

1 Order By Example

Assume the example table Sailors from Virtual Lab (in odtuclass). The content of the table is given below:

```
sqlite> Select * From Sailors;  
22|Dustin|7|45.0  
29|Brutus|1|33.0  
31|Lubber|8|55.5  
32|Andy|8|25.5  
58|Rusty|10|35.0  
64|Horatio|7|35.0  
71|Zorba|10|16.0  
74|Horatio|9|35.0  
85|Art|3|25.5  
95|Bob|3|63.5
```

The content of the table if we select the sailors younger than age 45.

```
sqlite> Select * From Sailors Where age < 45;  
29|Brutus|1|33.0  
32|Andy|8|25.5  
58|Rusty|10|35.0  
64|Horatio|7|35.0  
71|Zorba|10|16.0  
74|Horatio|9|35.0  
85|Art|3|25.5
```

Order by clause sorts the content of the result by a given column name. There are two sorting methods ASC stands for ascending and DESC is descending. There is an example that we sort the result by sid in descending order:

```
sqlite> Select * From Sailors Where age < 45 Order By sid DESC;  
85|Art|3|25.5  
74|Horatio|9|35.0  
71|Zorba|10|16.0  
64|Horatio|7|35.0  
58|Rusty|10|35.0  
32|Andy|8|25.5  
29|Brutus|1|33.0
```

A similar example that we sort the result in the ascending order of sName's:

```
sqlite> Select * From Sailors Where age < 45 Order By sName ASC;  
32|Andy|8|25.5  
85|Art|3|25.5  
29|Brutus|1|33.0  
64|Horatio|7|35.0  
74|Horatio|9|35.0  
58|Rusty|10|35.0  
71|Zorba|10|16.0
```

For example, assume the following query, list the sailors who are younger than 45. Order the result by ascending order of sailor name and descending order of rating. This means you need to sort the results by sailor names and if two sailors' name is equal sort them using rating. The query and the result are given below:

```
sqlite> Select * From Sailors Where age < 45 Order By sName ASC, rating DESC;
32|Andy|8|25.5
85|Art|3|25.5
29|Brutus|1|33.0
74|Horatio|9|35.0
64|Horatio|7|35.0
58|Rusty|10|35.0
71|Zorba|10|16.0
```

Consider this example, we want to find the minimum age of the sailor from each rating.

```
sqlite> Select rating, MIN(age)
...> From Sailors Group by rating;
1|33.0
3|25.5
7|35.0
8|25.5
9|35.0
10|16.0
```

If you want to sort the table using the minimum age of the groups, You can change the column name of the Min(age) part by using as. After renaming the column you can sort the table using the new column name:

```
sqlite> Select rating, MIN(age) as minAge
...> From Sailors Group by rating
[ ...> Order by minAge;
10|16.0
3|25.5
8|25.5
1|33.0
7|35.0
9|35.0
[sqlite>
```

And finally, you can directly sort the table by giving the selection index of the column in the select part. For our example, we want to sort the table by minimum age which is the second column in our result, so we can directly write 2 to the order by clause.

```
sqlite> Select rating, MIN(age)
...> From Sailors Group by rating
[ ...> Order by 2;
10|16.0
3|25.5
8|25.5
1|33.0
7|35.0
9|35.0
[sqlite>
```

Indexes start from 1 and you can use ASC or DESC with them also.