**SELECT \* FROM `customers` WHERE first\_name='Barbara';**

**Problem**

**-Problem 1**

--Return all products

--unit\_price

--new price(1.1 \* unit\_price)

**Solution**

SELECT name,unit\_price,unit\_price \*1.1 AS new\_price FROM products;

All of these clauses should be written in uppercase

**WHERE clause is used to filter data**

SELECT \* FROM customers WHERE points> 3000

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE state='VA'

State!= 'va'

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE state!='va'

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE birth\_date>'1990-01-01';

**-Problem 2**

**GET The orders placed this year**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM orders WHERE order\_date>='2019-01-30'

;

**AND OR NOT OPERATORS**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE state='CA' AND points>1000

;

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE state='CA' [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) points>1000

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE state='CA' [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) points>1000

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE birth\_date>'1990-01-01' OR (points>1000 AND state='CA');

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE birth\_date>'1990-01-01' AND (points>1000 OR state='CA');

**WHERE NOT**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE NOT (birth\_date>'1990-01-01' OR points>1000);

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE NOT (birth\_date>'1990-01-01' OR points<1000);

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE NOT (birth\_date<'1990-01-01' OR points<1000);

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE NOT (birth\_date<='1990-01-01' OR points<1000);

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE birth\_date<='1990-01-01' OR points<1000);

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM order\_items

**Problem-3**

**-From the order\_items table**

**-get the items for oder #6**

**-where total price is greater than 30**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM order\_items WHERE order\_id=6 AND unit\_price\* quantity>30;

**IN OPERATOR**

SELECT \* FROM customers WHERE state IN('CA','FL', 'GA');

**NOT OPERATOR**-NOT IN THESE STATES

SELECT \* FROM customers WHERE state NOT IN('CA','FL', 'GA');

**Problem-4**

**-Return Products with quantity of stocks equal to 49,38,72**

**IN USED INSTEAD OF OR;**

**IT IS USED WITH OR YOU HAVE to write LINES repeatedly BUT with with IN you can have functionality of OR just by writing IN() once iNSTEAD of OR OR OR**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE birth\_date<='1990-01-01' OR points<1000);

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM products WHERE quantity\_in\_stock **IN(49,38,72);**

**BETWEEN OPERATOR**

Whenever you are comparing an attribute in range of values you can use BETWEEN operators you can use BETWEEn. Suppose you are

SELECT \* FROM customers WHERE points BETWEEN 1000 and 3000;

[**SELECT**](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) **\* FROM customers WHERE birth\_date BETWEEN '1990-01-01'**[**AND**](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and)**'2000-01-01';**

**The LIKE Operator**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE last\_name [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/string-comparison-functions.html#operator_like) 'Brush%' ;

You can have name with b in beginning and even at the end

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE last\_name [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/string-comparison-functions.html#operator_like) '%b%' ;

**Customers have have last name y**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE last\_name [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/string-comparison-functions.html#operator_like) 'y%' ;

**Customers have first name r**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE last\_name [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/string-comparison-functions.html#operator_like) '\_\_\_\_\_y' ;

**--% respresent any number of characters**

**-- \_ represent single characters**

**Problem-5**

Chose the customers whose

--address contains trail or avenue

-phone numbers end with NINE

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE address [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/string-comparison-functions.html#operator_like) '%trail'

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE address [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/string-comparison-functions.html#operator_like) '%avenue'

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE address [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/string-comparison-functions.html#operator_like) '%trail%' [OR](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_or) address [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/string-comparison-functions.html#operator_like) '%avenue%'

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE phone [LIKE](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/string-comparison-functions.html#operator_like) '%9';

SELECT \* FROM customers WHERE phone LIKE '%6%';

**REGEXP-**It is regular expression here we find anything without using the % in LIKE

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE address **REGEXP** 'trail';

IF THE WORD BEGINS WITH TRAIL

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE address **REGEXP** '^trail';

IF THE WORD ENDS WITH TRAIL

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE address **REGEXP** 'trail$';

**CUSTOMERS WHO HAVE BOTH**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE address **REGEXP** 'field|trail';

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE address **REGEXP** '^field|trail';

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE address **REGEXP** 'field$|trail';

NOTES

^-Beginning of a string

$-end of a string

**USE [] to represent characters within a range**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE address **REGEXP** [a-j];

**PROBLEM-6**

**Get the customers whose**

**-firstnames are ELKA OR AMBUR**

**-lastnames end with EY OR ON**

**-lastnames start with My or contains SE**

**-lastnames contain B followed by R or U**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE first\_name [REGEXP](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/regexp.html#operator_regexp) 'ELKA|AMBUR';

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE last\_name [REGEXP](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/regexp.html#operator_regexp) 'EY$|ON'; **it can also be written as**

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE last\_name [REGEXP](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/regexp.html#operator_regexp) 'EY$|ON$';

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE last\_name [REGEXP](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/regexp.html#operator_regexp) '^My|SE';

