

Exercise 2: Play with Graph Database

Goal

Be Familiar with OrientDB UI

-
- Execute Query
- Graph Viewer

ToDo

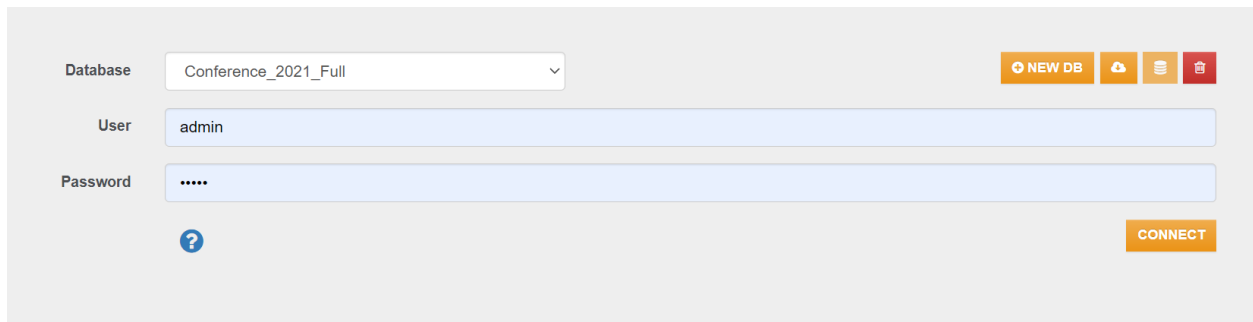
1. Log in

Open <http://localhost:2480/> with Chrome Browser

User: admin

Password: 2EPlex2021

Click 'Connect'



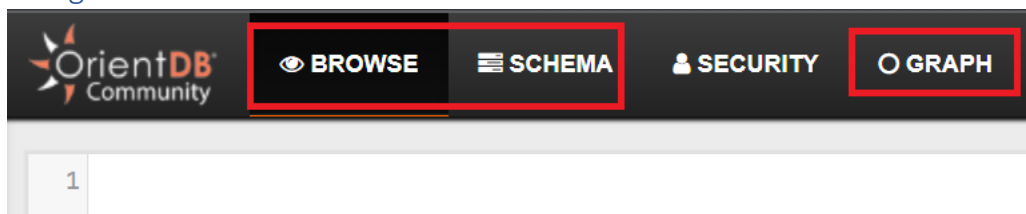
Database: Conference_2021_Full

User: admin

Password:

CONNECT

2. Navigate OrientDB UI



2.1 SCHEMA Tab

Click *SCHEMA* tab

You see List of Node (Vertex) and Edge defined

User Classes System Classes

Vertex Classes + NEW VERTEX

Name	Color	SuperClasses	Alias	Abstract	Clusters	Default Cluster	Cluster Selection	Records	Actions
Column		Object		<input type="checkbox"/>	[285,286,287,288,289,290,291,292,293,294,295,296]	285	round-robin	668	RENAME QUERY ALL + NEW RECORD DROP
DBSchema		ObjectWSource		<input type="checkbox"/>	[129,130,131,132,133,134,135,136,137,138,139,140]	129	round-robin	90	RENAME QUERY ALL + NEW RECORD DROP
Entity		Object		<input type="checkbox"/>	[249,250,251,252,253,254,255,256,257,258,259,260]	249	round-robin	38	RENAME QUERY ALL + NEW RECORD DROP
Field		Object		<input type="checkbox"/>	[117,118,119,120,121,122,123,124,125,126,127,128]	117	round-robin	441	RENAME QUERY ALL + NEW RECORD DROP
Function		ObjectWSource		<input type="checkbox"/>	[57,58,59,60,61,62,63,64,65,66,67,68]	57	round-robin	176	RENAME QUERY ALL + NEW RECORD DROP

