**1. What is MySQL?**

MySQL is an open source DBMS which is built, supported and distributed by MySQL AB (now acquired by Oracle)

**2. What are the technical features of MySQL?**

MySQL database software is a client or server system which includes

* Multithreaded SQL server supporting various client programs and libraries
* Different backend
* Wide range of application programming interfaces and
* Administrative tools.

**3. Why MySQL is used?**

MySQL database server is reliable, fast and very easy to use.  This software can be downloaded as freeware and can be downloaded from the internet.

**4. What are Heap tables?**

HEAP tables are present in memory and they are used for high speed storage on temporary

basis.

• BLOB or TEXT fields are not allowed

• Only comparison operators can be used =, <,>, = >,=<

• AUTO\_INCREMENT is not supported by HEAP tables

• Indexes should be NOT NULL

**5. What is the default port for MySQL Server?**

The default port for MySQL server is 3306.

**6.  What are the advantages of MySQL when compared with Oracle?**

* MySQL is open source software which is available at any time and has no cost involved.
* MySQL is portable
* GUI with command prompt.
* Administration is supported using MySQL Query Browser

**7. Differentiate between FLOAT and DOUBLE?**

Following are differences for FLOAT and DOUBLE:

• Floating point numbers are stored in FLOAT with eight place accuracy and it has four bytes.

• Floating point numbers are stored in DOUBLE with accuracy of 18 places and it has eight bytes.

**8. Differentiate CHAR\_LENGTH and LENGTH?**

CHAR\_LENGTH  is character count whereas the LENGTH is byte count. The numbers are same for Latin characters but they are different for Unicode and other encodings.

**9. How to represent ENUMs and SETs internally?**

ENUMs and SETs are used to represent powers of two because of storage optimizations.

**10. What is the usage of ENUMs in MySQL?**

ENUM is a string object used to specify set of predefined values and that can be used during table creation.



|  |  |
| --- | --- |
| 1 | Create table size(name ENUM('Small', 'Medium','Large'); |

**11. Define REGEXP?**

REGEXP is a pattern match in which  matches pattern anywhere in the search value.

**12. Difference between CHAR and VARCHAR?**

Following are the differences between CHAR and VARCHAR:

* CHAR and VARCHAR types differ in storage and retrieval
* CHAR column length is fixed to the length that is declared while creating table. The length value ranges from 1 and 255
* When CHAR values are stored then they are right padded using spaces to specific length. Trailing spaces are removed when CHAR values are retrieved.

**13. Give string types available for column?**

The string types are:

* SET
* BLOB
* ENUM
* CHAR
* TEXT
* VARCHAR

**14. How to get current MySQL version?**



|  |  |
| --- | --- |
| 1 | SELECT VERSION (); |

is used to get the current version of MySQL.

**15. What storage engines are used in MySQL?**

Storage engines are called table types and data is stored in files using various techniques.

Technique involves:

* Storage mechanism
* Locking levels
* Indexing
* Capabilities and functions.

**16. What are the drivers in MySQL?**

Following are the drivers available in MySQL:

* PHP Driver
* JDBC Driver
* ODBC Driver
* C WRAPPER
* PYTHON Driver
* PERL Driver
* RUBY Driver
* CAP11PHP Driver
* Ado.net5.mxj

**17. What does a TIMESTAMP do on UPDATE CURRENT\_TIMESTAMP data type?**

TIMESTAMP column is updated with Zero when the table is created.  UPDATE CURRENT\_TIMESTAMP modifier updates the timestamp field to current time whenever there is a change in other fields of the table.

**18. What is the difference between primary key and candidate key?**

Every row of a table is identified uniquely by primary key. There is only one primary key for a table.

Primary Key is also a candidate key. By common convention, candidate key can be designated as primary and which can be used for any foreign key references.

**19. How do you login to MySql using Unix shell?**

We can login through this command:

# [mysql dir]/bin/mysql -h hostname -u <UserName> -p <password>

**20. What does myisamchk do?**

It compress the MyISAM tables, which reduces their disk or memory usage.

**21. How do you control the max size of a HEAP table?**

Maximum size of Heal table can be controlled by MySQL config variable called max\_heap\_table\_size.

**22. What is the difference between MyISAM Static and MyISAM Dynamic?**

In MyISAM static all the fields will have fixed width. The Dynamic MyISAM table will have fields like TEXT, BLOB, etc. to accommodate the data types with various lengths.

MyISAM Static would be easier to restore in case of corruption.

**23. What are federated tables?**

Federated tables which allow access to the tables located on other databases on other servers.

**24. What, if a table has one column defined as TIMESTAMP?**

Timestamp field gets the current timestamp whenever the row gets altered.

**25. What happens when the column is set to AUTO INCREMENT and if you reach maximum value in the table?**

It stops incrementing. Any further inserts are going to produce an error, since the key has been used already.

**26. How can we find out which auto increment was assigned on Last insert?**

LAST\_INSERT\_ID will return the last value assigned by Auto\_increment and it is not required to specify the table name.

**27. How can you see all indexes defined for a table?**

Indexes are defined for the table by:

[](http://career.guru99.com/jobs/?utm_source=career.guru99&utm_medium=referral&utm_campaign=click)

SHOW INDEX FROM <tablename>;

**28. What do you mean by % and \_ in the LIKE statement?**

% corresponds to 0 or more characters, \_ is exactly one character in the LIKE statement.

**29. How can we convert between Unix & MySQL timestamps?**

UNIX\_TIMESTAMP is the command which converts from MySQL timestamp to Unix timestamp

FROM\_UNIXTIME is the command which converts from Unix timestamp to MySQL timestamp.

**30. What are the column comparisons operators?**

The = , <>, <=, <, >=, >,<<,>>, <=>, AND, OR, or LIKE operators are used in column comparisons in SELECT statements.

**31. How can we get the number of rows affected by query?**

Number of rows can be obtained by



|  |  |
| --- | --- |
| 1 | SELECT COUNT (user\_id) FROM users; |

**32.  Is Mysql query is case sensitive?**

No.



|  |  |
| --- | --- |
| 1  2  3 | SELECT VERSION(), CURRENT\_DATE;  SeLect version(), current\_date;  seleCt vErSiOn(), current\_DATE; |

All these examples are same. It is not case sensitive.

**33. What is the difference between the LIKE and REGEXP operators?**

LIKE and REGEXP operators are used to express with ^ and %.



|  |  |
| --- | --- |
| 1  2 | SELECT \* FROM employee WHERE emp\_name REGEXP "^b";  SELECT \* FROM employee WHERE emp\_name LIKE "%b"; |

**34. What is the difference between BLOB AND TEXT?**

A BLOB is a binary large object that can hold a variable amount of data. There are four types of BLOB –

* TINYBLOB
* BLOB
* MEDIUMBLOB and
* LONGBLOB

They all differ only in the maximum length of the values they can hold.

A TEXT is a case-insensitive BLOB. The four TEXT types

* TINYTEXT
* TEXT
* MEDIUMTEXT and
* LONGTEXT

They all correspond to the four BLOB types and have the same maximum lengths and storage requirements.

The only difference between BLOB and TEXT types is that sorting and comparison is performed in case-**sensitive** for BLOB values and case-**insensitive** for TEXT values.

**35. What is the difference between mysql\_fetch\_array and mysql\_fetch\_object?**

Following are the differences between mysql\_fetch\_array and mysql\_fetch\_object:

mysql\_fetch\_array() -Returns a result row as an associated array or a regular array from database.

mysql\_fetch\_object –  Returns a result row as object from database.

**36. How can we run batch mode in mysql?**

Following commands are used to run in batch mode:



|  |  |
| --- | --- |
| 1  2 | mysql ;  mysql mysql.out |

**37. Where MyISAM table will be stored and also give their formats of storage?**

Each MyISAM table is stored on disk in three formats:

* The ‘.frm’ file stores the table definition
* The data file has a ‘.MYD’ (MYData) extension
* The index file has a ‘.MYI’ (MYIndex) extension

**38. What are the different tables present in MySQL?**

Total 5 types of tables are present:

* MyISAM
* Heap
* Merge
* INNO DB
* ISAM

MyISAM is the default storage engine as of MySQL .

**39. What is ISAM?**

ISAM  is abbreviated as Indexed Sequential Access Method.It was developed by IBM to store and retrieve data on secondary storage systems like tapes.

**40. What is InnoDB?**

lnnoDB is a transaction safe storage engine developed by Innobase Oy which is a Oracle Corporation now.

**41. How MySQL Optimizes DISTINCT?**

DISTINCT is converted to a GROUP BY on all columns and it will be combined with ORDER BY clause.



|  |  |
| --- | --- |
| 1 | SELECT DISTINCT t1.a FROM t1,t2 where t1.a=t2.a; |

**42. How to enter Characters as HEX Numbers?**

If you want to enter characters as HEX numbers, you can enter HEX numbers with single quotes and a prefix of (X), or just prefix HEX numbers with (Ox).

A HEX number string will be automatically converted into a character string, if the expression context is a string.

**43. How to display top 50 rows?**

In MySql, top 50 rows are displayed by using this following query:



|  |  |
| --- | --- |
| 1  2 | SELECT \* FROM  LIMIT 0,50; |

**44. How many columns can be used for creating Index?**

Maximum of 16 indexed columns can be created for any standard table.

**45. What is the different between NOW() and CURRENT\_DATE()?**

NOW () command is used to show current year,month,date with hours,minutes and seconds.

CURRENT\_DATE() shows current year,month and date only.

