows:

```
set DERBY_HOME=C:\Derby_10
```

```
set PATH=%DERBY_HOME%\bin;%PATH%
```

MacOS:

In the Terminal, using any text editor to edit ~/.bash_profile

Appending following two lines

```
export DERBY_HOME=/Home/Derby_10
```

```
export PATH=$DERBY_HOME$/bin:$PATH$
```

```
$source ~/.bash_profile
```

4. Startup DB server:

If you have set DERBY_HOME in step 3.

Windows:

```
java -jar %DERBY_HOME%\lib\derbyrun.jar server start
```

MacOS:

```
java -jar $DERBY_HOME$/lib/derbyrun.jar server start
```

If not, you can just run straightforward.

Windows:

```
java -jar C:\Derby_10\lib\derbyrun.jar server start
```

MacOS:

```
java -jar /Home/Derby_10/lib/derbyrun.jar server start
```

- Obtain your DB driver. A DB driver is provided by the DB vendor and often takes the form of a jar file that is added as an external library. For Apache derby DB, the JDBC driver can be found at C:\Derby_10\lib\derbyclient.jar or /home/Derby_10/lib/derbyclient.jar

- Run your JDBC client program in command line console, requires DB driver in classpath, you can use either following ways to run your JDBC program in console

Windows

```
java -cp %DERBY_HOME%\lib\derbyclient.jar;. DerbyJDBCDemo.class
```

MacOS

```
java -cp $DERBY_HOME$/lib/derbyclient.jar:. DerbyJDBCDemo.class
```

Or

In the Terminal, using any text editor to edit ~/.bash_profile

Appending following line

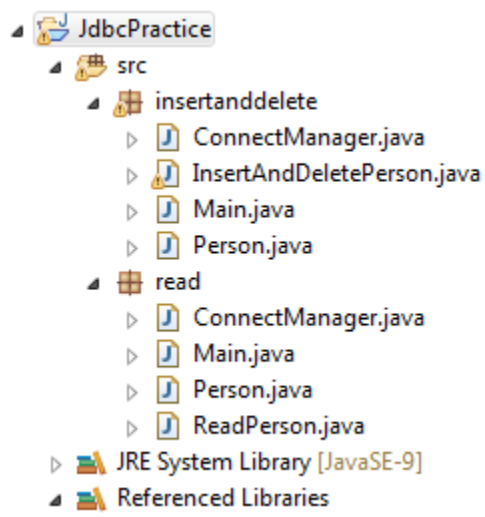
```
export CLASSPATH=.;$DERBY_HOME$/lib/derbyclient.jar
```

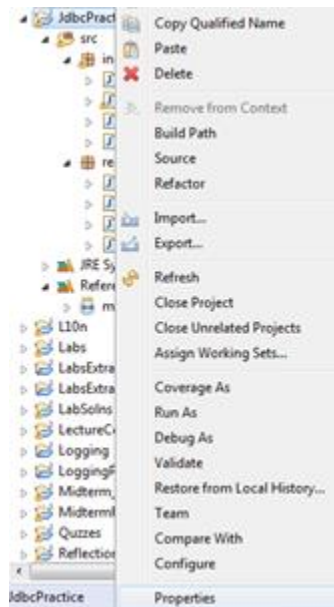
```
java DerbyJDBCDemo.class
```

```
$source ~/.bash_profile
```