1 2

Edge Classes + NEW EDGE

Name	Color	SuperClasses	Alias	Abstract	Clusters	Default Cluster	Cluster Selection	Records	Actions
DBSchema_Atr		DBSchema_Column		<input type="checkbox"/>	[1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100]	1089	round-robin	542	RENAME QUERY ALL + NEW RECORD DROP
DBSchema_Column		E		<input type="checkbox"/>	[1065,1066,1067,1068,1069,1070,1071,1072,1073,1074,1075,1076]	1065	round-robin	644	RENAME QUERY ALL + NEW RECORD DROP
DBSchema_Key		DBSchema_Column		<input type="checkbox"/>	[1077,1078,1079,1080,1081,1082,1083,1084,1085,1086,1087,1088]	1077	round-robin	101	RENAME QUERY ALL + NEW RECORD DROP
DBSchema_Record		E		<input type="checkbox"/>	[1341,1342,1343,1344,1345,1346,1347,1348,1349,1350,1351,1352]	1341	round-robin	6	RENAME QUERY ALL + NEW RECORD DROP
DBSchema_Virtual		DBSchema_Column		<input type="checkbox"/>	[1101,1102,1103,1104,1105,1106,1107,1108,1109,1110,1111,1112]	1101	round-robin	1	RENAME QUERY ALL + NEW RECORD DROP

1 2 3 4 5

Filter Schema

Type 'DBS', it lists only contains 'DBS' as a part of name

Schema Manager SAVE COLORS C

Create Vertex

SAVE COLORS CONFIG
ALL INDEXES
REBUILD ALL INDEXES

+ NEW VERTEX

Add new Vertex Person

Vertex Class: Person ✕

Name *

SuperClasses

Alias

Abstract

Number of Clusters

By default, OrientDB will create multiple clusters per each class (the number of clusters created is equals to the number of CPU's cores available on the server). All the records of a class are stored in the same cluster which has the same name as the class. For more details, visit the [docs](#)

SAVE

Find 'Person' Vertex you just added and click 'Person' cell in the row

Person	V	<input type="checkbox"/>	[1461,1462,1463,1464,1465,1466,1467,1468,1469,1470,1471,1472]	1461	round-robin	0	RENAME	QUERY ALL	+ NEW RECORD	DROP
--------	---	--------------------------	---	------	-------------	---	--	---	--	--

Click New Property

Person ?

SAVE
QUERY ALL
+ NEW RECORD
DROP

Properties ?

+ NEW PROPERTY

Name	Type	Linked_Type	Linked_Class	Mandatory	Read_Only	Not_Null	Min	Max	Collate
id	<input type="text" value="STRING"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	Case Insen

Add Property 'name' as string

Property: name ✕

Name *

Type *

Linked Type

Linked Class

Min

Max

Mandatory Read Only Not Null

Add property 'age' as integer

Property: age ➤

Name *

Type *

Linked Type

Linked Class

Min

Max

Mandatory Read Only Not Null

Confirm: Person

Person ?

Properties ?

Name	Type	Linked_Type
age	INTEGER <input type="text"/>	<input type="text"/>
id	STRING <input type="text"/>	<input type="text"/>
name	STRING <input type="text"/>	<input type="text"/>

Add new Vertex 'Movie'

Vertex Class: Movie ✕

Name *

SuperClasses

Alias

Abstract

Number of Clusters

By default, OrientDB will create multiple clusters per each class (the number of clusters created is equals to the number of CPU's cores available on the server). All the records of a class are stored in the same cluster which has the same name as the class. For more details, visit the [docs](#)

Add Property 'name' as string

Property: name ✕

Name *

Type *

Linked Type

Linked Class

Min

Max

Mandatory Read Only Not Null

Confirm: Movie

Movie ?

Properties ?

Name	Type	Linked_Type
id	STRING <input type="text"/>	<input type="text"/>
name	STRING <input type="text"/>	<input type="text"/>

Create Edge

+ NEW EDGE

Create 'Likes' Edge

Set 'From Vertex' as Person

Set 'To Vertex' as Movie

Edge Class: Likes

Name *

SuperClasses

From Vertex

To Vertex

Alias

Abstract

Number of Clusters

By default, OrientDB will create multiple clusters per each class (the number of clusters created is equals to the number of CPU's cores available on the server). All the records of a class are stored in the same cluster which has the same name as the class. For more details, visit the [docs](#)

SAVE

Add property 'rate' as int

Property: rate

Name *

Type *

Linked Type

Linked Class

Min

Max

Mandatory Read Only Not Null

CLOSE SAVE

Confirm: Likes

Likes ?