**46. What are the objects can be created using CREATE statement?**

Following objects are created using CREATE statement:

* DATABASE
* EVENT
* FUNCTION
* INDEX
* PROCEDURE
* TABLE
* TRIGGER
* USER
* VIEW

**47. How many TRIGGERS are allowed in MySql table?**

SIX triggers are allowed in MySql table. They are as follows:

* BEFORE INSERT
* AFTER INSERT
* BEFORE UPDATE
* AFTER UPDATE
* BEFORE DELETE and
* AFTER DELETE

**48. What are the nonstandard string types?**

Following are Non-Standard string types:

* TINYTEXT
* TEXT
* MEDIUMTEXT
* LONGTEXT

**49. What are all the Common SQL Function?**

CONCAT(A, B) – Concatenates two string values to create a single string output. Often used to combine two or more fields into one single field.

FORMAT(X, D) – Formats the number X to D significant digits.

CURRDATE(), CURRTIME() – Returns the current date or time.

NOW() – Returns the current date and time as one value.

MONTH(), DAY(), YEAR(), WEEK(), WEEKDAY() – Extracts the given data from a date value.

HOUR(), MINUTE(), SECOND() – Extracts the given data from a time value.

DATEDIFF(A, B) – Determines the difference between two dates and it is commonly used to calculate age

SUBTIMES(A, B) – Determines the difference between two times.

FROMDAYS(INT) – Converts an integer number of days into a date value.

**50. Explain Access Control Lists.**

An ACL (Access Control List) is a list of permissions that is associated with an object. This list is the basis for MySQL server’s security model and it helps in troubleshooting problems like users not being able to connect.