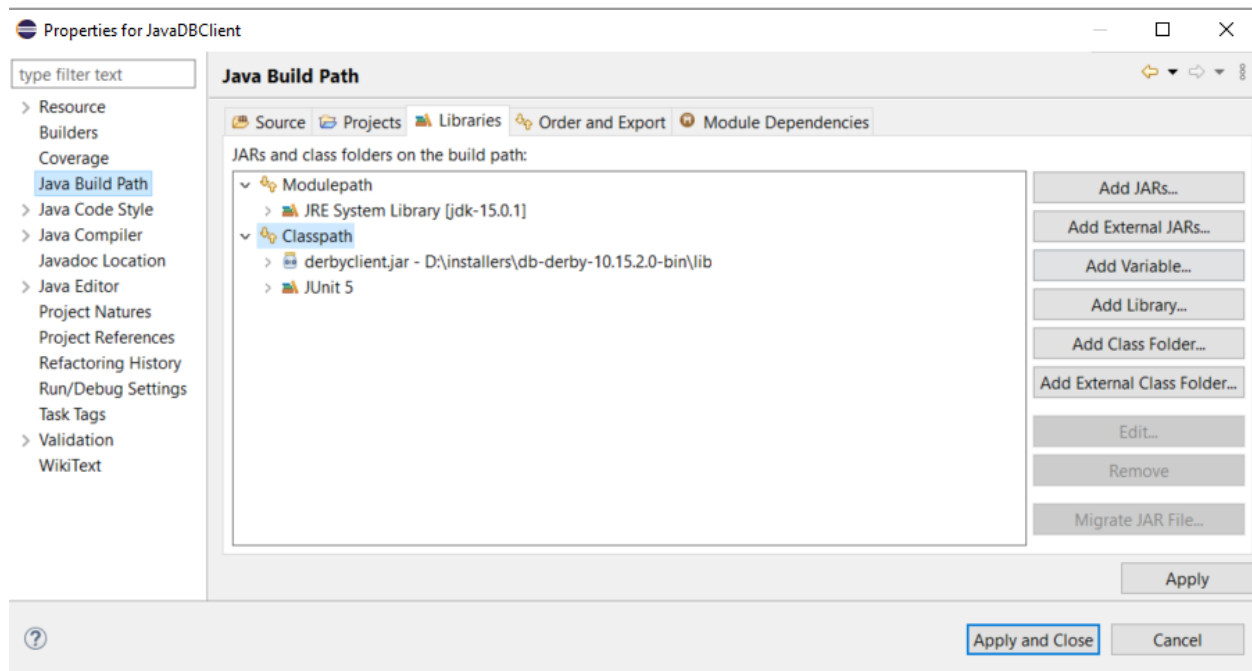
```
java DerbyJDBCDemo.class
```

If you only want to run your JDBC client program in eclipse, right – click on your project, select properties





Select Java Build Path, click on 'Libraries' tab, click on 'Add External JARS', select derbyclient.jar in the location where you extracted derby zip, select derbyclient.jar and click apply and close. Then you're good to go.



If you want to use derby ij tool to connect to Derby DB server,

Windows

```
java -jar %DERBY_HOME%\lib\derbyrun.jar ij
```

or

```
java -jar C:\Derby_10\lib\derbyrun.jar ij
```

MacOS

```
java -jar $DERBY_HOME$/lib/derbyrun.jar ij
```

Or

```
java -jar /Home/Derby_10/lib/derbyrun.jar ij
```

Create and open a connection to the database using the client driver.

```
CONNECT 'jdbc:derby://localhost:1527/testdb;create=true';
```

Then you can type DML and DDL SQLs in the ij console, then add ';' and then hit on 'Enter' to execute the SQLs.

Sample:

```
CREATE TABLE Employees(
```

```
Id INT NOT NULL GENERATED ALWAYS AS IDENTITY,
```

```
Name VARCHAR(255),
```

```
Salary INT NOT NULL,
```

```
Location VARCHAR(255),
```

```
PRIMARY KEY (Id))
```

```
INSERT INTO Employees(Name, Salary, Location) VALUES
```

```
('Amit', 30000, 'Hyderabad'),('Kalyan', 40000, 'Vishakhapatnam'),
```

```
('Navya', 50000, 'Delhi'),('Archana', 15000, 'Mumbai'),
```

```
('Trupthi', 45000, 'Kochin'),('Suchatra', 33000, 'Pune'),
```

```
('Rahul', 39000, 'Lucknow'),('Amit', 45000, 'Kochin')
```