Properties ?

Name	Type	Linked_Type	Linked_Class
in	LINK		Movie
out	LINK		Person
rate	INTEGER		

Click QUERY ALL

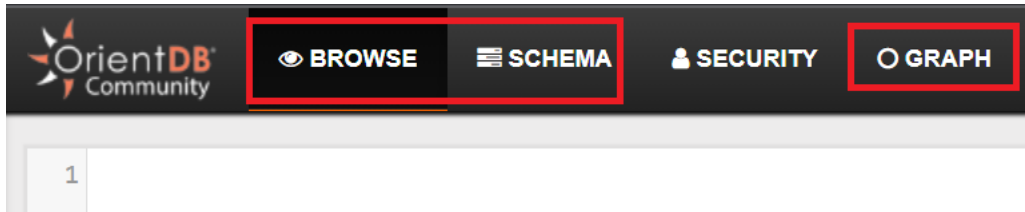
Vertex Classes

+ NEW VERTEX

Name	Color	SuperClasses	Alias	Abstract	Clusters	Default Cluster	Cluster Selection	Records	Actions
DBSchema		ObjectWSource		<input type="checkbox"/>	[129,130,131,132,133,134,135,136,137,138,139,140]	129	round-robin	90	RENAME QUERY ALL + NEW RECORD DROP

2.2 BROWSE Tab

Click BROWSE tab



Insert data to Person 'Kiyoshi' and Movie "Blues Brothers"

Insert Into Person set name = 'Kiyoshi', age = 10

Insert Into Movie set name = 'Blues Brothers'

COMMAND

Insert Into Person set name = 'Kiyoshi', age = 10

METADATA			PROPERTIES	
@rid	@version	@class	name	age
#81:0	1	Person	Kiyoshi	10

COMMAND

Insert Into Movie set name = 'Blues Brothers'

METADATA			PROPERTIES
@rid	@version	@class	name
#93:0	1	Movie	Blues Brothers

Insert Likes Edge "Kiyoshi Likes Blues Brothers"

Create Edge Likes from (select from Person where name = 'Kiyoshi') to (select from Movie where name = 'Blues Brothers') set rate = 5

COMMAND

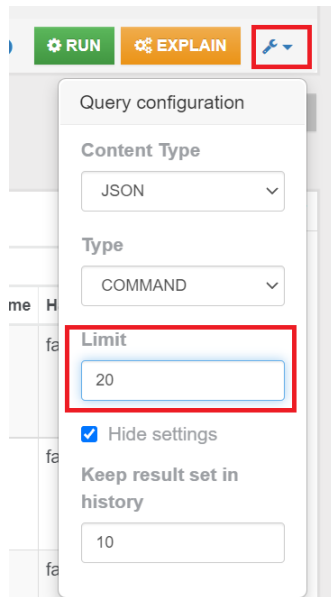
Create Edge Likes from (select from Person where name = 'Kiyoshi') to (select from Movie where name = 'Blues Brothers') set rate = 5

METADATA			PROPERTIES		
@rid	@version	@class	rate	out	in
#105:0	1	Likes	5	#81:0	#93:0

Note: @rid is automatically assigned.

Increase Row size limit to 200

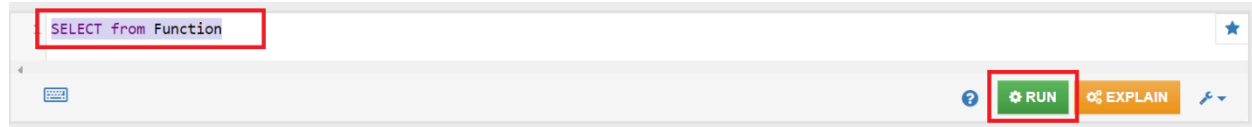
By default, limit is 20. Increase this number to 200 to return more rows



Execute simple Query

Execute Relational database SQL like simple query

Type query and click 'Run'