MySQL keeps the ACLs (also called grant tables) cached in memory. When a user tries to authenticate or run a command, MySQL checks the authentication information and permissions against the ACLs, in a predetermined order.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | |  | | --- | | Mysql interview questions and answers | | |  | | --- | | [**Part 1**](http://www.careerride.com/MySQL-Interview-Questions.aspx)[**Part 2**](http://www.careerride.com/MySQL-interview-questions-part-2.aspx)[**Part 3**](http://www.careerride.com/MySQL-interview-questions-part-3.aspx)[**Part 4**](http://www.careerride.com/MySQL-interview-questions-part-4.aspx)[**Part 5**](http://www.careerride.com/MySQL-interview-questions-part-5.aspx)[**Part 6**](http://www.careerride.com/MySQL-interview-questions-part-6.aspx)  ***MySQL interview questions - posted on June 27, 2013 at 16:35 PM by Kshipra Singh***  1. How many TRIGGERS are allowed in MySql table?  MySql table allows following 6 triggers:   -BEFORE INSERT -AFTER INSERT -BEFORE UPDATE -AFTER UPDATE -BEFORE DELETE and -AFTER DELETE  2. Differentiate between FLOAT and DOUBLE.  FLOAT stores floating point numbers with accuracy up to eight places and has four bytes while DOUBLE stores floating point numbers with accuracy upto 18 places and has eight bytes.  3. Tell us something about Heap tables.  - HEAP tables are found in memory.  - They are used for high speed storage on temporary basis.  Some of their characteristics are:  - They do not allow BLOB or TEXT fields.  - Only comparison operators like =, <,>, = >,=< , can be used with them.  - AUTO\_INCREMENT is not supported by HEAP tables - Indexes should be NOT NULL  4. How do you control the max size of a HEAP table?  - Maximum size of Heap table can be controlled using MySQL config variable called max\_heap\_table\_size.  5. What are the advantages of MySQL in comparison to Oracle?  - MySQL is open source software available at zero cost.  - It is portable  - GUI with command prompt. - Administration is supported by MySQL Query Browser  6. What does myisamchk do?  - It compresses the MyISAM tables, which reduces their disk or memory usage.  How can we convert between Unix & MySQL timestamps?  - MySQL timestamp can be converted into Unix timestamp using the command UNIX\_TIMESTAMP.  - Unix timestamp can be converted into MySQL timestamp using the command FROM\_UNIXTIME.  7. What is BLOB?  - BLOB stands for binary large object.  - It that can hold a variable amount of data.   There are four types of BLOB based on the maximum length of values they can hold:  - TINYBLOB - BLOB - MEDIUMBLOB  - LONGBLOB  8. What is TEXT?  TEXT is case-insensitive BLOB. The four types of TEXT are:   - TINYTEXT - TEXT - MEDIUMTEXT - LONGTEXT  8. What is the difference between BLOB and TEXT?  - In BLOB sorting and comparison is performed in case-sensitive for BLOB values  - In TEXT types sorting and comparison is performed case-insensitive.  9. How is MyISAM table stored?  MyISAM table is stored on disk in three formats.  - ‘.frm’ file – storing the table definition - ‘.MYD’ (MYData) - data file  - ‘.MYI’ (MYIndex) – index file  10. Explain advantages of MyISAM over InnoDB?  - MyISAM follows a much more conservative approach to disk space management – storing each MyISAM table in a separate file, which can be further compresses, if required.  - InnoDB stores the tables in tablespace. Further optimization is difficult with them.  11. How would concatenate strings in MySQL?  With the use of - CONCAT (string1, string2, string3)  12. How would you get the current date in Mysql?  By using SELECT CURRENT\_DATE();  13. How would you enter Characters as HEX Numbers?  - To enter characters as HEX numbers, you can enter HEX numbers with single quotes and a prefix of (X) - Alternatively, just prefix HEX numbers with (Ox).  14. How are MySQL timestamps seen to a user?  - MySQL time stamps are seen to a user in a readable format : YYYY-MM-DD HH:MM:SS.  **MySQL Interview April 01, 2011 at 11:10 am by Rajmeet Ghai**  [**Explain about MySQL and its features.**](http://www.careerride.com/MySQL-features.aspx)  **Latest answer -**MySQL is a relational database management system which........              [**Read answer**](http://www.careerride.com/MySQL-features.aspx)  [**What are the disadvantages of MySQL?**](http://www.careerride.com/MySQL-disadvantages.aspx)  **Latest answer  -**MySQL does not support a very large database size as efficiently........  [**Read answer**](http://www.careerride.com/MySQL-disadvantages.aspx)  [**What are the security recommendations while using MySQL?**](http://www.careerride.com/MySQL-security-recommendations.aspx)  **Latest answer  -**Access to the user table should never be given to avoid SQL injection attacks..........  [**Read answer**](http://www.careerride.com/MySQL-security-recommendations.aspx)  [**Describe MyISAM table.**](http://www.careerride.com/MySQL-MyISAM-table.aspx)  **Latest answer  -**In MySQL MyISAM is the default storage engine. MyISAM tables........  [**Read answer**](http://www.careerride.com/MySQL-MyISAM-table.aspx)  [**What is HEAP table?**](http://www.careerride.com/MySQL-HEAP-table.aspx)  **Latest answer  -**Tables that are present in the memory are called as HEAP tables. When creating a HEAP table........  [**Read answer**](http://www.careerride.com/MySQL-HEAP-table.aspx)  [**What is Query Cache in MySQL?**](http://www.careerride.com/MySQL-Query-Cache.aspx)  **Latest answer  -**Query Cache in MySQL is used in scenarios when the same queries need to be executed..........  [**Read answer**](http://www.careerride.com/MySQL-Query-Cache.aspx)  [**How is Exception Handling handled in MySQL?**](http://www.careerride.com/MySQL-Exception-Handling.aspx)  **Latest answer  -**Exception handling means changing the usual expected flow of the code..........  [**Read answer**](http://www.careerride.com/MySQL-Exception-Handling.aspx)  [**What are the Performance and Scalability characteristics of MySQL?**](http://www.careerride.com/MySQL-Performance-Scalability.aspx)  **Latest answer  -**MySQL has a unique storage engine architecture that makes it adaptable to most.........  [**Read answer**](http://www.careerride.com/MySQL-Performance-Scalability.aspx)  [**What are the limitations of mysql in Comparison of Oracle?**](http://www.careerride.com/MySQL-limitations.aspx)  **Latest answer  -**Transactions are better supported in Oracle as compared to Mysql.......... [**Read answer**](http://www.careerride.com/MySQL-limitations.aspx)  [**What is a Trigger in MySQL? Define different types of Trigger?**](http://www.careerride.com/MySQL-Trigger.aspx)  **Latest answer  -**A trigger is a set of code which is executed in response to some event. .......... [**Read answer**](http://www.careerride.com/MySQL-Trigger.aspx)  [**What is the difference between CHAR\_LENGTH and LENGTH?**](http://www.careerride.com/MySQL-CHAR_LENGTH.aspx)  **Latest answer  -**CHAR\_LENGTH includes leading and trailing blanks and the string-termination.......  [**Read answer**](http://www.careerride.com/MySQL-CHAR_LENGTH.aspx)  [**Explain the difference between BOOL, TINYINT and BIT.**](http://www.careerride.com/MySQL-BOOL-TINYINT-BIT.aspx)  **Latest answer  -**BIT data type can store up to 8 bytes from My SQL version 5.0.3....... 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If there is an ENUM for Colors .....  [**Read answer**](http://www.careerride.com/MySQL-ENUMs.aspx)  [**Explain MySQL Aggregate Functions.**](http://www.careerride.com/MySQL-Aggregate-Functions.aspx)  **Latest answer  -**Aggregate functions in MySQL are a group of functions that are used to operate.......  [**Read answer**](http://www.careerride.com/MySQL-Aggregate-Functions.aspx)  [**Describe Transaction-Safe Table Types in MySQL**](http://www.careerride.com/MySQL-Transaction-Safe.aspx)  **Latest answer  -**While using transactions in MySQL a transaction –safe table type must.......  [**Read answer**](http://www.careerride.com/MySQL-Transaction-Safe.aspx)  [**Describe MySQL Connection using mysql binary**](http://www.careerride.com/MySQL-Connection-using-binary.aspx)**.**  **Latest answer  -**Establishing connection to MySQL database using Mysql binary........  [**Read answer**](http://www.careerride.com/MySQL-Connection-using-binary.aspx)  [**Explain advantages of MyISAM over InnoDB**](http://www.careerride.com/MySQL-advantages-of-MyISAM-over-InnoDB.aspx)  **Latest answer -**MyISAM is faster than InnoDB in most of the cases.........  [**Read answer**](http://www.careerride.com/MySQL-advantages-of-MyISAM-over-InnoDB.aspx)  [**MySQL - Stored Procedures and Triggers**](http://www.careerride.com/MySQL-stored-procedures-and-triggers.aspx)  **Latest answer -**When multiple applications need to perform common database operations........  [**Read answer**](http://www.careerride.com/MySQL-stored-procedures-and-triggers.aspx)  [**Primary Keys and Auto Increment Fields in MySQL**](http://www.careerride.com/MySQL-primary-keys-and-auto-increment-fields.aspx)  **Latest answer -**Primary key is used to uniquely identify a row in a table.........  [**Read answer**](http://www.careerride.com/MySQL-primary-keys-and-auto-increment-fields.aspx)  [**COMMIT and ROLLBACK in MySQL**](http://www.careerride.com/MySQL-COMMIT-and-ROLLBACK.aspx)  **Latest answer -**A transaction in MySQL is a set of SQL statements written to perform a specific task.........  [**Read answer**](http://www.careerride.com/MySQL-COMMIT-and-ROLLBACK.aspx)  [**ALTER command to add and drop INDEX in MySQL**](http://www.careerride.com/MySQL-ALTER-command-to-add-and-drop-INDEX.aspx)  **Latest answer -**An index in MySQL can be added using ALTER statement in multiple ways as shown........  [**Read answer**](http://www.careerride.com/MySQL-ALTER-command-to-add-and-drop-INDEX.aspx)  [**Describe MySQL Connection using PHP Script.**](http://www.careerride.com/MySQL-Connection-using-PHP.aspx)  **Latest answer  -**Establishing connection to MySQL database using PHP can be done........... [**Read answer**](http://www.careerride.com/MySQL-Connection-using-PHP.aspx)  [Test your mysql knowledge with our multiple choice questions!](http://www.careerride.com/mysql-multiple-choice-questions.aspx)  [How will you export tables as an XML file in MySQL?](http://www.careerride.com/MySQL-Interview-Questions.aspx#export) [What is the use of i-am-a-dummy flag in MySQL?](http://www.careerride.com/MySQL-Interview-Questions.aspx#flag) [What are the differences between MySQL\_fetch\_array(), MySQL\_fetch\_object(), MySQL\_fetch\_row()?](http://www.careerride.com/MySQL-Interview-Questions.aspx#fetch) [What is difference between mysql\_connect and mysql\_pconnect?](http://www.careerride.com/MySQL-Interview-Questions.aspx#mysql_connect) [What is MySQL data directory? How to determine the location of the data directory?](http://www.careerride.com/MySQL-Interview-Questions.aspx#directory) [What you can use Regular Expression for in MySQL? Support your answer with an example.](http://www.careerride.com/MySQL-Interview-Questions.aspx#RegularExpression)  ***MySQL Interview Jan 09, 2009 at 18:10 pm by Rajmeet Ghai***  How will you export tables as an XML file in MySQL?  MYSQL’s query browser has a provision called “Export Result Set” which allows the tables to be exported as XML.  What is the use of i-am-a-dummy flag in MySQL?  Using the i-am-dummy flag makes the SQL engine refuse any Updates or deletes to execute if the WHERE clause is not present. It is very useful when using delete statements. Using i-am-dummy flag will not allow the following statement to execute:  Delete from employee;  What are the differences between MySQL\_fetch\_array(), MySQL\_fetch\_object(), MySQL\_fetch\_row()?  Mysql\_fetch\_object returns the result from the database as objects while mysql\_fetch\_array returns result as an array. This will allow access to the data by the field names. E.g. using mysql\_fetch\_object field can be accessed as $result->name and using mysql\_fetch\_array field can be accessed as $result->[name]. mysql\_fetch\_row($result):- where $result is the result resource returned from a successful query executed using the mysql\_query() function.  **Example:** $result = mysql\_query(“SELECT \* from students); while($row = mysql\_fetch\_row($result)) {        Some statement; }  What is difference between mysql\_connect and mysql\_pconnect?  Mysql\_connect() opens a new connection to the database while mysql\_pconnect() opens a persistent connection to the database. This means that each time the page is loaded mysql\_pconnect() does not open the database. Mysql\_close() cannot be used to close the persistent connection. Though it can be used to close mysql\_connect().  What is MySQL data directory? How to determine the location of the data directory?  MySQL stores its data on the disk on the data dictionary. Each subdirectory under this data dictionary represents a MySQL database, inside those directories. By default the information managed my MySQL = server mysqld is stored in data directory.A default location of data directory in windows is C:\mysql\data or C:\Program Files\MySQL\MySQL Server 5.0 \data..  What you can use Regular Expression for in MySQL? Support your answer with an example.  Regular expressions in MySql are used in queries for searching a pattern in a string.   * \* Matches 0 more instances of the string preceding it. * + matches 1 more instances of the string preceding it. * ? Matches 0 or 1instances of the string preceding it. * . Matches a single character. * [abc] matches a or b or z * | separates strings * ^ anchors the match from the start.   REGEXP can be used to match the input characters with the database.  Example:  The following statement retrieves all rows where column employee\_name contains the text 1000 (example salary):  Select employee\_name From employee  Where employee\_name REGEXP ‘1000’ Order by employee\_name  “.” Can be used to match any single character. “|” can be used to match either of the two strings  ***MySQL disadvantages - September 30, 2009 at 18:00 pm by Vidya Sagar***  **How will you export tables as an XML file in MySQL?**  From the command prompt type the following statement:  mysql -u test --xml -e 'SELECT \* FROM t1' > t1.xml  where ‘ –u test ‘ is the user name, --xml indicates the type of the file is xml, -e for export  **What is the use of i-am-a-dummy flag in MySQL?**  The flag i-am-a-dummy flag makes the MySQL engine to deny the UPDATE and DELETE commands unless the WHERE clause is present.  **What are the differences between MySQL\_fetch\_array(), MySQL\_fetch\_object(), MySQL\_fetch\_row()?**  The mysql\_fetch\_object() returns the result from the database as an object.  Ex: $result->name  The mysql\_fetch\_array() returns the result from the database as an associative array or numeric array or both by using mysql\_NUM or mysql\_ASSOC options.  EX: $result[0] ,$result['name']  The mysql\_fetch\_row() returns the result from the database as a numeric array.  Ex: $result[0]  **What is difference between mysql\_connect and mysql\_pconnect?**  **Mysql\_connect:**  - Opens a new connection to the database - The database connection can be closed - Opens the page every time the page is loaded.  **Mysql\_pconnect:**  - Opens a persistent connection to the database. - The database connection can not be closed. - The page need not be opened every time the page is loaded.  **What is MySQL data directory? How to determine the location of the data directory?**  MySQL data directory is most important location in which all MySQL databases are stored. The default data directory is located in the file mysql.lf.  If the out of the space is the issue, then the directory need to be moved another location. Before moving, the database need to be closed. After moving the MySQL configuration file need to be edited. Look for the ‘datadir’ entry and change the path to the new directory.  **What you can use Regular Expression for in MySQL? Support your answer with an example.**  Regular expressions are a set of characters. Regular expressions are used for finding certain sequences in strings.  The following are the regular expression characters:  - \* Represents matching characters that are 0 or more occurrences of the string that precedes it. - + Represents matching characters that are 1 or more occurrences of the string that precedes it. - ? Represents matching characters that are 0 or 1 occurrences of the string that precedes it. - . Represents single character pattern matching. - [abc] Represents matching characters that is either a or b or c  - | Used for separation of strings - ^ Finds the matching pattern starting from the beginning.  To match the input characters with database tables, REGEXP is used. For example:  Select cityname from territories where cityname REGEXP ‘^(jo)\*’;  The above query returns all city names that has the substring ‘jo’. | | | |

### **What are the steps required to view your MYSQL database?**

There are certain steps that are required to before you can view MySQL database and they are as follows:  
1. Login as database user: for example:   
[root@ tmp]# mysql -u mysqluser -p sales  
2. List all your MySQL databases: use the show command to view the list of all available MySQL databases. For example to view sales database use the command shown below:  
mysql> show databases;  
| Database |  
| salesdata |

### **Write a command to view MySQL database table structure**

To view the database table structure describe command is used that provides the list of all the data fields used in the database table. Example: a table named sales will have the four fields like: name, description, num, and date.  
mysql> describe test;  
| Field | Type | Null | Key | Default | Extra|  
| num | int(11)| |PRI | NULL | auto\_increment |  
| date | date| | MUL | 0000-00-00 |   
| name | varchar(50) | MUL |  
| description | varchar(75) | YES | | NULL

### **Write a command to view the content of the table**

To view all the data that is contained inside a table named sales use the select command. For example: to see the data of first row in a table using the command as:  
mysql> select \* from sales limit 1;  
If the database is created recently then it will give a blank listing, but after the data is being entered it will show the full listing in a tabular form.

### **What is the procedure to configure the application of MYSQL?**

The procedure to configure the application of MySQL is:  
1. First create a database  
2. Test the database by informing about the database name, IP address of database client server, username and password of application.   
3. Edit the special application specific configuration file using a GUI or command line.   
4. Configure the language with which MySQL will interact.

