



Title

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Course	Database Concepts and Applications
Session	
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Date	2022-09-14

EASY

1. Display the (1) oldest Cat and the (1) oldest Dog.

The screenshot shows a PostgreSQL query editor window titled "ZOO/postgres@PostgreSQL 11". The "Query Editor" tab is active, displaying the following SQL query:

```
1 SELECT MIN(animals.dob) , species.current_name FROM animals
2 INNER JOIN species ON species.id = animals.species_id
3 WHERE species.id IN
4 (SELECT id FROM species
5 WHERE current_name IN ('Dog','Cat'))
6 GROUP BY species.current_name ;
7
8
9
10
11
12
13
```

Below the query editor, the "Data Output" tab is active, showing the results of the query in a table:

	min	current_name
	timestamp without time zone	character varying (50)
1	2013-05-19 15:59:00	Cat
2	2013-05-14 15:40:00	Dog

2. Display the cats whose id is smaller than it's species's id.

ZOO/postgres@PostgreSQL 11

Query Editor Query History

```
1 SELECT animals.id , species.current_name , animals.species_id FROM animals
2 INNER JOIN species ON animals.id > species.id
3 WHERE species.id IN
4 (SELECT id FROM species
5 WHERE current_name = 'Cat')
6 ;
7
8
9
10
11
12
13
--
```

Data Output Explain Messages Notifications

	id	current_name	species_id
	integer	character varying (50)	integer
1	3	Cat	2
2	4	Cat	3
3	5	Cat	2
4	6	Cat	3
5	7	Cat	1
6	8	Cat	2
7	9	Cat	3
8	10	Cat	1
9	11	Cat	1
10	12	Cat	1
11	13	Cat	1
12	14	Cat	1
13	15	Cat	1
14	16	Cat	1
15	17	Cat	1
16	18	Cat	1
17	19	Cat	1
18	20	Cat	1

ZOO/postgres@PostgreSQL 11

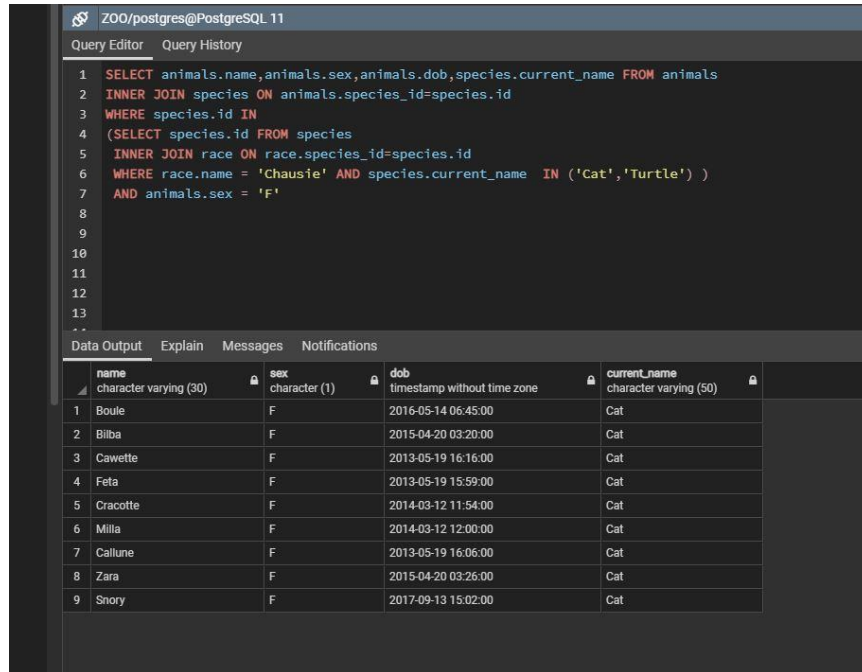
Query Editor Query History

```
1 SELECT animals.id , species.current_name , animals.species_id FROM animals
2 INNER JOIN species ON animals.id < animals.species_id
3 WHERE species.id IN
4 (SELECT id FROM species
5 WHERE current_name = 'Cat')
6 ;
7
8
9
10
11
12
13
--
```

