

```
-- 1) Print all the titles names
```

```
select title from titles
```

```
-- 2) Print all the titles that have been published by 1389
```

```
select * from titles where pub_id = 1389
```

```
-- 3) Print the books that have price in range of 10 to 15
```

110 %

Results Messages

|    | title  |
|----|--|
| 1  | But Is It User Friendly?                               |
| 2  | Computer Phobic AND Non-Phobic Individuals: Beha...    |
| 3  | Cooking with Computers: Surreptitious Balance She...   |
| 4  | Emotional Security: A New Algorithm                    |
| 5  | Fifty Years in Buckingham Palace Kitchens              |
| 6  | Is Anger the Enemy?                                    |
| 7  | Life Without Fear                                      |
| 8  | Net Etiquette  |
| 9  | Onions, Leeks, and Garlic: Cooking Secrets of the M... |
| 10 | Prolonged Data Deprivation: Four Case Studies          |
| 11 | Secrets of Silicon Valley                              |
| 12 | Silicon Valley Gastronomic Treats                      |
| 13 | Straight Talk About Computers                          |

```
-- 2) Print all the titles that have been published by 1389
```

```
select * from titles where pub_id = 1389
```

```
-- 3) Print the books that have price in range of 10 to 15
```

110 %

Results Messages

|   | title_id | title   | type         | pub_id | price | advance | royalty | ytd_sales | notes  |
|---|----------|---|--------------|--------|-------|---------|---------|-----------|--|
| 1 | BU1032   | The Busy Executive's Database Guide                 | business     | 1389   | 19.99 | 5000.00 | 10      | 4095      | An overview of available database systems with e...    |
| 2 | BU1111   | Cooking with Computers: Surreptitious Balance Sh... | business     | 1389   | 11.95 | 5000.00 | 10      | 3876      | Helpful hints on how to use your electronic resourc... |
| 3 | BU7832   | Straight Talk About Computers                       | business     | 1389   | 19.99 | 5000.00 | 10      | 4095      | Annotated analysis of what computers can do for y...   |
| 4 | PC1035   | But Is It User Friendly?                            | popular_comp | 1389   | 22.95 | 7000.00 | 16      | 8780      | A survey of software for the naive user, focusing o... |
| 5 | PC8888   | Secrets of Silicon Valley                           | popular_comp | 1389   | 20.00 | 8000.00 | 10      | 4095      | Muckraking reporting on the world's largest compu...   |
| 6 | PC9999   | Net Etiquette                                       | popular_comp | 1389   | NULL  | NULL    | NULL    | NULL      | A must-read for computer conferencing.                 |

```
-- 3) Print the books that have price in range of 10 to 15
```

```
select title, price from titles where price between 10 and 15
```

```
-- 4) Print those books that have no price
```

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Results Messages

|   | title   | price |
|---|---|-------|
| 1 | Cooking with Computers: Surreptitious Balance Sh... | 11.95 |
| 2 | Is Anger the Enemy?                                 | 10.95 |
| 3 | Fifty Years in Buckingham Palace Kitchens           | 11.95 |
| 4 | Sushi, Anyone?                                      | 14.99 |

```
-- 4) Print those books that have no price
```

```
select title, price from titles where price is null
```

110 %

Results Messages

|   | title                              | price |
|---|------------------------------------|-------|
| 1 | The Psychology of Computer Cooking | NULL  |
| 2 | Net Etiquette                      | NULL  |

```
-- 5) Print the book names that start with 'The'
```

```
select title from titles where title like 'The%'
```

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Results Messages

|   | title                               |
|---|-------------------------------------|
| 1 | The Busy Executive's Database Guide |
| 2 | The Gourmet Microwave               |
| 3 | The Psychology of Computer Cooking  |

-- 6) Print the book names that do not have 'v' in their name

```
select title from titles where title NOT LIKE '%v%';
```

| Results  |   |
|----------|---|
| Messages |   |
| title    |   |
| 1        | But Is It User Friendly?                              |
| 2        | Cooking with Computers: Surreptitious Balance Sh...   |
| 3        | Emotional Security: A New Algorithm                   |
| 4        | Fifty Years in Buckingham Palace Kitchens             |
| 5        | Is Anger the Enemy?                                   |
| 6        | Life Without Fear                                     |
| 7        | Net Etiquette   |
| 8        | Onions, Leeks, and Garlic: Cooking Secrets of the ... |
| 9        | Straight Talk About Computers                         |
| 10       | Sushi, Anyone?  |
| 11       | The Psychology of Computer Cooking                    |
| 12       | You Can Combat Computer Stress!                       |

