

JCR QUERIES

A PRACTICAL OVERVIEW

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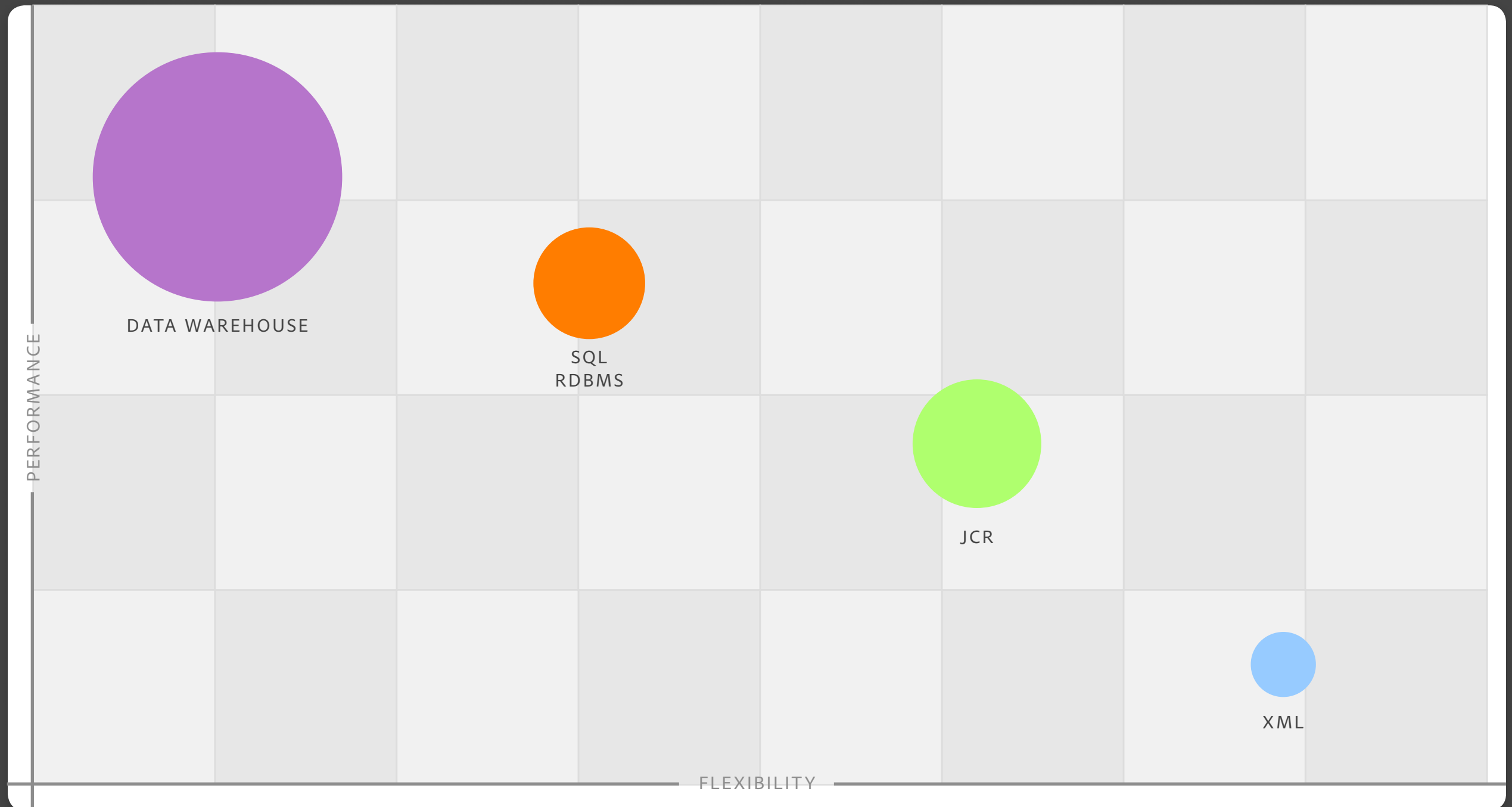
WARSAW TEAM