### **What are the applications required to support MYSQL?**

The applications that are required to support MySQL are as follows:  
1. php-mysql MySQL database is used specifically to support PHP  
2. perl-DBI: provides generic Perl interface for interacting with relational databases  
3. perl-DBD-MySQL MySQL database specific support for Perl  
4. Web server is required to configure the database and its configuration  
5. Programming language is required which supports MySQL.

### **Write a query to stop MYSQL in unix**

The query to stop MySQL is quite useful when an error is occurred or when data has to be saved from any mishap. It is also used for retrieving the root password because it is either easily forgotten or misplaced. To stop the service the following command is required:   
1) Stop MySQL  
[root@ tmp]# service mysqld stop  
Stopping MySQL: [ OK ]  
[root@ tmp]#

### **Write a query to MYSQL in safe mode and to change the root password**

To start MySQL in safe mode, mysqld\_safe command is used which allow it to run in the safe mode and it also doesn’t allow the reading of tables with the database passwords:  
[root@ ]# mysqld\_safe --skip-grant-tables --skip-networking &[1] 13007  
[root@ ]# Starting mysqld daemon with databases from /var/lib/mysql  
[root@ ]#  
After running the MySQL in safe mode the password protection gets removed and to use the password protection mechanism a command is used as follows:   
mysql -u root command  
[root@bigboy tmp]# mysql -u root  
Welcome to the MySQL monitor. Commands end with ; or \g.  
Your MySQL connection id is 1 to server version: 4.1.16  
Type 'help;' or '\h' for help. Type '\c' to clear the buffer.  
mysql> [ a message is being shown which allow user to take the control of the root]

### **How to take MYSQL database backup?**

To take the database backup use the following syntax:  
mysqldump --add-drop-table -u [username] -p[password] [database] > [backup\_file]  
This command will take the database backup by knowing the username and password for the database connection and dropping any table which is being deleted or not in use. It is always a good practice to take the backup of mysql as it contains all the database information that a user can access. While using the command keep a note that there should not be any space between –p switch and password, if there is then you will get a syntax error.

### **Write a command with which MySQL table can be repaired**

The command syntax with which mysql table can be repaired is as follows:  
REPAIR TABLE tablename;  
REPAIR TABLE tablename QUICK;  
REPAIR TABLE tablename EXTENDED;  
The command will just do as it says repair a specified table, but if QUICK or EXTENDED is used then the meaning of it changes. In case of QUICK it will repair only the index tree, whereas in case of EXTENDED it will create index row by row and repair it.

### **What are the different tables present in MySQL?**

There are many tables that remain present by default. But, MyISAM is the default database engine used in MySQL. There are five types of tables that are present:  
1. MyISAM  
2. Heap  
3. Merge  
4. INNO DB  
5. ISAM

### **What does the file with the extension: frm, myd, and myi contain?**

MySQL default table type is MyISAM, where there are three kind of files that are stored inside MyISAM. The file names begin with the table name and have the extensions such as frm, myd and myi. The explaination of each file is given below:  
.frm file consists of the table definition that are stored in the database  
.myd is an extension that is used by a data file.  
.myi is an extension that is used by index file.

### **What is the difference between MYSQL and SQL?**

SQL is known as standard query language, as the name implies it is the language which is used to interact with the database like MySQL. Whereas, MySQL is a database that store various types of data and keep it safe. A PHP script is required to store and retrieve the values inside the database.

|  |
| --- |
| **How database are managed?** Database is a collection of data and it is managed by a database server, which is a special program that is also known as MySQL database server. Application that you create usually communicates with the database server in the language which it can understand; mostly SQL language is used for communication. Database server in return interacts with the web server on same server or computer. Database server and web server result in the data which is being shown on the web. **What is required to create MYSQL database?** To create MySQL databse the first component which has to be present is a database server on which the queries of database will run and software tool through which you can access the applications. It also requires PHP scripts for communicating with the database using SQL commands. **What do you understand by MYSQL terminal?** MySQL terminal is used as a command line interface in many operating system. It provides a way to access the database and other resources using the SQL commands that are interpreted by the MySQL database server. **Why phpMyAdmin is used for MYSQL?** PhpMyAdmin is a very popular and easy to use GUI tool that can allow SQL commands to be run to create database, create tables, insert data and retrieve it. It provides a web based interface to the user for the ease of use. phpMyAdmin allows user to manage everything from one place and no other installation is required in the computer after this. **Write a query to create a database and a table?** MySQL comes up with some default database that can be used as a base to create a new one. The command that is used to create a new database is as follows: CREATE DATABASE SQL command The command has to be written in MySQL terminal. This command will create a new database and then you can create new tables and include data in it. **How can you make a database as your current database?** After making a database the first thing which has to be done is to create a table inside the database to test the new database that is being created. The command which is used to do that is: USE aliendatabase; This command allows us to make a database which is not a current database as my current. I have to just use the USE variable and the name of the database and it will become active for use. |

|  |
| --- |
|  |
| Why to use CHAR instead of VARCHAR in the database?  CHAR is much more accurate and efficient to use. CHAR doesn’t have to keep a count of the variable length. It is more efficient when you have to use it for a text column which is of an exact length. Char is used for the data which are fixed, but VARCHAR is used for data like password, which are variable.  What are ENUMs used for in MySQL?  ENUM is used to limit the possible values and store it together. It is a function that can be created to store the similar values together. It is used in creation of table. The syntax of it is as follows: CREATE TABLE months (month ENUM “January”, “February”, “March”,…);  INSERT months VALUES (“April”);  What is the purpose of -> in the MySQL terminal?  -> prompt in the command of MySQL indicates that a single statement is being entered across multiple lines. From this prompt MySQL interprets that you haven’t finished entering the statements. It has no impact of enter which you might press to go to the next line. MySQL will execute the statement only when you will insert the semicolon in the end which it recognizes.  How to find the unique values if the value in the column is repeated?  If the values in the column of a table are repeating and a unique value has to be found then the following command can be used in the query: SELECT DISTINCT user\_firstname FROM users;  There is another command which can be used to find the command to see the distinct values as: SELECT COUNT (DISTINCT user\_firstname) FROM users;  When to use ORDER BY in DELETE statement?  The ORDER BY clause in DELETE statement is used when a deletion has to take place by in a specified order. The syntax is like this  DELETE [LOW\_PRIORITY] [QUICK] [IGNORE] FROM tbl\_name [WHERE where\_condition] [ORDER BY ...] [LIMIT row\_count]  ORDER BY clause is specified, the rows are deleted in the order that is specified.  What is the difference between Unix timestamps and MySQL timestamps?  The unix timestamp is stored as 32 bit integer whereas, MySQL timestamps are stored in 32 bit integers but represented differently then UNIX timestamps like YYYY-MM-DD HH:MM:SS format. Unix timestamp is given as month-day-year-HH:MM:SS.. |

## SQL Queries Interview Questions and Answers on "SQL Select"

**1. Get all employee details from the employee table**

Select \* from employee

**2. Get First\_Name,Last\_Name from employee table**

Select first\_name, Last\_Name from employee

**3. Get First\_Name from employee table using alias name “Employee Name”**

Select first\_name Employee Name from employee

**4. Get First\_Name from employee table in upper case**

Select upper(FIRST\_NAME) from EMPLOYEE

**5. Get First\_Name from employee table in lower case**

Select lower(FIRST\_NAME) from EMPLOYEE

**6. Get unique DEPARTMENT from employee table**

select distinct DEPARTMENT from EMPLOYEE

**Don't Miss** - [SQL and Database theory Interview Questions](http://a4academics.com/interview-questions/53-database-and-sql/411-sql-interview-questions-and-answers-database)

**7. Select first 3 characters of FIRST\_NAME from EMPLOYEE**

**Oracle Equivalent of SQL Server SUBSTRING is SUBSTR**, Query : select substr(FIRST\_NAME,0,3) from employee  
 **SQL Server Equivalent of Oracle SUBSTR is SUBSTRING**, Query : select substring(FIRST\_NAME,0,3) from employee  
 **MySQL Server Equivalent of Oracle SUBSTR is SUBSTRING**. In MySQL start position is 1, Query : select substring(FIRST\_NAME,1,3) from employee

**8. Get position of 'o' in name 'John' from employee table**

**Oracle Equivalent of SQL Server CHARINDEX is INSTR**, Query : Select instr(FIRST\_NAME,'o') from employee where first\_name='John'  
 **SQL Server Equivalent of Oracle INSTR is CHARINDEX**, Query: Select CHARINDEX('o',FIRST\_NAME,0) from employee where first\_name='John'  
 **MySQL Server Equivalent of Oracle INSTR is LOCATE**, Query: Select LOCATE('o',FIRST\_NAME) from employee where first\_name='John'

**9. Get FIRST\_NAME from employee table after removing white spaces from right side**

select RTRIM(FIRST\_NAME) from employee

**10. Get FIRST\_NAME from employee table after removing white spaces from left side**

select LTRIM(FIRST\_NAME) from employee

**11. Get length of FIRST\_NAME from employee table**

**Oracle,MYSQL Equivalent of SQL Server Len is Length** , Query :select length(FIRST\_NAME) from employee  
 **SQL Server Equivalent of Oracle,MYSQL Length is Len**, Query :select len(FIRST\_NAME) from employee