-- 7) print the books sorted by the royalty

```
select * from titles
where royalty is not null
order by royalty;
```

110 %

Results Messages

|    | title_id | title  | type         | pub_id | price | advance | royalty | ytd_sales | notes  | pubdate |
|----|----------|--|--------------|--------|-------|---------|---------|-----------|--|---------|
| 1  | BU1032   | The Busy Executive's Database Guide                    | business     | 1389   | 19.99 | 5000.00 | 10      | 4095      | An overview of available database systems with emp...      | 1991-06 |
| 2  | BU1111   | Cooking with Computers: Surreptitious Balance She...   | business     | 1389   | 11.95 | 5000.00 | 10      | 3876      | Helpful hints on how to use your electronic resource...    | 1991-06 |
| 3  | BU7832   | Straight Talk About Computers                          | business     | 1389   | 19.99 | 5000.00 | 10      | 4095      | Annotated analysis of what computers can do for yo...      | 1991-06 |
| 4  | PS2106   | Life Without Fear                                      | psychology   | 0736   | 7.00  | 6000.00 | 10      | 111       | New exercise, meditation, and nutritional techniques...    | 1991-10 |
| 5  | PS3333   | Prolonged Data Deprivation: Four Case Studies          | psychology   | 0736   | 19.99 | 2000.00 | 10      | 4072      | What happens when the data runs dry? Searching ...         | 1991-06 |
| 6  | PS7777   | Emotional Security: A New Algorithm                    | psychology   | 0736   | 7.99  | 4000.00 | 10      | 3336      | Protecting yourself and your loved ones from undue ...     | 1991-06 |
| 7  | TC3218   | Onions, Leeks, and Garlic: Cooking Secrets of the M... | trad_cook    | 0877   | 20.95 | 7000.00 | 10      | 375       | Profusely illustrated in color, this makes a wonderful ... | 1991-10 |
| 8  | PC8888   | Secrets of Silicon Valley                              | popular_comp | 1389   | 20.00 | 8000.00 | 10      | 4095      | Muckraking reporting on the world's largest compute...     | 1994-06 |
| 9  | PS1372   | Computer Phobic AND Non-Phobic Individuals: Beh...     | psychology   | 0877   | 21.59 | 7000.00 | 10      | 375       | A must for the specialist, this book examines the diff...  | 1991-10 |
| 10 | TC7777   | Sushi, Anyone?   | trad_cook    | 0877   | 14.99 | 8000.00 | 10      | 4095      | Detailed instructions on how to make authentic Jap...      | 1991-06 |
| 11 | PS2091   | Is Anger the Enemy?                                    | psychology   | 0736   | 10.95 | 2275.00 | 12      | 2045      | Carefully researched study of the effects of strong e...   | 1991-06 |
| 12 | MC2222   | Silicon Valley Gastronomic Treats                      | mod_cook     | 0877   | 19.99 | 0.00    | 12      | 2032      | Favorite recipes for quick, easy, and elegant meals.       | 1991-06 |

-- 8) print the books sorted by publisher in descending then by types in ascending then by price in descending

```
select * from titles
order by pub_id desc , type , price desc
```