Adobe

STORAGE BACKEND GRAPH

STORAGE BACKEND GRAPH



JCR CONCEPTS

DAVID'S MODEL

DATA FIRST,
STRUCTURE LATER.
MAYBE

DRIVE THE
CONTENT
HIERACHY

ID IS
EVIL

REFERENCES
CONSIDERED
HARMFUL

JCR ENTITIES
SHOULD NOT
ALWAYS BE
TREATED AS
FILE SYSTEMS
EQUIVALENTS

SQL - JCR COMPARISON

Tree structure must be saved as flat structure with parent-child references - Tree structures supported natively

Entity schema must be clearly defined - Entity schema can be defined as precisely as user wants - from strict field list to freeform nt:unstructured type

Preferred strict relations with foreign keys and integrity check - Strict relations possible (using Reference and Weak Reference) but path relations preferred in most solutions

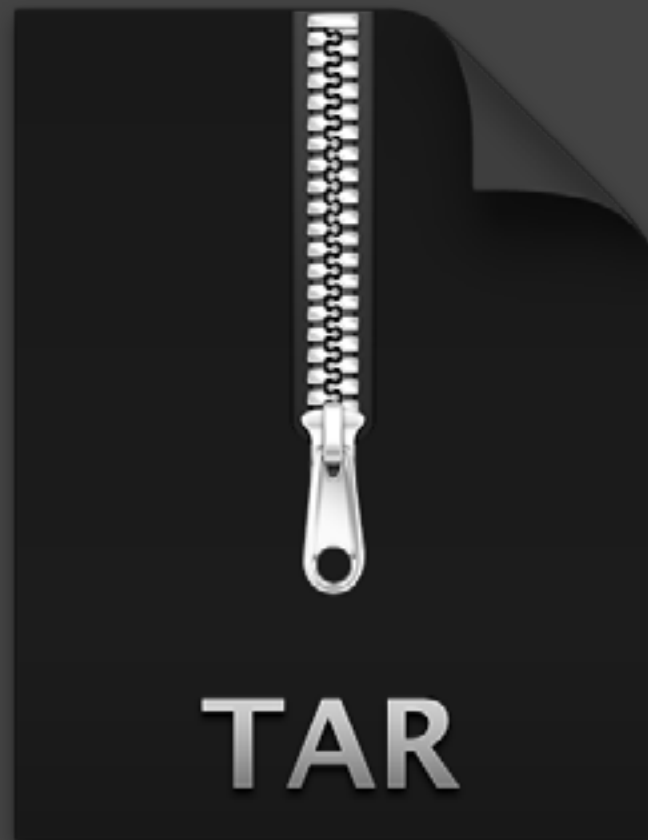
Queries based on indexes, full text search available in some databases - Queries based on Lucene full text indexes

SOURCE OF KNOWLEDGE

[HTTP://SVN.APACHE.ORG/VIEWVC/JACKRABBIT/TRUNK/JACKRABBIT-SPI-COMMONS/SRC/TEST/RESOURCES/ORG/APACHE/JACKRABBIT/SPI-COMMONS/QUERY/SQL2/TEST.SQL2.TXT?VIEW=MARKUP](http://svn.apache.org/viewvc/jackrabbit/trunk/jackrabbit-spi-commons/src/test/resources/org/apache/jackrabbit/spi-commons/query/sql2/test.sql2.txt?view=markup)

```
22 # 6.7.1 Query (p 99)
23 select * from test
24 SELECT * FROM TEST
25 SeLeCt * FrOm test
26 select * from test where id=1
27 select * from test where id=1 order by id
28 select * from test order by id
29
30 # 6.7.2 Source (p 99)
31 # 6.7.3 Selector (p 100)
32 # 6.7.4 Name (p 100)
33 select * from test as t
34 select * from ["Test"]
35 select * from [test]
36 select * from [test] as [t]
37 select * from test as ["t"]
38 select * from ["test"] as ["t"]
39
40 # 6.7.5 Join (p 102)
41 # 6.7.6 JoinType (p 102)
42 # 6.7.7 JoinCondition (p 103)
43 # 6.7.8 EquiJoinCondition (p 103)
44 select * from parent inner join child on parent.id=child.parentid
45 select * from parent as p inner join child as c on p.id=c.parentid
46 select * from parent as p inner join child as c on p.id=c.parentid
47 select * from parent as p left outer join child as c on p.id=c.parentid
48 select * from parent as p right outer join child as c on p.id=c.parentid
49
50 # 6.7.9 SemiJoinCondition (p 105)
```