Data Output Explain Messages Notifications

id	current_name	species_id
integer	character varying (50)	integer

3. List all the female Chausie cats and turtles. (Name, DOB, Sex, Species)



The screenshot shows a PostgreSQL query editor interface. The top bar indicates the connection is to 'ZOO/postgres@PostgreSQL 11'. Below the bar are tabs for 'Query Editor' and 'Query History'. The 'Query Editor' tab contains a SQL query that selects animal details based on specific criteria. Below the query editor are tabs for 'Data Output', 'Explain', 'Messages', and 'Notifications'. The 'Data Output' tab is active, displaying a table with 9 rows of data. The table has five columns: 'name', 'sex', 'dob', and 'current_name'. The data includes names like Boule, Biba, Cawette, Feta, Cracotte, Milla, Callune, Zara, and Snory, all of which are female ('F') and are currently listed as 'Cat'.

```
1 SELECT animals.name,animals.sex,animals.dob,species.current_name FROM animals
2 INNER JOIN species ON animals.species_id=species.id
3 WHERE species.id IN
4 (SELECT species.id FROM species
5 INNER JOIN race ON race.species_id=species.id
6 WHERE race.name = 'Chausie' AND species.current_name IN ('Cat','Turtle') )
7 AND animals.sex = 'F'
```

	name character varying (30)	sex character (1)	dob timestamp without time zone	current_name character varying (50)
1	Boule	F	2016-05-14 06:45:00	Cat
2	Biba	F	2015-04-20 03:20:00	Cat
3	Cawette	F	2013-05-19 16:16:00	Cat
4	Feta	F	2013-05-19 15:59:00	Cat
5	Cracotte	F	2014-03-12 11:54:00	Cat
6	Milla	F	2014-03-12 12:00:00	Cat
7	Callune	F	2013-05-19 16:06:00	Cat
8	Zara	F	2015-04-20 03:26:00	Cat
9	Snory	F	2017-09-13 15:02:00	Cat

4. Update all the dog's nulled comments to "woff, woff, woff"

ZOO/postgres@PostgreSQL 11

Query Editor Query History

```
1 UPDATE animals
2 SET comments = 'woff, woff, woff'
3 WHERE comments IS NULL AND animals.id IN
4 (
5 SELECT animals.id FROM animals
6 INNER JOIN species ON animals.species_id = species.id
7 WHERE species.current_name = 'Dog' )
8
9 RETURNING animals.comments
10
11
12
13
14
```

Data Output Explain Messages Notifications

	comments	
	text	
1	woff, woff, woff	
2	woff, woff, woff	
3	woff, woff, woff	
4	woff, woff, woff	
5	woff, woff, woff	
6	woff, woff, woff	
7	woff, woff, woff	
8	woff, woff, woff	
9	woff, woff, woff	
10	woff, woff, woff	
11	woff, woff, woff	
12	woff, woff, woff	
13	woff, woff, woff	
14	woff, woff, woff	
15	woff, woff, woff	
16	woff, woff, woff	
17	woff, woff, woff	
18	woff, woff, woff	