**12. Get First\_Name from employee table after replacing 'o' with '$'**

select REPLACE(FIRST\_NAME,'o','$') from employee

**13. Get First\_Name and Last\_Name as single column from employee table separated by a '\_'**

**Oracle Equivalent of MySQL concat is '||'**, Query : Select FIRST\_NAME|| '\_' ||LAST\_NAME from EMPLOYEE  
 **SQL Server Equivalent of MySQL concat is '+'**, Query : Select FIRST\_NAME + '\_' +LAST\_NAME from EMPLOYEE  
 **MySQL Equivalent of Oracle '||' is concat**, Query : Select concat(FIRST\_NAME,'\_',LAST\_NAME) from EMPLOYEE

**14. Get FIRST\_NAME ,Joining year,Joining Month and Joining Date from employee table**

**SQL Queries in Oracle**, Select FIRST\_NAME, to\_char(joining\_date,'YYYY') JoinYear , to\_char(joining\_date,'Mon'), to\_char(joining\_date,'dd') from EMPLOYEE  
 **SQL Queries in SQL Server**, select SUBSTRING (convert(varchar,joining\_date,103),7,4) , SUBSTRING (convert(varchar,joining\_date,100),1,3) , SUBSTRING (convert(varchar,joining\_date,100),5,2) from EMPLOYEE  
 **SQL Queries in MySQL**, select year(joining\_date),month(joining\_date), DAY(joining\_date) from EMPLOYEE

**15. Get all employee details from the employee table order by First\_Name Ascending**

Select \* from employee order by FIRST\_NAME asc

**16. Get all employee details from the employee table order by First\_Name descending**

Select \* from employee order by FIRST\_NAME desc

**17. Get all employee details from the employee table order by First\_Name Ascending and Salary descending**

Select \* from employee order by FIRST\_NAME asc,SALARY desc

## "SQL Where Condition" Interview Questions

**18. Get employee details from employee table whose employee name is “John”**

Select \* from EMPLOYEE where FIRST\_NAME='John'

**19. Get employee details from employee table whose employee name are “John” and “Roy”**

Select \* from EMPLOYEE where FIRST\_NAME in ('John','Roy')

**20. Get employee details from employee table whose employee name are not “John” and “Roy”**

Select \* from EMPLOYEE where FIRST\_NAME not in ('John','Roy')

## "SQL Wild Card Search" Interview Questions

**21. Get employee details from employee table whose first name starts with 'J'**

Select \* from EMPLOYEE where FIRST\_NAME like 'J%'

**22. Get employee details from employee table whose first name contains 'o'**

Select \* from EMPLOYEE where FIRST\_NAME like '%o%'

**23. Get employee details from employee table whose first name ends with 'n'**

Select \* from EMPLOYEE where FIRST\_NAME like '%n'

## "SQL Pattern Matching" Interview Questions

**24. Get employee details from employee table whose first name ends with 'n' and name contains 4 letters**

Select \* from EMPLOYEE where FIRST\_NAME like '\_\_\_n' (Underscores)

**25. Get employee details from employee table whose first name starts with 'J' and name contains 4 letters**

Select \* from EMPLOYEE where FIRST\_NAME like 'J\_\_\_' (Underscores)

**26. Get employee details from employee table whose Salary greater than 600000**

Select \* from EMPLOYEE where Salary >600000

**27. Get employee details from employee table whose Salary less than 800000**

Select \* from EMPLOYEE where Salary <800000

**28. Get employee details from employee table whose Salary between 500000 and 800000**

Select \* from EMPLOYEE where Salary between 500000 and 800000

**29. Get employee details from employee table whose name is 'John' and 'Michael'**

Select \* from EMPLOYEE where FIRST\_NAME in ('John','Michael')

**30. Get employee details from employee table whose joining year is “2013”**

**SQL Queries in Oracle**, Select \* from EMPLOYEE where to\_char(joining\_date,'YYYY')='2013'  
  
**SQL Queries in SQL Server**, Select \* from EMPLOYEE where SUBSTRING(convert(varchar,joining\_date,103),7,4)='2013'  
  
**SQL Queries in MySQL**, Select \* from EMPLOYEE where year(joining\_date)='2013'

**31. Get employee details from employee table whose joining month is “January”**

**SQL Queries in Oracle**, Select \* from EMPLOYEE where to\_char(joining\_date,'MM')='01' or Select \* from EMPLOYEE where to\_char(joining\_date,'Mon')='Jan'  
  
**SQL Queries in SQL Server**, Select \* from EMPLOYEE where SUBSTRING(convert(varchar,joining\_date,100),1,3)='Jan'  
  
**SQL Queries in MySQL**, Select \* from EMPLOYEE where month(joining\_date)='01'

**32. Get employee details from employee table who joined before January 1st 2013**

**SQL Queries in Oracle**, Select \* from EMPLOYEE where JOINING\_DATE <to\_date('01/01/2013','dd/mm/yyyy')  
  
**SQL Queries in SQL Server** (Format - “MM/DD/YYYY”), Select \* from EMPLOYEE where joining\_date <'01/01/2013'  
  
**SQL Queries in MySQL** (Format - “YYYY-DD-MM”), Select \* from EMPLOYEE where joining\_date <'2013-01-01'

**33. Get employee details from employee table who joined after January 31st**

**SQL Queries in Oracle**, Select \* from EMPLOYEE where JOINING\_DATE >to\_date('31/01/2013','dd/mm/yyyy')  
  
**SQL Queries in SQL Server and MySQL** (Format - “MM/DD/YYYY”), Select \* from EMPLOYEE where joining\_date >'01/31/2013'  
  
**SQL Queries in MySQL** (Format - “YYYY-DD-MM”), Select \* from EMPLOYEE where joining\_date >'2013-01-31'

**35. Get Joining Date and Time from employee table**

**SQL Queries in Oracle**, select to\_char(JOINING\_DATE,'dd/mm/yyyy hh:mi:ss') from EMPLOYEE  
  
**SQL Queries in SQL Server**, Select convert(varchar(19),joining\_date,121) from EMPLOYEE  
  
**SQL Queries in MySQL**, Select CONVERT(DATE\_FORMAT(joining\_date,'%Y-%m-%d-%H:%i:00'),DATETIME) from EMPLOYEE

**36. Get Joining Date,Time including milliseconds from employee table**

**SQL Queries in Oracle**, select to\_char(JOINING\_DATE,'dd/mm/yyyy HH:mi:ss.ff') from EMPLOYEE . Column Data Type should be “TimeStamp”  
  
**SQL Queries in SQL Server**, select convert(varchar,joining\_date,121) from EMPLOYEE  
  
**SQL Queries in MySQL**, Select MICROSECOND(joining\_date) from EMPLOYEE

**37. Get difference between JOINING\_DATE and INCENTIVE\_DATE from employee and incentives table**

Select FIRST\_NAME,INCENTIVE\_DATE - JOINING\_DATE from employee a inner join incentives B on A.EMPLOYEE\_ID=B.EMPLOYEE\_REF\_ID

**38. Get database date**

**SQL Queries in Oracle**, select sysdate from dual  
  
**SQL Queries in SQL Server**, select getdate()  
  
**SQL Query in MySQL**, select now()

**39. Get names of employees from employee table who has '%' in Last\_Name. Tip : Escape character for special characters in a query.**

**SQL Queries in Oracle**, Select FIRST\_NAME from employee where Last\_Name like '%?%%'

**SQL Queries in SQL Server**, Select FIRST\_NAME from employee where Last\_Name like '%[%]%'

**SQL Queries in MySQL**, Select FIRST\_NAME from employee where Last\_Name like '%\%%'

**40. Get Last Name from employee table after replacing special character with white space**

**SQL Queries in Oracle**, Select translate(LAST\_NAME,'%',' ') from employee  
  
**SQL Queries in SQL Server and MySQL**, Select REPLACE(LAST\_NAME,'%',' ') from employee

## "SQL Group By Query" Interview Questions and Answers

**41. Get department,total salary with respect to a department from employee table.**

Select DEPARTMENT,sum(SALARY) Total\_Salary from employee group by department

**42. Get department,total salary with respect to a department from employee table order by total salary descending**

Select DEPARTMENT,sum(SALARY) Total\_Salary from employee group by DEPARTMENT order by Total\_Salary descending

## SQL Queries Interview Questions and Answers on "SQL Mathematical Operations using Group By"

**43. Get department,no of employees in a department,total salary with respect to a department from employee table order by total salarydescending**

Select DEPARTMENT,count(FIRST\_NAME),sum(SALARY) Total\_Salary from employee group by DEPARTMENT order by Total\_Salary descending

**44. Get department wise average salary from employee table order by salaryascending**

select DEPARTMENT,avg(SALARY) AvgSalary from employee group by DEPARTMENT order by AvgSalary asc

**45. Get department wise maximum salary from employee table order by salaryascending**

select DEPARTMENT,max(SALARY) MaxSalary from employee group by DEPARTMENT order by MaxSalary asc

**46. Get department wise minimum salary from employee table order by salary ascending**

select DEPARTMENT,min(SALARY) MinSalary from employee group by DEPARTMENT order by MinSalary asc

**47. Select no of employees joined with respect to year and month from employee table**

**SQL Queries in Oracle**, select to\_char (JOINING\_DATE,'YYYY') Join\_Year,to\_char (JOINING\_DATE,'MM') Join\_Month,count(\*) Total\_Emp from employee group by to\_char (JOINING\_DATE,'YYYY'),to\_char(JOINING\_DATE,'MM')  
  
**SQL Queries in SQL Server**, select datepart (YYYY,JOINING\_DATE) Join\_Year,datepart (MM,JOINING\_DATE) Join\_Month,count(\*) Total\_Emp from employee group by datepart(YYYY,JOINING\_DATE), datepart(MM,JOINING\_DATE)  
  
**SQL Queries in MySQL**, select year (JOINING\_DATE) Join\_Year,month (JOINING\_DATE) Join\_Month,count(\*) Total\_Emp from employee group by year(JOINING\_DATE), month(JOINING\_DATE)

**48. Select department,total salary with respect to a department from employee table where total salary greater than 800000 order by Total\_Salary descending**

Select DEPARTMENT,sum(SALARY) Total\_Salary from employee group by DEPARTMENT having sum(SALARY) >800000 order by Total\_Salary desc

**49. Select employee details from employee table if data exists in incentive table ?**

select \* from EMPLOYEE where exists (select \* from INCENTIVES)

**Explanation** : Here "exists" statement helps us to do the job of If statement. Main query will get executed if the sub query returns at least one row. So we can consider the sub query as "If condition" and the main query as "code block" inside the If condition. We can use any SQL commands (Joins, Group By , having etc) in sub query. This command will be useful in queries which need to detect an event and do some activity.