Query Samples 1

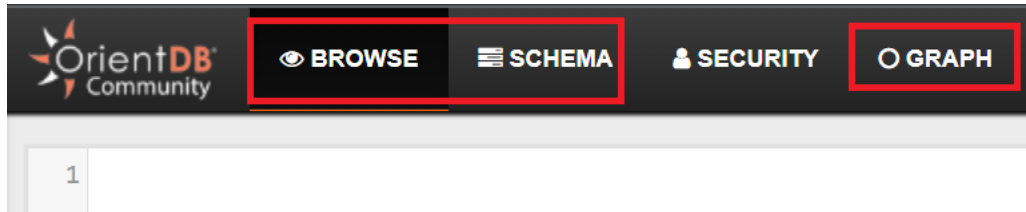
```
SELECT * from Function
```

```
SELECT * from Function where IsInternal = true
```

```
SELECT * from Function where IsInternal = true Order by name
```

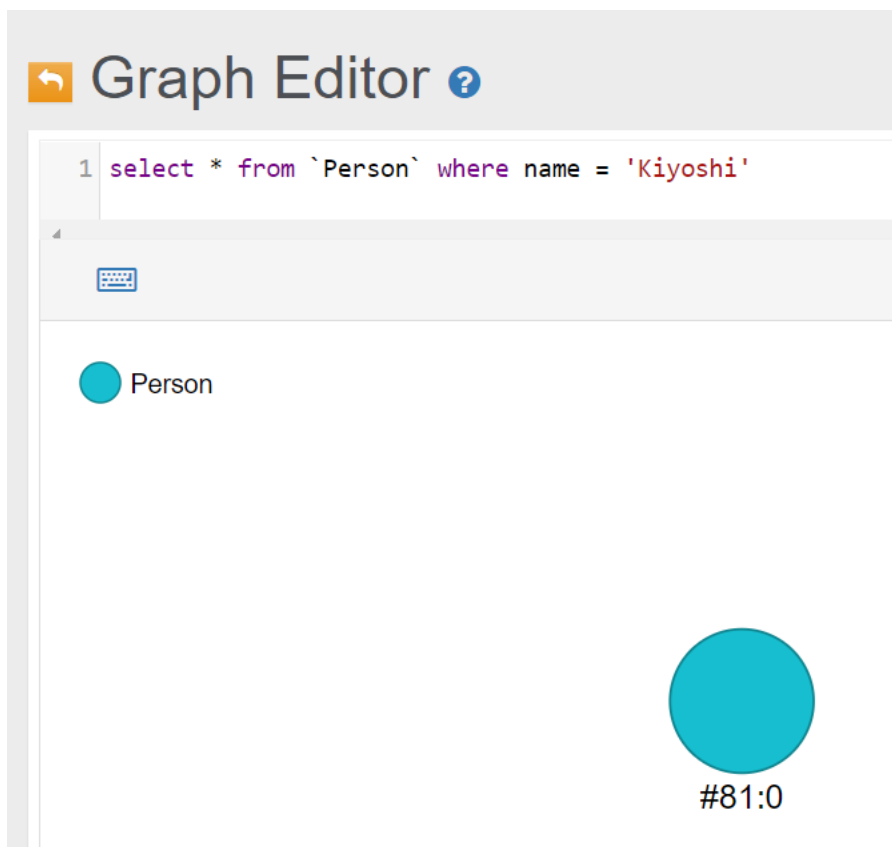
2.3 GRAPH Tab

Click GRAPH tab



Show Graph

```
select * from `Person` where name = 'Kiyoshi'
```



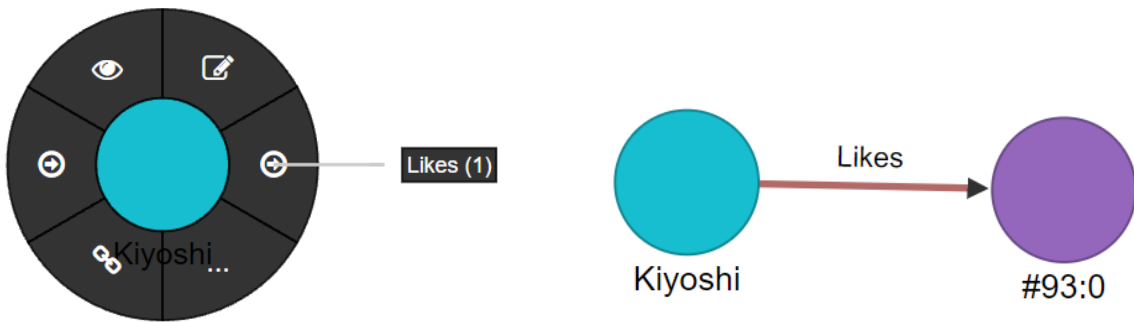
The image displays the Graph Editor interface. At the top, there is a header with a back arrow icon and the text "Graph Editor" followed by a help icon. Below the header is a text input field containing the query: `1 select * from `Person` where name = 'Kiyoshi'`. Underneath the query field is a keyboard icon. The main area of the editor shows a graph visualization with a single node. The node is represented by a teal circle and is labeled "Person" to its left. Below the node, the identifier "#81:0" is displayed.