5. Display the top 3 youngest animals of each race

ZOO/postgres@PostgreSQL 11

Query EditorQuery History

1 (SELECT a.name, a.dob, r.name

2 FROM animals a

3 JOIN race r

4 ON a.race_id = r.id

5 WHERE r.id = 1 ORDER BY r.name limit 3)

6 UNION

7 (SELECT a.name, a.dob, r.name

8 FROM animals a

9 JOIN race r

10 ON a.race_id = r.id

11 WHERE r.id = 2 ORDER BY r.name limit 3)

12 UNION

13 (SELECT a.name, a.dob, r.name

14 FROM animals a

15 JOIN race r

16 ON a.race_id = r.id

17 WHERE r.id = 3 ORDER BY r.name limit 3)

18 UNION

19 (SELECT a.name, a.dob, r.name

20 FROM animals a

21 JOIN race r

22 ON a.race_id = r.id

23 WHERE r.id = 4 ORDER BY r.name limit 3)

24 UNION

25 (SELECT a.name, a.dob, r.name

26 FROM animals a

27 JOIN race r

28 ON a.race_id = r.id

29 WHERE r.id = 5 ORDER BY r.name limit 3);

30

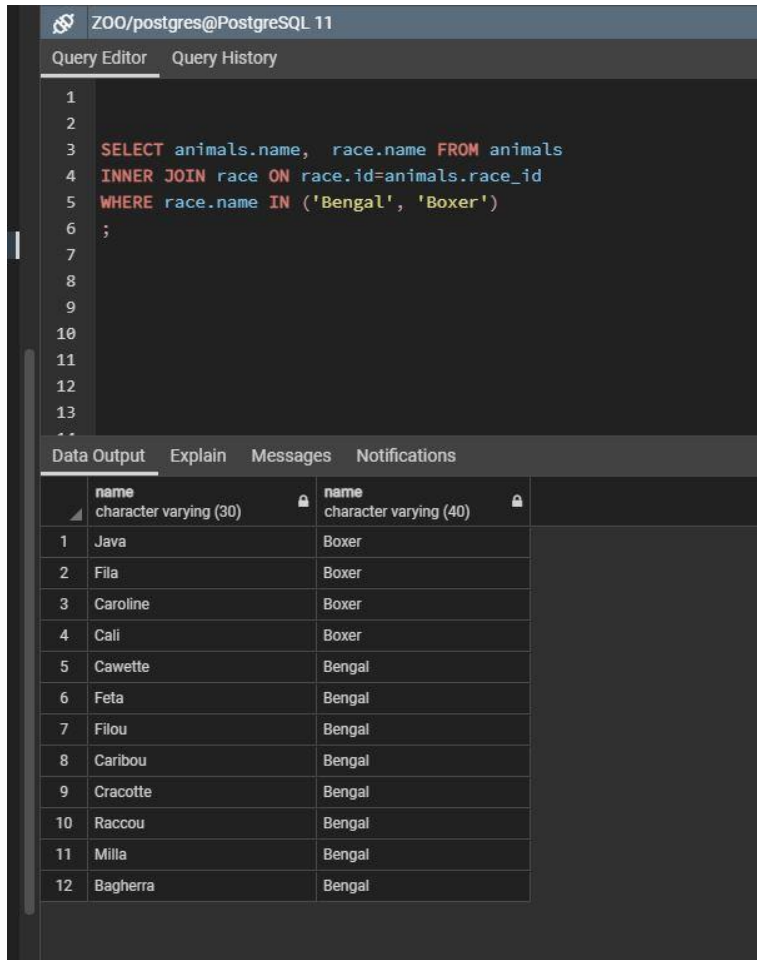
31

Data OutputExplainMessagesNotifications

	name character varying (30)	dob timestamp without time zone	name character varying (40)
1	Welva	2015-03-10 13:45:00	American Bully
2	Caroline	2015-12-06 05:18:00	Boxer
3	Boucan	2016-05-14 06:42:00	American Curl

MED

1. List all the Boxer and all the Bengal (Race Name, Animal Name)



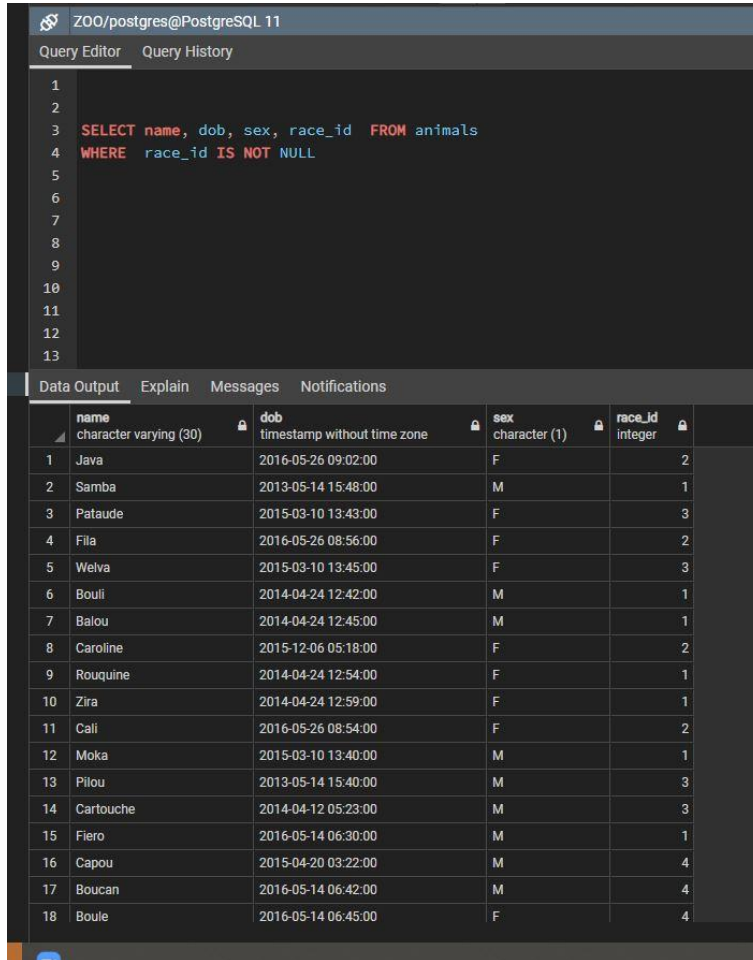
The screenshot shows a PostgreSQL query editor interface. The top bar indicates the connection is 'ZOO/postgres@PostgreSQL 11'. Below the bar are tabs for 'Query Editor' and 'Query History'. The query editor contains the following SQL query:

```
1
2
3 SELECT animals.name, race.name FROM animals
4 INNER JOIN race ON race.id=animals.race_id
5 WHERE race.name IN ('Bengal', 'Boxer')
6 ;
7
8
9
10
11
12
13
...
```