**50. How to fetch data that are common in two query results ?**

select \* from EMPLOYEE where EMPLOYEE\_ID INTERSECT select \* from EMPLOYEE where EMPLOYEE\_ID < 4

**Explanation** : Here "INTERSECT" command is used to fetch data that are common in 2 queries. In this example, we had taken EMPLOYEE table in both the queries.We can apply INTERSECT command on different tables. The result of the above query will return employee details of "ROY" because, employee id of ROY is 3, and both query results have the information about ROY.

**51. Get Employee ID's of those employees who didn't receive incentives without using sub query ?**

select EMPLOYEE\_ID from EMPLOYEE  
MINUS  
select EMPLOYEE\_REF\_ID from INCENTIVES

**Explanation** : To filter out certain information we use MINUS command. What MINUS Command odes is that, it returns all the results from the first query, that are not part of the second query. In our example, first three employees received the incentives. So query will return employee id's 4 to 8.

**52. Select 20 % of salary from John , 10% of Salary for Roy and for other 15 % of salary from employee table**

SELECT FIRST\_NAME, CASE FIRST\_NAME WHEN 'John' THEN SALARY \* .2 WHEN 'Roy' THEN SALARY \* .10 ELSE SALARY \* .15 END "Deduced\_Amount" FROM EMPLOYEE

**Explanation** : Here, we are using "SQL CASE" statement to achieve the desired results. After case statement, we had to specify the column on which filtering is applied. In our case it is "FIRST\_NAME". And in then condition, specify the name of filter like John, Roy etc. To handle conditions outside our filter, use else block where every one other than John and Roy enters.

**53. Select Banking as 'Bank Dept', Insurance as 'Insurance Dept' and Services as 'Services Dept' from employee table**

SQL Queries in Oracle, SELECT distinct DECODE (DEPARTMENT, 'Banking', 'Bank Dept', 'Insurance', 'Insurance Dept', 'Services', 'Services Dept') FROM EMPLOYEE  
SQL Queries in SQL Server and MySQL, SELECT case DEPARTMENT when 'Banking' then 'Bank Dept' when 'Insurance' then 'Insurance Dept' when 'Services' then 'Services Dept' end FROM EMPLOYEE

**Explanation** : Here "DECODE" keyword is used to specify the alias name. In oracle we had specify, Column Name followed by Actual Name and Alias Name as arguments. In SQL Server and MySQL, we can use the earlier switch case statements for alias names.

**54. Delete employee data from employee table who got incentives in incentive table**

delete from EMPLOYEE where EMPLOYEE\_ID in (select EMPLOYEE\_REF\_ID from INCENTIVES)

**Explanation** : Trick about this question is that we can't delete data from a table based on some condition in another table by joining them. Here to delete multiple entries from EMPLOYEE table, we need to use Subquery. Entries will get deleted based on the result of Subquery.

**55. Insert into employee table Last Name with " ' " (Single Quote - Special Character)**

Tip - Use another single quote before special character  
Insert into employee (LAST\_NAME) values ('Test''')

**56. Select Last Name from employee table which contain only numbers**

Select \* from EMPLOYEE where lower(LAST\_NAME)=upper(LAST\_NAME)

**Explanation** : In order to achieve the desired result, we use "ASCII" property of the database. If we get results for a column using Lower and Upper commands, ASCII of both results will be same for numbers. If there is any alphabets in the column, results will differ.

**57. Write a query to rank employees based on their incentives for a month**

select FIRST\_NAME,INCENTIVE\_AMOUNT,DENSE\_RANK() OVER (PARTITION BY INCENTIVE\_DATE ORDER BY INCENTIVE\_AMOUNT DESC) AS Rank from EMPLOYEE a, INCENTIVES b where a.EMPLOYEE\_ID=b.EMPLOYEE\_REF\_ID

**Explanation** : In order to rank employees based on their rank for a month, "DENSE\_RANK" keyword is used. Here partition by keyword helps us to sort the column with which filtering is done. Rank is provided to the column specified in the order by statement. The above query ranks employees with respect to their incentives for a given month.

**58. Update incentive table where employee name is 'John'**

update INCENTIVES set INCENTIVE\_AMOUNT='9000' where EMPLOYEE\_REF\_ID=(select EMPLOYEE\_ID from EMPLOYEE where FIRST\_NAME='John' )

**Explanation** : We need to join Employee and Incentive Table for updating the incentive amount. But for update statement joining query wont work. We need to use sub query to update the data in the incentive table. SQL Query is as shown below.

**59. Select first\_name, incentive amount from employee and incentives table for those employees who have incentives**

Select FIRST\_NAME,INCENTIVE\_AMOUNT from employee a inner join incentives B on A.EMPLOYEE\_ID=B.EMPLOYEE\_REF\_ID

**60. Select first\_name, incentive amount from employee and incentives table for those employees who have incentives and incentive amount greater than 3000**

Select FIRST\_NAME,INCENTIVE\_AMOUNT from employee a inner join incentives B on A.EMPLOYEE\_ID=B.EMPLOYEE\_REF\_ID and INCENTIVE\_AMOUNT >3000

**61. Select first\_name, incentive amount from employee and incentives table for all employes even if they didn't get incentives**

Select FIRST\_NAME,INCENTIVE\_AMOUNT from employee a left join incentives B on A.EMPLOYEE\_ID=B.EMPLOYEE\_REF\_ID

**62. Select first\_name, incentive amount from employee and incentives table for all employees even if they didn't get incentives and set incentive amount as 0 for those employees who didn't get incentives.**

**SQL Queries in Oracle**, Select FIRST\_NAME,nvl(INCENTIVE\_AMOUNT,0) from employee a left join incentives B on A.EMPLOYEE\_ID=B.EMPLOYEE\_REF\_ID  
  
**SQL Queries in SQL Server**, Select FIRST\_NAME, ISNULL(INCENTIVE\_AMOUNT,0) from employee a left join incentives B on A.EMPLOYEE\_ID=B.EMPLOYEE\_REF\_ID  
  
**SQL Queries in MySQL**, Select FIRST\_NAME, IFNULL(INCENTIVE\_AMOUNT,0) from employee a left join incentives B on A.EMPLOYEE\_ID=B.EMPLOYEE\_REF\_ID

**63. Select first\_name, incentive amount from employee and incentives table for all employees who got incentives using left join**

**SQL Queries in Oracle**, Select FIRST\_NAME,nvl(INCENTIVE\_AMOUNT,0) from employee a right join incentives B on A.EMPLOYEE\_ID=B.EMPLOYEE\_REF\_ID  
  
**SQL Queries in SQL Server**, Select FIRST\_NAME, isnull(INCENTIVE\_AMOUNT,0) from employee a right join incentives B on A.EMPLOYEE\_ID=B.EMPLOYEE\_REF\_ID  
  
**SQL Queries in MySQL**, Select FIRST\_NAME, IFNULL(INCENTIVE\_AMOUNT,0) from employee a right join incentives B on A.EMPLOYEE\_ID=B.EMPLOYEE\_REF\_ID

**64. Select max incentive with respect to employee from employee and incentives table using sub query**

**SQL Queries in Oracle**, select DEPARTMENT,(select nvl(max(INCENTIVE\_AMOUNT),0) from INCENTIVES where EMPLOYEE\_REF\_ID=EMPLOYEE\_ID) Max\_incentive from EMPLOYEE  
  
**SQL Queries in SQL Server**, select DEPARTMENT,(select ISNULL(max(INCENTIVE\_AMOUNT),0) from INCENTIVES where EMPLOYEE\_REF\_ID=EMPLOYEE\_ID) Max\_incentive from EMPLOYEE  
  
**SQL Queries in SQL Server**, select DEPARTMENT,(select IFNULL (max(INCENTIVE\_AMOUNT),0) from INCENTIVES where EMPLOYEE\_REF\_ID=EMPLOYEE\_ID) Max\_incentive from EMPLOYEE

## "Top N Salary" SQL Interview Questions and Answers

**65. Select TOP 2 salary from employee table**

**SQL Queries in Oracle**, select \* from (select \* from employee order by SALARY desc) where rownum <3  
  
**SQL Queries in SQL Server**, select top 2 \* from employee order by salary desc  
  
**SQL Queries in MySQL**, select \* from employee order by salary desc limit 2

**66. Select TOP N salary from employee table**

**SQL Queries in Oracle**, select \* from (select \* from employee order by SALARY desc) where rownum <N + 1  
  
**SQL Queries in SQL Server**, select top N \* from employee  
  
**SQL Queries in MySQL**, select \* from employee order by salary desc limit N

**67. Select 2nd Highest salary from employee table**

**SQL Queries in Oracle**, select min(salary) from (select \* from (select \* from employee order by SALARY desc) where rownum <3)  
  
**SQL Queries in SQL Server**, select min(SALARY) from (select top 2 \* from employee) a  
  
**SQL Queries in MySQL**, select min(SALARY) from (select \* from employee order by salary desc limit 2) a

**68. Select Nth Highest salary from employee table**

**SQL Queries in Oracle**, select min(salary) from (select \* from (select \* from employee order by SALARY desc) where rownum <N + 1)  
  
**SQL Queries in SQL Server**, select min(SALARY) from (select top N \* from employee) a  
  
**SQL Queries in MySQL**, select min(SALARY) from (select \* from employee order by salary desc limit N) a

## "SQL Union" Query Interview Questions

**69. Select First\_Name,LAST\_NAME from employee table as separate rows**

select FIRST\_NAME from EMPLOYEE union select LAST\_NAME from EMPLOYEE

**70. What is the difference between UNION and UNION ALL ?**

Both UNION and UNION ALL is used to select information from structurally similar tables. That means corresponding columns specified in the union should have same data type. For example, in the above query, if FIRST\_NAME is DOUBLE and LAST\_NAME is STRING above query wont work. Since the data type of both the columns are VARCHAR, union is made possible. Difference between UNION and UNION ALL is that , UNION query return only distinct values.

