

Aggregate Functions	

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create table animals as
  select "dog" as kind, 4 as legs, 20 as weight union
```

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create table animals as
select "dog" as kind, 4 as legs, 20 as weight union
select "cat" , 4 , 10 union
select "ferret" , 4 , 10 union
select "parrot" , 2 , 6 union
select "penguin" , 2 , 10 union
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### animals:

kind	legs	weight
dog	4	20
cat	4	10
ferret	4	10
parrot	2	6
penguin	2	10
t-rex	2	12000

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select max(legs) from animals;

max(legs)	
4	

### animals:

kind	legs	weight
dog	4	20
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(Demo)

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An aggregate function also selects some row in the table to supply the values of columns that are not aggregated. In the case of max or min, this row is that of the max or min value. Otherwise, it is arbitrary.

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dog	4	20
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select max(weight), kind from animals;
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select max(weight), kind from animals;
select min(kind), kind from animals;
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dog	4	20
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select max(weight), kind from animals; select max(legs), kind from animals;
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```
select max(weight), kind from animals; select max(legs), kind from animals;
select min(kind), kind from animals; select avg(weight), kind from animals;
```

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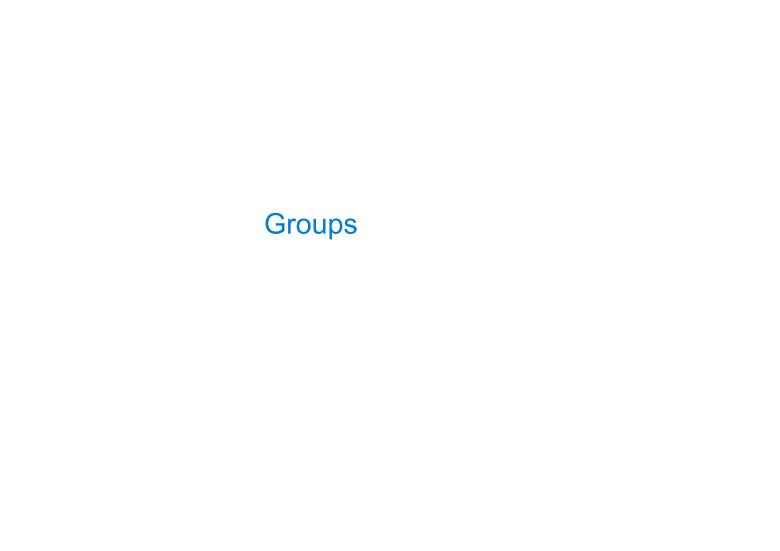
```
select max(weight), kind from animals;
select max(legs), kind from animals;
(Demo)
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# **Discussion Question**

What are all the kinds of animals that have the maximal number of legs?



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Rows in a table can be grouped, and aggregation is performed on each group

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#### animals:

	kind	legs	weight
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legs=4	cat	4	10
	ferret	4	10
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	cat	4	10
	ferret	4	10
legs=2	parrot	2	6
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			kind	legs	weight	
legs	max(weight)	1 :	dog	4	20	
		legs=4	cat	4	10	
4	20		ferret	4	10	
2	12000	<b></b>	parrot	2	6	
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legs	max(weight)	[	dog	4	20	1
1093		legs=4	cat	4	10	i
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	12000	<b>V</b>	parrot	2	6	
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		(Demo)	t-rex	2	12000	1

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select weight/legs, count(\*) from animals group by weight/legs having count(\*)>1;

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### animals:

weight/legs=5

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weight/legs=2
weight/legs=3

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weight/legs	count(*)
5	2
2	2

weight/legs=5
weight/legs=2
weight/legs=2
weight/legs=3
weight/legs=5
weight/legs=6000

kind	legs	
dog	4	
rat	4	

animals:

weight

20

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2	2



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What's the maximum difference between leg count for two animals with the same weight?

Example: Big Game

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(Demo)