Below the query editor are tabs for 'Data Output', 'Explain', 'Messages', and 'Notifications'. The 'Data Output' tab is active, displaying a table with two columns: 'name' (character varying (30)) and 'name' (character varying (40)). The table contains 12 rows of data:

	name character varying (30)	name character varying (40)
1	Java	Boxer
2	Fila	Boxer
3	Caroline	Boxer
4	Cali	Boxer
5	Cawette	Bengal
6	Feta	Bengal
7	Filou	Bengal
8	Caribou	Bengal
9	Cracotte	Bengal
10	Raccou	Bengal
11	Milla	Bengal
12	Bagherra	Bengal

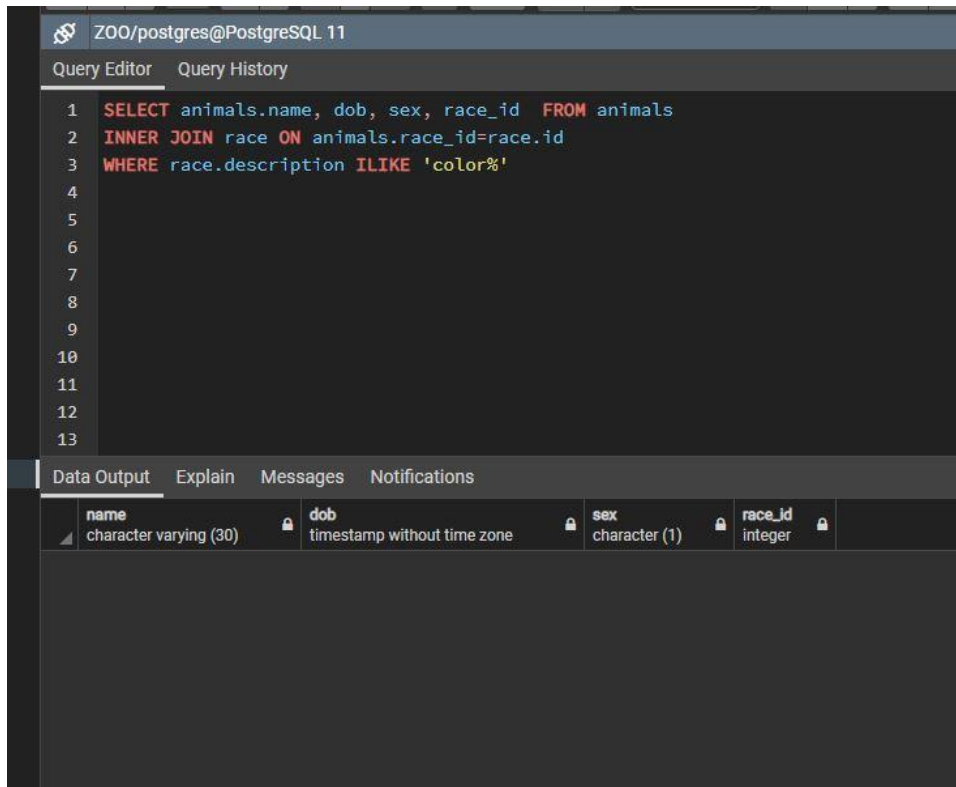
2. List of animals (Name, Sex, DOB, Race_Id) with a race .