10 %

ResultsMessages

|    | title_id | title  | type         | pub_id | price | advance  | royalty | ytd_sales | notes  | pubdate |
|----|----------|--|--------------|--------|-------|----------|---------|-----------|--|---------|
| 1  | BU7832   | Straight Talk About Computers                          | business     | 1389   | 19.99 | 5000.00  | 10      | 4095      | Annotated analysis of what computers can do for y...     | 1991-06 |
| 2  | BU1032   | The Busy Executive's Database Guide                    | business     | 1389   | 19.99 | 5000.00  | 10      | 4095      | An overview of available database systems with em...     | 1991-06 |
| 3  | BU1111   | Cooking with Computers: Surreptitious Balance She...   | business     | 1389   | 11.95 | 5000.00  | 10      | 3876      | Helpful hints on how to use your electronic resourc...   | 1991-06 |
| 4  | PC1035   | But Is It User Friendly?                               | popular_comp | 1389   | 22.95 | 7000.00  | 16      | 8780      | A survey of software for the naive user, focusing on...  | 1991-06 |
| 5  | PC8888   | Secrets of Silicon Valley                              | popular_comp | 1389   | 20.00 | 8000.00  | 10      | 4095      | Muckraking reporting on the world's largest comput...    | 1994-06 |
| 6  | PC9999   | Net Etiquette  | popular_comp | 1389   | NULL  | NULL     | NULL    | NULL      | A must-read for computer conferencing.                   | 2024-05 |
| 7  | MC2222   | Silicon Valley Gastronomic Treats                      | mod_cook     | 0877   | 19.99 | 0.00     | 12      | 2032      | Favorite recipes for quick, easy, and elegant meals.     | 1991-06 |
| 8  | MC3021   | The Gourmet Microwave                                  | mod_cook     | 0877   | 2.99  | 15000.00 | 24      | 22246     | Traditional French gourmet recipes adapted for mo...     | 1991-06 |
| 9  | PS1372   | Computer Phobic AND Non-Phobic Individuals: Beh...     | psychology   | 0877   | 21.59 | 7000.00  | 10      | 375       | A must for the specialist, this book examines the dif... | 1991-10 |
| 10 | TC3218   | Onions, Leeks, and Garlic: Cooking Secrets of the M... | trad_cook    | 0877   | 20.95 | 7000.00  | 10      | 375       | Profusely illustrated in color, this makes a wonderf...  | 1991-10 |
| 11 | TC7777   | Sushi, Anyone?   | trad_cook    | 0877   | 14.99 | 8000.00  | 10      | 4095      | Detailed instructions on how to make authentic Jap...    | 1991-06 |
| 12 | TC4203   | Fifty Years in Buckingham Palace Kitchens              | trad_cook    | 0877   | 11.95 | 4000.00  | 14      | 15096     | More anecdotes from the Queen's favorite cook de...      | 1991-06 |
| 13 | MC3026   | The Psychology of Computer Cooking                     | UNDECIDED    | 0877   | NULL  | NULL     | NULL    | NULL      |  | 2024-05 |
| 14 | BU2075   | You Can Combat Computer Stress!                        | business     | 0736   | 2.99  | 10125.00 | 24      | 18722     | The latest medical and psychological techniques for...   | 1991-06 |
| 15 | PS3333   | Prolonged Data Deprivation: Four Case Studies          | psychology   | 0736   | 19.99 | 2000.00  | 10      | 4072      | What happens when the data runs dry? Searching ...       | 1991-06 |
| 16 | PS2091   | Is Anger the Enemy?                                    | psychology   | 0736   | 10.95 | 2275.00  | 12      | 2045      | Carefully researched study of the effects of strong ...  | 1991-06 |

```
-- 9) Print the average price of books in every type
```

```
select type, AVG(price) 'Average price by type' from titles group by type;
```

```
-- 10) print all the types in uniques
```

110 %

| Results |              | Messages              |
|---------|--------------|-----------------------|
|         | type         | Average price by type |
| 1       | business     | 13.73                 |
| 2       | mod_cook     | 11.49                 |
| 3       | popular_comp | 21.475                |
| 4       | psychology   | 13.504                |
| 5       | trad_cook    | 15.9633               |
| 6       | UNDECIDED    | NULL                  |

```
select type, AVG(price) 'Average price by type' from titles group by type;
```

```
-- 10) print all the types in uniques
```

```
select distinct type from titles;
```

110 %

Results

Messages

|   | type         |
|---|--------------|
| 1 | business     |
| 2 | mod_cook     |
| 3 | popular_comp |
| 4 | psychology   |
| 5 | trad_cook    |
| 6 | UNDECIDED    |

```
-- 11) Print the first 2 costliest books
```

```
select top 2 * from titles  
where price is not null  
order by price
```

110 %

Results Messages

|   | title_id | title                           | type     | pub_id | price | advance  | royalty | ytd_sales | notes  | pubdate                 |
|---|----------|---------------------------------|----------|--------|-------|----------|---------|-----------|--|-------------------------|
| 1 | BU2075   | You Can Combat Computer Stress! | business | 0736   | 2.99  | 10125.00 | 24      | 18722     | The latest medical and psychological techniques f... | 1991-06-30 00:00:00.000 |
| 2 | MC3021   | The Gourmet Microwave           | mod_cook | 0877   | 2.99  | 15000.00 | 24      | 22246     | Traditional French gourmet recipes adapted for m...  | 1991-06-18 00:00:00.000 |

```
select * from titles
where type = 'business' and price < 20 and advance > 7000
```

110 %

Results Messages

|   | title_id | title                           | type     | pub_id | price | advance  | royalty | ytd_sales | notes   | pubdate                 |
|---|----------|---------------------------------|----------|--------|-------|----------|---------|-----------|---|-------------------------|
| 1 | BU2075   | You Can Combat Computer Stress! | business | 0736   | 2.99  | 10125.00 | 24      | 18722     | The latest medical and psychological techniques ... | 1991-06-30 00:00:00.000 |

```
-- 13) Select those publisher id and number of books which have price between 15 to 25 and have 'It' in its name.
-- Print only those which have count greater than 2. Also sort the result in ascending order of count
```

```
select pub_id, COUNT(title_id) as book_count
from titles
where price between 15 and 25 and title like '%It%'
group by pub_id
having count(title_id) > 2
order by count(title_id);
```