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE last\_name **REGEXP** B[R|U];

Can also be written as

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE last\_name **REGEXP** 'br|bu';

**Is NULL**

Use to find information which is blank or missing

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM customers WHERE phone IS NULL;

**PROBLEM-07**

**Get the orders that are not shipped**

**SELECT \* FROM orders WHERE shipped\_date** IS NULL;

**ORDER by clause**

**In MYSQL in every** table there is a primary key as we have to query we have to do all by ID by with ORDER by clause it will show first name or what we want in an ascending order or by Descending order

**SELECT \* FROM customers ORDER by first\_name;**

**Sorting customers by descending order**

**SELECT \* FROM customers ORDER by first\_name DESC;**

**USING Multiple firstnames sorting them with**

**SELECT \* FROM customers ORDER by first\_name,state;**

**SELECT first\_name,last\_name FROM customers ORDER by birth\_date;**

**SELECT first\_name,last\_name,10 AS points FROM customers ORDER by points,birth\_date;**

**Always sort by column names**

**PROBLEM-09**

**SELECT \* FROM order\_items WHERE order\_id=2;**

**SELECT \*,quantity\*unit\_price AS total\_price FROM order\_items WHERE order\_id=2 ORDER BY total\_price ASC;**

**LIMIT OPERATOR**

**Limit the number of records returned from your query**

**SELECT \* FROM customers LIMIT 3;**

**SELECT \* FROM customers LIMIT 6,3;this tells sql to skip 6 records and insert only 3;**

**PROBLEM-09**

**Get the top 3 Loyal customers customers that have more points than anyone else**

**SELECT \* FROM customers ORDER BY points DESC LIMIT 3;**

LIMIT clause should always come at the end

**JOIN**

**COMBINE TABLE IN ORDERS TABLE WITH TABLE IN CUSTOMERS TABLE**

**Writing INNER JOIN IS OPTIONAL**

**SELECT \* FROM orders JOIN customers ON customers.customer\_id=orders.customer\_id;**

**SELECT order\_id,first\_name,last\_name FROM orders JOIN customers ON orders.customer\_id=customers.customer\_id;**

**SELECT order\_id,orders.customer\_id,first\_name,last\_name FROM orders JOIN customers ON orders.customer\_id=customers.customer\_id;**

**To avoid repetition of using name of the table**

**SELECT order\_id,o.customer\_id,first\_name,last\_name FROM orders o JOIN customers c ON o.customer\_id=c.customer\_id;**

**PROBLEM-10**

**SELECT \* FROM order\_items oi JOIN products p ON oi.product\_id=p.product\_id;**

**SELECT order\_id,oi.product\_id,quantity,oi.unit\_price FROM order\_items oi JOIN products p ON oi.product\_id=p.product\_id;**

**JOINING ACROSS DATABASES-SELF JOIN**

**SELECT \* FROM order\_items oi JOIN sql\_inventory.products p On oi.product\_id=p.product\_id;**

**You have to prefix tables that are not a part of the database**

**SELECT \* FROM order\_items oi JOIN sql\_inventory.products p ON oi.product\_id=p.product\_id;**

**USE sql\_hr;**

[**SELECT**](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) **e.employee\_id, e.first\_name, m.first\_name AS manager FROM employees e JOIN employees m ON e.reports\_to=m.employee\_id ;**

**JOINING MULTIPLE TABLES**

**USE sql\_store;**

**SELECT \* FROM orders o**

**JOIN customers c**

**On o.customer\_id=c.customer\_id;**

**JOIN order\_statuses os**

**On o.status=os.order\_status\_id;**

**USE sql\_store;**

**SELECT o.order\_id,**

**o.order\_date,**

**c.first\_name,**

**c.last\_name,**

**os.name AS status**

**FROM orders o**

**JOIN customers c**

**On o.customer\_id=c.customer\_id;**

**JOIN order\_statuses os**

**On o.status=os.order\_status\_id;**

**PROBLEM-11**

**USE sql\_invoicing;**

[**SELECT**](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) **\* FROM payments p JOIN clients c ON p.client\_id=c.client\_id ;**

**USE sql\_invoicing;**

**SELECT \* FROM payments p**

**JOIN clients c**

**ON p.client\_id=c.client\_id;**

**USE sql\_invoicing;**

**SELECT \* FROM payments p**

**JOIN clients c**

**ON p.client\_id=c.client\_id**

**JOIN payment\_methods pm**

**ON p.payment\_method=pm.payment\_method\_id;**

**USE sql\_invoicing;**

**SELECT**

**p.data,**

**p.invoice\_id,**

**p.amount,**

**c.name,**

**pm.name**

**FROM payments p**

**JOIN clients c**

**ON p.client\_id=c.client\_id**

**JOIN payment\_methods pm**

**ON p.payment\_method=pm.payment\_method\_id;**

**Compound Join Conditions**