**71. Write create table syntax for employee table**

Oracle -CREATE TABLE EMPLOYEE (  
EMPLOYEE\_ID NUMBER,  
FIRST\_NAME VARCHAR2(20 BYTE),  
LAST\_NAME VARCHAR2(20 BYTE),  
SALARY FLOAT(126),  
JOINING\_DATE TIMESTAMP (6) DEFAULT sysdate,  
DEPARTMENT VARCHAR2(30 BYTE) )  
SQL Server -CREATE TABLE EMPLOYEE(  
EMPLOYEE\_ID int NOT NULL,  
FIRST\_NAME varchar(50) NULL,  
LAST\_NAME varchar(50) NULL,  
SALARY decimal(18, 0) NULL,  
JOINING\_DATE datetime2(7) default getdate(),  
DEPARTMENT varchar(50) NULL)

**72. Write syntax to delete table employee**

DROP table employee;

**73. Write syntax to set EMPLOYEE\_ID as primary key in employee table**

ALTER TABLE EMPLOYEE add CONSTRAINT EMPLOYEE\_PK PRIMARY KEY(EMPLOYEE\_ID)

**74. Write syntax to set 2 fields(EMPLOYEE\_ID,FIRST\_NAME) as primary key in employee table**

ALTER TABLE EMPLOYEE add CONSTRAINT EMPLOYEE\_PK PRIMARY KEY(EMPLOYEE\_ID,FIRST\_NAME)

**75. Write syntax to drop primary key on employee table**

Alter TABLE EMPLOYEE drop CONSTRAINT EMPLOYEE\_PK;

**76. Write Sql Syntax to create EMPLOYEE\_REF\_ID in INCENTIVES table as foreign key with respect to EMPLOYEE\_ID in employee table**

ALTER TABLE INCENTIVES ADD CONSTRAINT INCENTIVES\_FK FOREIGN KEY (EMPLOYEE\_REF\_ID) REFERENCES EMPLOYEE(EMPLOYEE\_ID)

**77. Write SQL to drop foreign key on employee table**

ALTER TABLE INCENTIVES drop CONSTRAINT INCENTIVES\_FK;

**78. Write SQL to create Orcale Sequence**

CREATE SEQUENCE EMPLOYEE\_ID\_SEQ START WITH 0 NOMAXVALUE MINVALUE 0 NOCYCLE NOCACHE NOORDER;

**79. Write Sql syntax to create Oracle Trigger before insert of each row in employee table**

CREATE OR REPLACE TRIGGER EMPLOYEE\_ROW\_ID\_TRIGGER  
BEFORE INSERT ON EMPLOYEE FOR EACH ROW  
DECLARE  
seq\_no number(12);  
BEGIN  
select EMPLOYEE\_ID\_SEQ.nextval into seq\_no from dual ;  
:new EMPLOYEE\_ID :=seq\_no;  
END;  
SHOW ERRORS;

**80. Oracle Procedure81. Oracle View**

An example oracle view script is given below  
create view Employee\_Incentive as select FIRST\_NAME,max(INCENTIVE\_AMOUNT) INCENTIVE\_AMOUNT from EMPLOYEE a, INCENTIVES b where a.EMPLOYEE\_ID=b.EMPLOYEE\_REF\_ID group by FIRST\_NAME

**82. Oracle materialized view - Daily Auto Refresh**

CREATE MATERIALIZED VIEW Employee\_Incentive  
REFRESH COMPLETE  
START WITH SYSDATE  
NEXT SYSDATE + 1 AS  
select FIRST\_NAME,INCENTIVE\_DATE,INCENTIVE\_AMOUNT from EMPLOYEE a, INCENTIVES b   
where a.EMPLOYEE\_ID=b.EMPLOYEE\_REF\_ID

**83. Oracle materialized view - Fast Refresh on Commit**

Create materialized view log for fast refresh. Following materialized view script wont get executed if materialized view log doesn't exists  
  
CREATE MATERIALIZED VIEW MAT\_Employee\_Incentive\_Refresh  
BUILD IMMEDIATE  
REFRESH FAST ON COMMIT AS  
select FIRST\_NAME,max(INCENTIVE\_AMOUNT) from EMPLOYEE a, INCENTIVES b  
where a.EMPLOYEE\_ID=b.EMPLOYEE\_REF\_ID group by FIRST\_NAME

**84. What is SQL Injection ?**

SQL Injection is one of the the techniques uses by hackers to hack a website by injecting SQL commands in data fields.

**What's MySQL ?**MySQL (pronounced "my ess cue el") is an open source relational database management system (RDBMS) that uses Structured Query Language (SQL), the most popular language for adding, accessing, and processing data in a database. Because it is open source, anyone can download MySQL and tailor it to their needs in accordance with the general public license. MySQL is noted mainly for its speed, reliability, and flexibility. ...

**What is DDL, DML and DCL ?**  
If you look at the large variety of SQL commands, they can be divided into three large subgroups. Data Definition Language deals with database schemas and descriptions of how the data should reside in the database, therefore language statements like CREATE TABLE or ALTER TABLE belong to DDL. DML deals with data manipulation, and therefore includes most common SQL statements such SELECT, INSERT, etc. Data Control Language includes commands such as GRANT, and mostly concerns with rights, permissions and other controls of the database system.

**How do you get the number of rows affected by query?**  
SELECT COUNT (user\_id) FROM users would only return the number of user\_id’s.

**If the value in the column is repeatable, how do you find out the unique values?**  
Use DISTINCT in the query, such as SELECT DISTINCT user\_firstname FROM users; You can also ask for a number of distinct values by saying SELECT COUNT (DISTINCT user\_firstname) FROM users;

**How do you return the a hundred books starting from 25th?**  
SELECT book\_title FROM books LIMIT 25, 100. The first number in LIMIT is the offset, the second is the number.

**You wrote a search engine that should retrieve 10 results at a time, but at the same time you’d like to know how many rows there’re total. How do you display that to the user?**  
SELECT SQL\_CALC\_FOUND\_ROWS page\_title FROM web\_pages LIMIT 1,10; SELECT FOUND\_ROWS(); The second query (not that COUNT() is never used) will tell you how many results there’re total, so you can display a phrase "Found 13,450,600 results, displaying 1-10". Note that FOUND\_ROWS does not pay attention to the LIMITs you specified and always returns the total number of rows affected by query.

**How would you write a query to select all teams that won either 2, 4, 6 or 8 games?**  
SELECT team\_name FROM teams WHERE team\_won IN (2, 4, 6, 8)

**How would you select all the users, whose phone number is null?**  
SELECT user\_name FROM users WHERE ISNULL(user\_phonenumber);

**What does this query mean: SELECT user\_name, user\_isp FROM users LEFT JOIN isps USING (user\_id) ?**  
It’s equivalent to saying SELECT user\_name, user\_isp FROM users LEFT JOIN isps WHERE users.user\_id=isps.user\_id

**How do you find out which auto increment was assigned on the last insert?**

**[\_private/tble\_firefox.htm]**

SELECT LAST\_INSERT\_ID() will return the last value assigned by the auto\_increment function. Note that you don’t have to specify the table name.

**What does –i-am-a-dummy flag to do when starting MySQL?**  
Makes the MySQL engine refuse UPDATE and DELETE commands where the WHERE clause is not present.

**On executing the DELETE statement I keep getting the error about foreign key constraint failing. What do I do?**  
What it means is that so of the data that you’re trying to delete is still alive in another table. Like if you have a table for universities and a table for students, which contains the ID of the university they go to, running a delete on a university table will fail if the students table still contains people enrolled at that university. Proper way to do it would be to delete the offending data first, and then delete the university in question. Quick way would involve running SET foreign\_key\_checks=0 before the DELETE command, and setting the parameter back to 1 after the DELETE is done. If your foreign key was formulated with ON DELETE CASCADE, the data in dependent tables will be removed automatically.

**When would you use ORDER BY in DELETE statement?**  
When you’re not deleting by row ID. Such as in DELETE FROM techpreparation\_com\_questions ORDER BY timestamp LIMIT 1. This will delete the most recently posted question in the table techpreparation\_com\_questions.

**How can you see all indexes defined for a table?**  
SHOW INDEX FROM techpreparation\_questions;

**How would you change a column from VARCHAR(10) to VARCHAR(50)?**  
ALTER TABLE techpreparation\_questions CHANGE techpreparation\_content techpreparation\_CONTENT VARCHAR(50).

