



Tree Walks - Introduction

Typically the hierarchy will be defined in a table by the use of a foreign key or 'pigs ear', where a column perhaps called Parent ID would have a foreign key to the Primary Key column.

ID	Level	Name	Parent ID
1	One	Level 1	
3	Two	Level 2 A	1
5	Two	Level 2 B	1

Tree walking is the technique of taking the Parent ID and traversing either up or down the hierarchy or 'tree'.



```
select <column_name>  
from <table_name>  
start with <column_name> = '<value>'  
connect by prior <primary key column> = <foreign key name>;
```

In the example this is how to work down the tree....

```
start with name = 'LEVEL 1'  
connect by prior ID = Parent_ID;
```

To work up the tree the 'prior' clause is moved to the right ...

```
start with name = 'LEVEL 6A'  
connect by ID = prior Parent_ID;
```



Tree Walks - Example of Tree Walking in SQL

Issuing the following statement on this data will return the following records...

```
select id, level, name, parent_id  
from table  
start with name = 'LEVEL 1'  
connect by prior id = parent_id;
```

<i>ID</i>	<i>Level</i>	<i>Name</i>	<i>Parent_ID</i>
1	One	Level 1	
3	Two	Level 2A	1
5	Two	Level 2B	1



So far Tree Walks have been output in no particular order within the levels, 'order siblings' will allow the ordering of each sub-grouping amongst itself

```
select lpad('-', level, '-')//sl_location_name LOCATION  
from store_locations  
start with sl_parent_location_id is null  
connect by prior sl_location_id = sl_parent_location_id  
order siblings by sl_location_name;
```

Note the use of level, this is a reserved word which holds the level value of the current record

Tree Walks - Advanced Ordering of Siblings in Tree Walks



LOCATION

-WEST NORWOOD

--GLASGOW

---EDINBURGH

----DUNDEE

----DUNFERMLINE

----KIRKCALDY

----MIDLOTHIAN

----PAISLEY

----PENRITH