Display Name instead of @rid

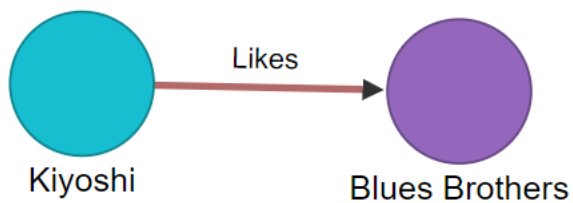
The image shows two side-by-side windows. The left window is titled 'Person-#81:0' and has a 'Settings' tab. It contains several configuration options: 'Display' (set to 'name'), 'Display Template' (empty), 'Display Color' (black), 'Display Background' (black), 'Icon' (a red circle with a slash), 'Icon Size' (empty), 'Icon Vertical Padding' (empty), 'Radius' (empty), 'Fill' (teal), and 'Stroke' (teal). A 'SAVE' button is at the bottom. The right window is titled 'Graph Editor' and shows a SQL query: `1 select * from `Person` where name = 'Kiyoshi'`. Below the query, a teal circle is shown with the label 'Kiyoshi' underneath it.

Display Movie

Click the circle and click 'Likes'



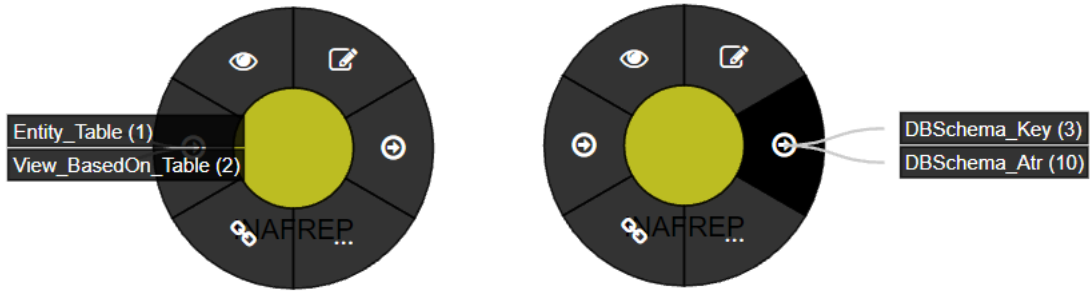
Display name for Movie



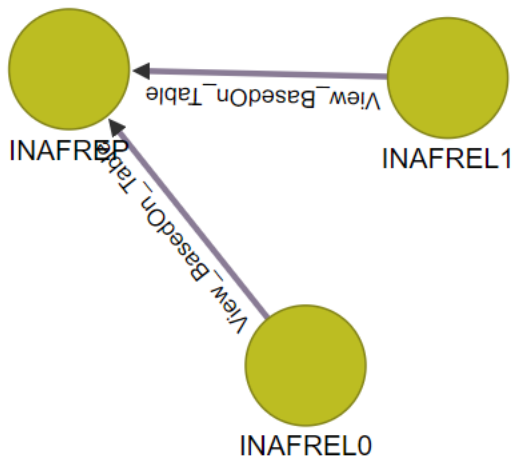
Execute more query

```
select * from `DBSchema` where name = 'INAFREP'
```

Click 'Circle' and hover arrows



Click 'View_basedOn_Table'



To clear canvas click



Execute bellow query

```
select from (TRAVERSE in('Function_Calls_Function') FROM (select from Function where name = '1102619'))
```