TAR PM VS SQL PM



DESCRIPTION OF THE TEST SCENARIO

`Category`		
(P)	id	int(11)
N	name DEFAULT NULL	varchar(100)
N	path DEFAULT NULL	varchar(1000)

`Tag`		
N	product_id DEFAULT NULL	int(11)
N	name DEFAULT NULL	varchar(100)

`Property`		
N	product_id DEFAULT NULL	int(11)
N	variant_id DEFAULT NULL	int(11)
N	name DEFAULT NULL	varchar(100)
N	intValue DEFAULT NULL	int(11)
N	floatValue DEFAULT NULL	float
	dateValue DEFAULT CURRENT_TIMESTAMP	timestamp
N	stringValue DEFAULT NULL	varchar(1000)
N	boolValue DEFAULT NULL	tinyint(1)

`Manufacturer`		
(P)	id	int(11)
N	path DEFAULT NULL	varchar(1000)
N	name DEFAULT NULL	varchar(100)
N	address DEFAULT NULL	varchar(100)
N	city DEFAULT NULL	varchar(100)
N	phone DEFAULT NULL	varchar(100)
N	email DEFAULT NULL	varchar(100)
N	freeShipment DEFAULT NULL	tinyint(1)

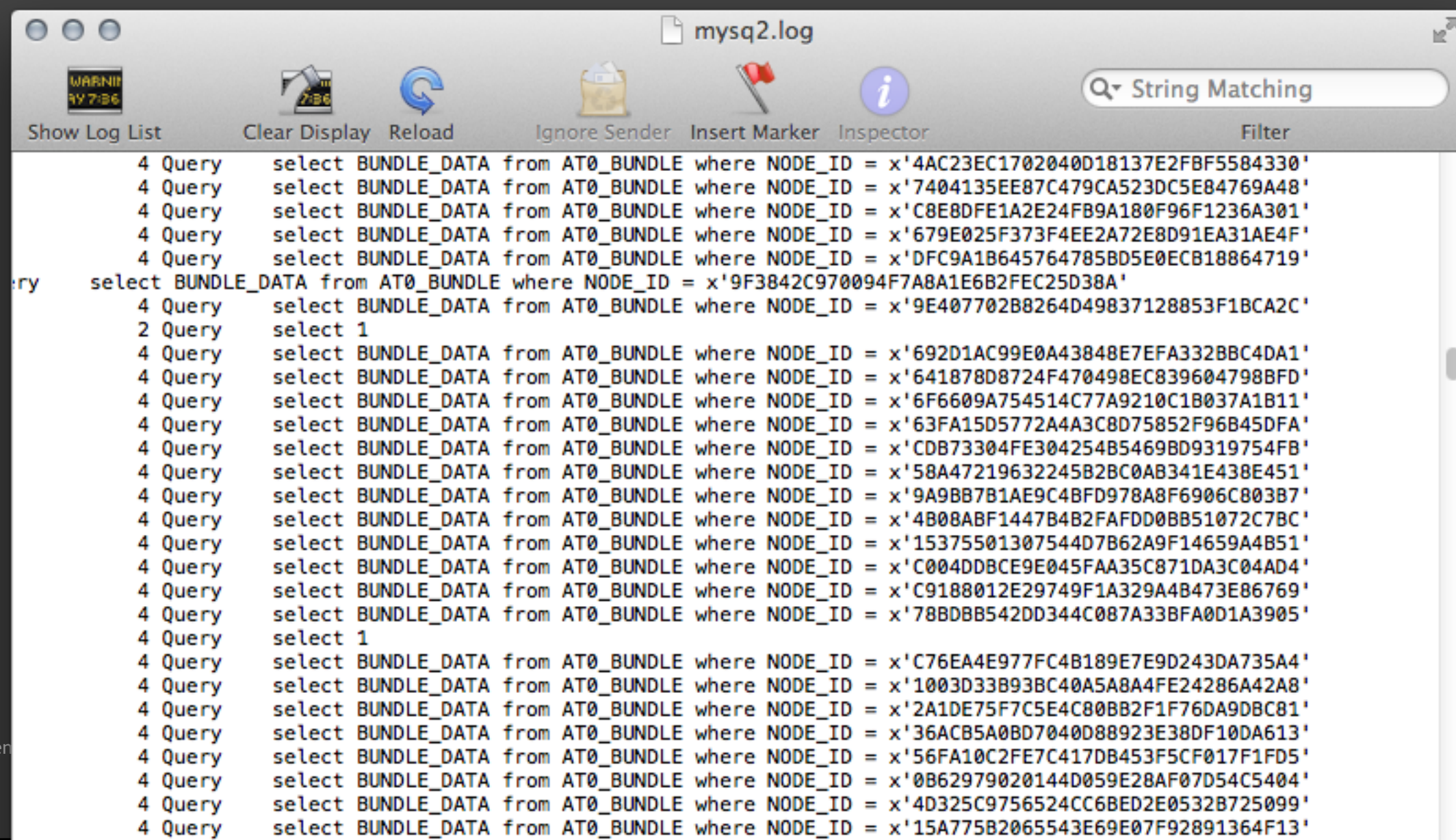
`product`		
(P)	id	int(11)
N	category_id DEFAULT NULL	int(11)
N	name DEFAULT NULL	varchar(100)
N	description DEFAULT NULL	varchar(10000)
N	manufacturer_id DEFAULT NULL	int(11)