The screenshot shows a PostgreSQL query editor interface. At the top, the connection is labeled 'ZOO/postgres@PostgreSQL 11'. Below this, there are tabs for 'Query Editor' and 'Query History'. The 'Query Editor' tab is active, displaying a SQL query across 13 lines. The query is:
1
2
3 SELECT name, dob, sex, race_id FROM animals
4 WHERE race_id IS NOT NULL
5
6
7
8
9
10
11
12
13
Below the query editor, there are tabs for 'Data Output', 'Explain', 'Messages', and 'Notifications'. The 'Data Output' tab is active, showing a table with 18 rows of data. The table has four columns: 'name' (character varying (30)), 'dob' (timestamp without time zone), 'sex' (character (1)), and 'race_id' (integer). The data is as follows:

	name character varying (30)	dob timestamp without time zone	sex character (1)	race_id integer
1	Java	2016-05-26 09:02:00	F	2
2	Samba	2013-05-14 15:48:00	M	1
3	Pataude	2015-03-10 13:43:00	F	3
4	Fila	2016-05-26 08:56:00	F	2
5	Welva	2015-03-10 13:45:00	F	3
6	Bouli	2014-04-24 12:42:00	M	1
7	Balou	2014-04-24 12:45:00	M	1
8	Caroline	2015-12-06 05:18:00	F	2
9	Rouquine	2014-04-24 12:54:00	F	1
10	Zira	2014-04-24 12:59:00	F	1
11	Cali	2016-05-26 08:54:00	F	2
12	Moka	2015-03-10 13:40:00	M	1
13	Pilou	2013-05-14 15:40:00	M	3
14	Cartouche	2014-04-12 05:23:00	M	3
15	Fiero	2016-05-14 06:30:00	M	1
16	Capou	2015-04-20 03:22:00	M	4
17	Boucan	2016-05-14 06:42:00	M	4
18	Boule	2016-05-14 06:45:00	F	4

3. List of animals (Name, Sex, DOB, Race_Id) whose race has the word color in it.



The screenshot shows a PostgreSQL query editor interface. The title bar indicates the connection is to 'ZOO/postgres@PostgreSQL 11'. The 'Query Editor' tab is active, displaying the following SQL query:

```
1 SELECT animals.name, dob, sex, race_id FROM animals
2 INNER JOIN race ON animals.race_id=race.id
3 WHERE race.description ILIKE 'color%'
4
5
6
7
8
9
10
11
12
13
```

Below the query editor, the 'Data Output' tab is active, showing the column definitions for the query result:

name	dob	sex	race_id
character varying (30)	timestamp without time zone	character (1)	integer

4. List all the dog and cats and turtle whose name has the letter 'a' in it.

ZOO/postgres@PostgreSQL 11

Query EditorQuery History

12345678910111213

```
1 SELECT animals.name, animals.species_id , species.current_name FROM animals
2 INNER JOIN species ON animals.species_id=species.id
3 WHERE species.current_name IN ('Dog','Cat','Turtle') AND animals.name ILIKE '%%'
4
5
6
7
8
9
10
11
12
13
```

Data Output

Explain

Messages

Notifications

	name character varying (30)	species_id integer	current_name character varying (50)
1	Zambo	1	Dog
2	Canaille	1	Dog
3	Java	1	Dog
4	Samba	1	Dog
5	Pataude	1	Dog
6	Fila	1	Dog
7	Welva	1	Dog
8	Balou	1	Dog
9	Caroline	1	Dog
10	Zira	1	Dog
11	Louya	1	Dog
12	Anyu	1	Dog
13	Cali	1	Dog
14	Moka	1	Dog
15	Cartouche	1	Dog
16	Tortilla	3	Turtle
17	Lulla	3	Turtle
18	Dana	3	Turtle

5. List all the male dogs, the female cats and the youngest parrot (name, sex, specie, dob), order by species_name

ZOO/postgres@PostgreSQL 11

Query Editor Query History

```
1
2 (SELECT species.current_name,animals.name, animals.dob,animals.sex FROM species
3 INNER JOIN animals ON animals.species_id=species.id
4 WHERE( species.current_name IN ('Cat') AND animals.sex = 'F' ) OR (species.current_name IN ('Dog') AND animals.sex = 'M')
5 OR (species.current_name IN ('Parrot') AND animals.dob > TIMESTAMP '2016-03-26 07:56:00' )
6 ORDER BY species.current_name)
7
8
9
10
11
12
13
```