**How would you delete a column?**  
ALTER TABLE techpreparation\_answers DROP answer\_user\_id.

**Questions : 1 how to do login in mysql with unix shell.**  
Answers :1 By below method if [password](http://www.trixhub.com/secure-organize-multiples-password-sticky-password/) is pass and user name is root  
# [mysql dir]/bin/mysql -h hostname -u root -p pass

**Questions : 2 how you will Create a database on the mysql server with unix shell.**  
Answers : 2 mysql> create database databasename;

**Questions : 3 how to list or view all databases from the mysql server.**  
Answers : 3 mysql> show databases;

**Questions : 4 How Switch (select or use) to a database.**  
Answers : 4 mysql> use databasename;

**Questions : 5 How To see all the tables from a database of mysql server.**  
Answers : 5 mysql> show tables;

**Questions : 6 How to see table’s field formats or description of table .**  
Answers : 6 mysql> describe tablename;

**Questions : 7 How to delete a database from mysql server.**  
Answers : 7 mysql> drop database databasename;

**Questions : 8 How we get Sum of column.**  
Answers : 8 mysql> SELECT SUM(\*) FROM [table name];

**Questions : 9 How to delete a table.**  
Answers : 9 mysql> drop table tablename;

**Questions : 10 How you will Show all data from a table.**  
Answers : 10 mysql> SELECT \* FROM tablename;

**Questions : 11 How to returns the columns and column information pertaining to the designated table.**  
Answers : 11 mysql> show columns from tablename;

**Questions : 12 How to Show certain selected rows with the value “abcd”.**  
Answers : 12 mysql> SELECT \* FROM tablename WHERE fieldname = “abcd”;

**Questions : 13 How will Show all records containing the name “sonia” AND the phone number ‘9899000000’.**  
Answers : 13 mysql> SELECT \* FROM tablename WHERE name = “sonia” AND phone\_number = ‘9899000000’;

**Questions : 14 How you will Show all records not containing the name “sonia” AND the phone number ‘9899000000’ order by the phone\_number field.**  
Answer : 14 mysql> SELECT \* FROM tablename WHERE name != “sonia” AND phone\_number = ‘9899000000’ order by phone\_number;

**Questions : 15 How to Show all records starting with the letters ‘sonia’ AND the phone number ‘9899000000’.**  
Answers : 15 mysql> SELECT \* FROM tablename WHERE name like “sonia%” AND phone\_number = ‘9899000000’;

**Questions : 16 How to show all records starting with the letters ‘sonia’ AND the phone number ‘9899000000’ limit to records 1 through 5.**  
Answers : 16 mysql> SELECT \* FROM tablename WHERE name like “sonia%” AND phone\_number = ‘9899000000’ limit 1,5;

**Questions : 16 Use a regular expression to find records. Use “REGEXP BINARY” to force case-sensitivity. This finds any record beginning with r.**  
Answer : 16 mysql> SELECT \* FROM tablename WHERE rec RLIKE “^r”;

**Questions : 17 How you will Show unique records.**  
Answer : 17 mysql> SELECT DISTINCT columnname FROM tablename;

**Questions : 18 how we will Show selected records sorted in an ascending (asc) or descending (desc).**  
Answer : 18 mysql> SELECT col1,col2 FROM tablename ORDER BY col2 DESC;

mysql> SELECT col1,col2 FROM tablename ORDER BY col2 ASC;

**Questions : 19 how to Return total number of rows.**  
Answers : 19 mysql> SELECT COUNT(\*) FROM tablename;

**Questions : 20 How to Join tables on common columns.**  
Answer : 20 mysql> select lookup.illustrationid, lookup.personid,person.birthday from lookup left join person on lookup.personid=person.personid=statement to join birthday in person table with primary illustration id.

**Questions : 21 How to Creating a new user. Login as root. Switch to the MySQL db. Make the user. Update privs.**  
Answer : 21 # mysql -u root -p

mysql> use mysql;

mysql> INSERT INTO user (Host,User,[Password](http://www.trixhub.com/secure-organize-multiples-password-sticky-password/)) VALUES(‘%’,’username’,PASSWORD(‘password’));

mysql> flush privileges;

**Questions : 22 How to Change a users password from unix shell.**  
Answers : 22 # [mysql dir]/bin/mysqladmin -u username -h hostname.blah.org -p password ‘new-password’

**Questions : 23 How to Change a users password from MySQL prompt. Login as root. Set the password. Update privs.**  
Answer : 23 # mysql -u root -p

mysql> SET PASSWORD FOR ‘user’@’hostname’ = PASSWORD(‘passwordhere’);

mysql> flush privileges;

**Questions : 24 How to Recover a MySQL root password. Stop the MySQL server process. Start again with no grant tables. Login to MySQL as root. Set new password. Exit MySQL and restart MySQL server.**  
Answer : 24 # /etc/init.d/mysql stop   
# mysqld\_safe –skip-grant-tables &  
# mysql -u root  
mysql> use mysql;  
mysql> update user set password=PASSWORD(“newrootpassword”) where User=’root’;  
mysql> flush privileges;  
mysql> quit  
# /etc/init.d/mysql stop  
# /etc/init.d/mysql start

**Questions : 25 How to Set a root password if there is on root password.**  
Answer : 25 # mysqladmin -u root password newpassword

**Questions : 26 How to Update a root password.**  
Answer : 26 # mysqladmin -u root -p oldpassword newpassword

**Questions : 27 How to allow the user “sonia” to connect to the server from localhost using the password “passwd”. Login as root. Switch to the MySQL db. Give privs. Update privs.**  
Answers : 27 # mysql -u root -p  
mysql> use mysql;  
mysql> grant usage on \*.\* to sonia@localhost identified by ‘passwd’;  
mysql> flush privileges;

**Questions : 28 How to give user privilages for a db. Login as root. Switch to the MySQL db. Grant privs. Update privs.**  
Answers : 28 # mysql -u root -p  
mysql> use mysql;  
mysql> INSERT INTO user (Host,Db,User,Select\_priv,Insert\_priv,Update\_priv,Delete\_priv,Create\_priv,Drop\_priv) VALUES (‘%’,’databasename’,’username’,’Y’,’Y’,’Y’,’Y’,’Y’,’N’);  
mysql> flush privileges;   
or   
mysql> grant all privileges on databasename.\* to username@localhost;  
mysql> flush privileges;

**Questions : 29 How To update info already in a table and Delete a row(s) from a table.**  
Answer : 29 mysql> UPDATE [table name] SET Select\_priv = ‘Y’,Insert\_priv = ‘Y’,Update\_priv = ‘Y’ where [field name] = ‘user’;   
mysql> DELETE from [table name] where [field name] = ‘whatever’;

**Questions : 30 How to Update database permissions/privilages.**  
Answer : 30 mysql> flush privileges;

**Questions : 31 How to Delete a column and Add a new column to database.**  
Answer : 31 mysql> alter table [table name] drop column [column name];  
mysql> alter table [table name] add column [new column name] varchar (20);

**Questions : 32 Change column name and Make a unique column so we get no dupes.**  
Answer : 32 mysql> alter table [table name] change [old column name] [new column name] varchar (50);  
mysql> alter table [table name] add unique ([column name]);

**Questions : 33 How to make a column bigger and Delete unique from table.**  
Answer : 33 mysql> alter table [table name] modify [column name] VARCHAR(3);  
mysql> alter table [table name] drop index [colmn name];

**Questions : 34 How to Load a CSV file into a table.**  
Answer : 34 mysql> LOAD DATA INFILE ‘/tmp/filename.csv’ replace INTO TABLE [table name] FIELDS TERMINATED BY ‘,’ LINES TERMINATED BY ‘n’ (field1,field2,field3);

**Questions : 35 How to dump all databases for backup. Backup file is sql commands to recreate all db’s.**  
Answer : 35 # [mysql dir]/bin/mysqldump -u root -ppassword –opt >/tmp/alldatabases.sql

**Questions : 36 How to dump one database for backup.**  
Answer : 36 # [mysql dir]/bin/mysqldump -u username -ppassword –databases databasename >/tmp/databasename.sql

**Questions : 37 How to dump a table from a database.**  
Answer : 37 # [mysql dir]/bin/mysqldump -c -u username -ppassword databasename tablename > /tmp/databasename.tablename.sql

**Questions : 38 Restore database (or database table) from backup.**  
Answer : 38 # [mysql dir]/bin/mysql -u username -ppassword databasename < /tmp/databasename.sql

**Questions : 39 How to Create Table show Example.**  
Answer : 39 mysql> CREATE TABLE [table name] (firstname VARCHAR(20), middleinitial VARCHAR(3), lastname VARCHAR(35),suffix VARCHAR(3),officeid VARCHAR(10),userid VARCHAR(15),username VARCHAR(8),email VARCHAR(35),phone VARCHAR(25), groups VARCHAR(15),datestamp DATE,timestamp time,pgpemail VARCHAR(255));  
**Questions : 40 How to search second maximum(second highest) salary value(integer)from table employee (field salary)in the manner so that mysql gets less load?**  
Answers : 40 By below query we will get second maximum(second highest) salary value(integer)from table employee (field salary)in the manner so that mysql gets less load?   
SELECT DISTINCT(salary) FROM employee order by salary desc limit 1 , 1 ;   
(This way we will able to find out 3rd highest , 4th highest salary so on just need to change limit condtion like LIMIT 2,1 for 3rd highest and LIMIT 3,1 for 4th   
some one may finding this way useing below query that taken more time as compare to above query SELECT salary FROM employee where salary < (select max(salary) from employe) order by salary DESC limit 1 ;