100 %

Results Messages

| pub_id | book_count |
|--------|------------|
|--------|------------|

```
-- 14) Print the Authors who are from 'CA'
select * from authors where state = 'CA'
```

```
-- 15) Print the count of authors from every state
```

110 %

Results Messages

|    | au_id       | au_lname   | au_fname | phone        | address              | city          | state | zip   | contract |
|----|-------------|------------|----------|--------------|----------------------|---------------|-------|-------|----------|
| 1  | 172-32-1176 | White      | Johnson  | 408 496-7223 | 10932 Bigge Rd.      | Menlo Park    | CA    | 94025 | 1        |
| 2  | 213-46-8915 | Green      | Marjorie | 415 986-7020 | 309 63rd St. #411    | Oakland       | CA    | 94618 | 1        |
| 3  | 238-95-7766 | Carson     | Cheryl   | 415 548-7723 | 589 Darwin Ln.       | Berkeley      | CA    | 94705 | 1        |
| 4  | 267-41-2394 | O'Leary    | Michael  | 408 286-2428 | 22 Cleveland Av. #14 | San Jose      | CA    | 95128 | 1        |
| 5  | 274-80-9391 | Straight   | Dean     | 415 834-2919 | 5420 College Av.     | Oakland       | CA    | 94609 | 1        |
| 6  | 409-56-7008 | Bennet     | Abraham  | 415 658-9932 | 6223 Bateman St.     | Berkeley      | CA    | 94705 | 1        |
| 7  | 427-17-2319 | Dull       | Ann      | 415 836-7128 | 3410 Blonde St.      | Palo Alto     | CA    | 94301 | 1        |
| 8  | 472-27-2349 | Gringlesby | Burt     | 707 938-6445 | PO Box 792           | Covelo        | CA    | 95428 | 1        |
| 9  | 486-29-1786 | Locksley   | Charlene | 415 585-4620 | 18 Broadway Av.      | San Francisco | CA    | 94130 | 1        |
| 10 | 672-71-3249 | Yokomoto   | Akiko    | 415 935-4228 | 3 Silver Ct.         | Walnut Creek  | CA    | 94595 | 1        |
| 11 | 724-08-9931 | Stringer   | Dirk     | 415 843-2991 | 5420 Telegraph Av.   | Oakland       | CA    | 94609 | 0        |
| 12 | 724-80-9391 | MacFeather | Stearns  | 415 354-7128 | 44 Upland Hts.       | Oakland       | CA    | 94612 | 1        |
| 13 | 756-30-7391 | Karsen     | Livia    | 415 534-9219 | 5720 McAuley St.     | Oakland       | CA    | 94609 | 1        |
| 14 | 846-92-7186 | Hunter     | Sheryl   | 415 836-7128 | 3410 Blonde St.      | Palo Alto     | CA    | 94301 | 1        |
| 15 | 893-72-1158 | McBadden   | Heather  | 707 448-4982 | 301 Putnam           | Vacaville     | CA    | 95688 | 0        |

```
-- 15) Print the count of authors from every state  
select state, count(au_id) from authors group by state
```

110 %

Results Messages

|   | state | (No column name) |
|---|-------|------------------|
| 1 | CA    | 15               |
| 2 | IN    | 1                |
| 3 | KS    | 1                |
| 4 | MD    | 1                |
| 5 | MI    | 1                |
| 6 | OR    | 1                |
| 7 | TN    | 1                |
| 8 | UT    | 2                |

PostgreSQL exercises

https://pgexercises.com/questions/basic/

Simple SQL Queries 

Begin!

This category deals with the basics of SQL. It covers select and where clauses, case expressions, unions, and a few other odds and ends. If you're already educated in SQL you will probably find these exercises fairly easy. If not, you should find them a good point to start learning for the more difficult categories ahead!

If you struggle with these questions, I strongly recommend [Learning SQL](#), by Alan Beaulieu, as a concise and well-written book on the subject. If you're interested in the fundamentals of database systems (as opposed to just how to use them), you should also investigate [An Introduction to Database Systems](#) by C.J. Date.

- Retrieve everything from a table ✓
- Retrieve specific columns from a table ✓
- Control which rows are retrieved ✓
- Control which rows are retrieved - part 2 ✓
- Basic string searches ✓
- Matching against multiple possible values ✓
- Classify results into buckets
- Working with dates
- Removing duplicates, and ordering results ✓
- Combining results from multiple queries ✓
- Simple aggregation ✓
- More aggregation ✓