`Variant`		
(P)	id	int(11)
N	product_id DEFAULT NULL	int(11)
N	name DEFAULT NULL	varchar(100)

Everything can go wrong
when demoing live.

Please be forgiving.

UNDER THE HOOD



```
mysql2.log
WARN 4V7:86
Show Log List Clear Display Reload Ignore Sender Insert Marker Inspector Filter
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'4AC23EC1702040D18137E2FBF5584330'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'7404135EE87C479CA523DC5E84769A48'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'C8E8DFE1A2E24FB9A180F96F1236A301'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'679E025F373F4EE2A72E8D91EA31AE4F'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'DFC9A1B645764785BD5E0ECB18864719'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'9F3842C970094F7A8A1E6B2FEC25D38A'
2 Query select 1
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'692D1AC99E0A43848E7EFA332BBC4DA1'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'641878D8724F470498EC839604798BFD'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'6F6609A754514C77A9210C1B037A1B11'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'63FA15D5772A4A3C8D75852F96B45DFA'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'CDB73304FE304254B5469BD9319754FB'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'58A47219632245B2BC0AB341E438E451'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'9A9BB7B1AE9C4BFD978A8F6906C803B7'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'4B08ABF1447B4B2FAFDD0BB51072C7BC'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'15375501307544D7B62A9F14659A4B51'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'C004DDBCE9E045FAA35C871DA3C04AD4'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'C9188012E29749F1A329A4B473E86769'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'78BDBB542DD344C087A33BFA0D1A3905'
4 Query select 1
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'C76EA4E977FC4B189E7E9D243DA735A4'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'1003D33B93BC40A5A8A4FE24286A42A8'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'2A1DE75F7C5E4C80BB2F1F76DA9DBC81'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'36ACB5A0BD7040D88923E38DF10DA613'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'56FA10C2FE7C417DB453F5CF017F1FD5'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'0B62979020144D059E28AF07D54C5404'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'4D325C9756524CC6BED2E0532B725099'
4 Query select BUNDLE_DATA from AT0_BUNDLE where NODE_ID = x'15A775B2065543E69E07F92891364F13'
```


THE PROOF OF JCR POWER



The screenshot shows the Adobe website homepage. At the top is a navigation bar with links: Products, Solutions, Learning, Help, Downloads, Company, Buy, and a search bar. Below the navigation bar is a hero banner featuring a woman holding a vintage camera. The text on the banner reads: "Introducing the Elements 11 family. Amazing photos and videos. Amazingly fast. Edit photos and videos more easily than ever with new Adobe Photoshop Elements 11 & Adobe Premiere Elements 11." Below the banner are several tiles: "Students, teachers, and schools" with a photo of a student writing; "Solutions for every business" with a photo of people in a meeting; and a promotional tile for video tools: "Switch. Save. Edit. Get up to 40% off all pro video tools when you switch from Final Cut or Avid by Nov. 30." The footer contains links for Learning, Help, and Download, along with a "Take a class" button and a "Find answers fast" link.

THANK YOU
AND GOOD LUCK
WITH JCR QUERIES!



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