Data Output Explain Messages Notifications

	current_name character varying (50)	name character varying (30)	dob timestamp without time zone	sex character (1)
2	Cat	Boule	2016-05-14 06:45:00	F
3	Cat	Bilba	2015-04-20 03:20:00	F
4	Cat	Cawette	2013-05-19 16:16:00	F
5	Cat	Feta	2013-05-19 15:59:00	F
6	Cat	Cracotte	2014-03-12 11:54:00	F
7	Cat	Milla	2014-03-12 12:00:00	F
8	Cat	Callune	2013-05-19 16:06:00	F
9	Cat	Zara	2015-04-20 03:26:00	F
10	Dog	Rox	2017-04-05 13:43:00	M
11	Dog	Zambo	2013-05-14 15:50:00	M
12	Dog	Samba	2013-05-14 15:48:00	M
13	Dog	Bouli	2014-04-24 12:42:00	M
14	Dog	Balou	2014-04-24 12:45:00	M
15	Dog	Bobo	2017-07-21 15:41:00	M
16	Dog	Moka	2015-03-10 13:40:00	M
17	Dog	Pilou	2013-05-14 15:40:00	M
18	Dog	Cartouche	2014-04-12 05:23:00	M
19	Parrot	Ravard	2016-03-26 08:28:00	M

HARD

1. List all the Cats who has any parents.

The screenshot shows a PostgreSQL query editor with the following SQL query:

```
1 SELECT animals.name, animals.species_id, animals.mother_id, animals.father_id, species.current_name FROM animals
2 INNER JOIN species ON animals.species_id = species.id
3 WHERE species.current_name = 'Cat' AND (animals.mother_id IS NOT NULL OR animals.father_id IS NOT NULL)
4
5
6
7
8
9
10
11
12
13
```

The query results are displayed in a table with the following columns: name, species_id, mother_id, father_id, and current_name.

	name	species_id	mother_id	father_id	current_name
1	Shory	2	41	31	Cat
2	Roucky	2	40	30	Cat

2. List of Bouli's kid(s) (Name, Sex and DOB)

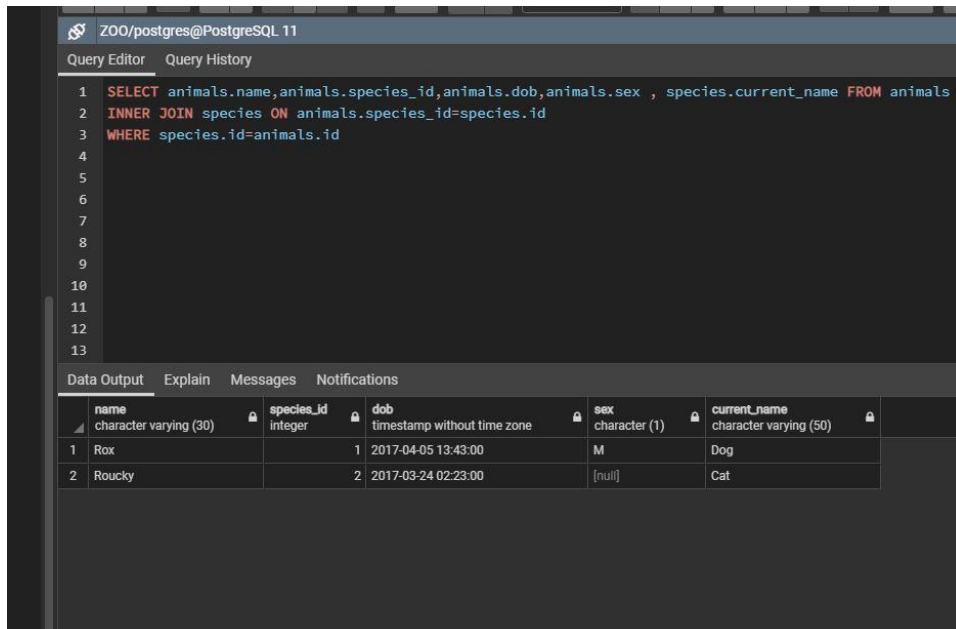
The screenshot shows a PostgreSQL query editor with the following SQL query:

```
1 SELECT a.name, a.sex, a.dob
2 FROM animals a
3 WHERE a.mother_id IN(
4     SELECT animals.id
5     from animals
6     WHERE animals.name = 'Bouli'
7 );
8
9
10
11
```

The query results are displayed in a table with the following columns: name, sex, and dob.

