

How GRAPH Data Is Stored

In a Table

EmployeeID	LastName	FirstName	ReportsTo	Department
1	Davolio	Nancy	3	IT
2	Fuller	Andrew	NULL	NULL
3	Leverling	Janet	2	IT
4	Peacock	Margaret	3	IT
5	Buchanan	Steven	2	Finance
6	Suyama	Michael	5	Finance
7	King	Robert	5	Finance
8	Callahan	Laura	4	IT
9	Dodsworth	Anne	4	IT
10	Robinson	Peter	8	IT
11	Smith	Mary	8	IT
12	Chang	Leslie	7	Finance
13	Morales	Conney	12	Finance
14	Ng	Jordan	12	Finance
15	Black	Lela	11	IT
16	Lee	Josh	14	Finance
17	Spencer	Monica	16	Finance
19	Smith	JoAnna	17	Finance
20	White	Peter	16	Finance

In Two Tables

```
CREATE TABLE Person (ID INTEGER PRIMARY KEY, Name VARCHAR(100), Age INT) AS NODE;  
CREATE TABLE friends (StartDate date) AS EDGE;
```

Node Properties			Nodes that this edge connects			Edge Properties
\$node_id	Name	Age	\$edge_id	\$from_id	\$to_id	StartDate
{"type": "node", "id": 0}	John	30	{"type": "edge", "id": 0}	{"type": "node", "id": 0}	{"type": "node", "id": 1}	01/01/2013
"type": "node", "id": 1}	Mary	28	{"type": "edge", "id": 1}	{"type": "node", "id": 1}	{"type": "node", "id": 2}	05/05/2010
"type": "node", "id": 2}	Alice	25	{"type": "edge", "id": 2}	{"type": "node", "id": 2}	{"type": "node", "id": 0}	09/09/2016

Person Node Table **Friends Edge Table**

Nodes and Edges are stored as tables

Query GRAPH Data in Two Tables

New `MATCH` clause is introduced to support pattern matching and multi-hop navigation through the graph. The `MATCH` function uses ASCII-art style syntax for pattern matching. For example:

```
-- Find friends of John
SELECT Person2.Name
FROM Person Person1, Friends, Person Person2
WHERE MATCH(Person1-(Friends)->Person2)
AND Person1.Name = 'John';
```

In a Specialized **GRAPH Database with**
Embedded Pointers