name	sex	dob
------	-----	-----

3. List of all the animals whose id matches their species id



The screenshot shows a PostgreSQL query editor window titled "ZOO/postgres@PostgreSQL 11". The query editor has two tabs: "Query Editor" and "Query History". The query being executed is:

```
1 SELECT animals.name,animals.species_id,animals.dob,animals.sex , species.current_name FROM animals
2 INNER JOIN species ON animals.species_id=species.id
3 WHERE species.id=animals.id
4
5
6
7
8
9
10
11
12
13
```

Below the query editor, the "Data Output" tab is selected, showing the results of the query. The results are displayed in a table with the following columns: name, species_id, dob, sex, and current_name. The table contains two rows of data:

	name character varying (30)	species_id integer	dob timestamp without time zone	sex character (1)	current_name character varying (50)
1	Rox	1	2017-04-05 13:43:00	M	Dog
2	Roucky	2	2017-03-24 02:23:00	[null]	Cat

4. Insert the following animal in the table:

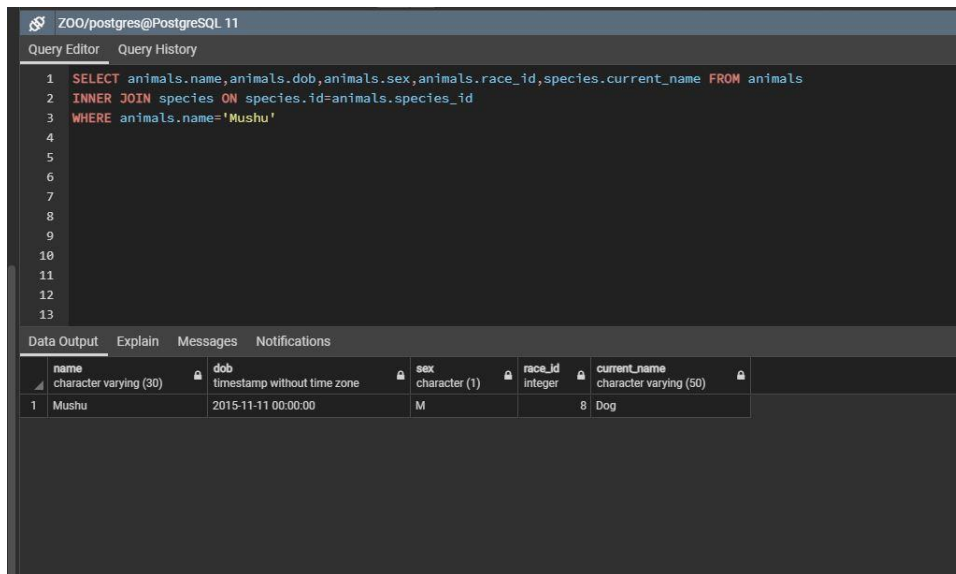
Name : Mushu

DoB : 2015-11-11

Sex : M

Species : Dog

Race : Rottweiler



The screenshot shows a PostgreSQL query editor interface. The top bar indicates the connection is 'ZOO/postgres@PostgreSQL 11'. Below the bar, there are two tabs: 'Query Editor' and 'Query History'. The 'Query Editor' tab is active, displaying a SQL query with line numbers 1 through 13. The query is a SELECT statement that retrieves columns from the 'animals' table and joins it with the 'species' table. The query is as follows:

```
1 SELECT animals.name,animals.dob,animals.sex,animals.race_id,species.current_name FROM animals
2 INNER JOIN species ON species.id=animals.species_id
3 WHERE animals.name='Mushu'
4
5
6
7
8
9
10
11
12
13
```

Below the query editor, there are four tabs: 'Data Output', 'Explain', 'Messages', and 'Notifications'. The 'Data Output' tab is active, showing a table with the results of the query. The table has five columns: 'name', 'dob', 'sex', 'race_id', and 'current_name'. The data types for these columns are 'character varying (30)', 'timestamp without time zone', 'character (1)', 'integer', and 'character varying (50)' respectively. There is one row of data with the following values: 'Mushu', '2015-11-11 00:00:00', 'M', '8', and 'Dog'.

	name character varying (30)	dob timestamp without time zone	sex character (1)	race_id integer	current_name character varying (50)
1	Mushu	2015-11-11 00:00:00	M	8	Dog

5. Insert the following animal in the table, on duplicate change the name to 'Musha' and the sex to 'F'

Name : Mushu

DoB : 2015-11-11

Sex : M

Species : Dog

Race : Rottweiler