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1. Benefits Of MySQL

Ans: 1) it is easy to handle by user ,using by SQL knowledge

1. it is free of cost
2. Source code is freely available to web user
3. It various security features like firewall,encrption and user authentication
4. It supports multi engine support feature,the admin to configure the database in a way to balance the workload.
5. It is a platform friendly database support
6. It is very good scalability to web application like multi user connection overhead and execution requests.
7. SQL Commands with examples

Ans: 1)SQL commands are instructions .

1. It is used to communicate with the database.
2. ,They are DDL,DML,DCL,TCL,DQL
3. Examples:create,drop,alter,truncate,insert,update,delete,select,revoke,grant,commit,

rollback ,save point.

1. SQL JOINS with examples

Ans: 1)it is used to join two tables or More than two tables

1. we have 4 types of join:
2. inner join:Matching values of both tables
3. Left join:Return all values of left tables and match records from the right table.
4. Right join: Return all values of the right tables and match records from the left table
5. Cross join:Return all records from the both tables.
6. Syntax:

Select table1.column,table2.column from table1 Inner/Left/right/cross join table2 on

table1.column=table2.column function/clauses/condition;

Note:

\*In syntax after on we should use both tables same columns

1. Explain Database Normalization with examples:

Ans:1)Database Normalization is the process of efficiently organizing data in a database

1. The reasons are eliminating redundant data,ensuring data dependencies make sense.
2. Normalization guidelines are divided into normal forms,the aim of normal forms is to organise the database structure.

4)First Normal Form(1NF):

\*Define data items required,because they become columns in the tables

\*Place related data items in the table

\*there are no repeating groups of data

\*there is a primary key

Example:

\*Table has different columns:they are column1,column2,etc

\*Table is divided into two tables as per our requirement

\*Table1 has some column,one column is mentioned primary key

\*Table2 has some columns, one column is mentioned primary key

\*Here both columns primary keys are same columns names,so we are linked data by using primary key

5)Second Normal Form(2NF):

\*The 2NF states that it should meet all rules for 1NF and there must be no partial dependences of any of the columns on the primary keys.

Examples:

\*In any Table primary key consists of more than two columns,you need to separate the columns into three tables

\* create a table1 and store data in columns using one primary key columns

\*create a table2 and store data in columns using another primary key columns

\*create a table 3 and store data in columns storing both table1 & table2 primary key columns also.

6)Third Normal Form(3NF):

\*it is in second normal form

\*All non primary fields are on the primary key

Examples:

\*Table has different columns,some columns have dependency to the other columns.

\*so we need to create table1 using the primary key column of the main table.

\* we need to create table 2 using primary key column of the main table,here table1 primary key column also added.

5. Any 10 important Functions and usage

Ans:1)Mysql functions sorted into the type of functions based on the categories such as String,advanced,numaric/Mathamatical,date/time, and encryption/compression functions.

2)They are:

\* concate: to cancate the columns

\*Lower /Upper:To write columns in lower/upper case

\*Replace:To replace the data

\*AVG: to calaculate avg of columns

\*count:To calculate the count of columns

\*Max/Min:To calculate Max/Min value of column

\*SUM:To calculate sum of the column

\*curdate:To select the particular date

\*current\_timestamp:to select date with HH:MM:SS

\*curtime:To select current time

\*data\_add:To add the interval of days

6. Indexing and its types with examples

Ans:1)Index is a data structure that allows us to add indexes in the existing tables.It enables ypu to improve the faster retrieval of records on a database table

2)We have two type of indexes.

1. Clustered Index: When a table is created with a primary key or unique key ,it is automatically created special indexed name primary
2. Non-clustered Index:All index other than primary indexes are known as secondary index/non-clustered index.

3)Allowed index type BTREE

7. File Permissions in Linux Unix How to Read, Write & Change

Ans:

\*we have 3 types owners in every file.They are User,Group,others

\*we should give read-r & write-w & change -x permission of every file by using linux comands

\*Linux command:chmod

\* By using chmod command we can change file permission as per our requirments

Ex:

1. file.txt is a file name:

\* chmod +/- file.txt ,add & remove permission using this command

\*we give permission two types of ways :

1. Numeric type:

Ex: chmod 777 file.txt

1. Symbolic type:

Ex:chmod -/+/=/ file.txt

1. GREP, AWK, SED Commands usage

Ans:

\* GREP,AWK and SED all are linux command used by searching,replacing data in every file

\*GREP:

1. It is used to search for words/views/particular word in files
2. Syntax:

Grep -option ‘word’ filename

Note:

\* Option are I/v/o/c/I/ etc

\*AWK:

1. Every file is divided in to lines and fields
2. Syntax:

\* awk ‘{print$column\_no}’ filename -get particular field info

\*awk ‘NR==row\_no’ filename - get particular line info

\*awk ‘{NR==row\_no,{print$column\_no1}’ filename -get particular line&field info

\*SED:

1. It is used to insertion, deletion, search and replace
2. Syntax:

sed OPTIONS... [SCRIPT] [INPUTFILE...]

Ex:

sed ‘s/krishna/prasad/’ filename

1. Vi Editor usage and examples

Ans:

\*VI Editor is used to crate a new file and insert data ,update data,delete data .

\*data inserting we use linux command:esc+i

\*after insert data we should save data by using linux command:esc+:wq!

\*without saving file linux command:esc+q!

\*if searching any word in file using linux command:esc+/word then enter after use n button in keyboard

1. MySQL Memory Calculator

Ans:

\* It is used to plan memory allocation in the system RAM

\*it is used by configuration part of system RAM memory allocation

\*In each server we should plan 80 % of RAM memory is allocated by database server mysql server and remaining 20 % used by other things like OS etc

\*How to configure 80% RAM space:

1. In linux we have mainly three types of variables in file configuration.

They are :

1. General variable:

\* mainly General variables are base direc and data direc

1. Global variable:

\*mainly global variables are buffer\_pool\_size,max\_connection

1. Thread variable:

\*we should use all this variables memory for each connection

1. In Global variable out of 80 % ,75% memory is allocated by buffer\_pool\_size variables remaining 5 % is allocated by other variables
2. Each connection is multiplied by thread variable memory

11. DCL-Data Control Language - Grant, Revoke

Ans:

\*Mysql is installed by the linux,we should go for the mysql command prompt

\*in the root path we get default schemes and bulit schema details

\*now we give the SQL command access permission by using DCL queries.

\*we have two syntax:

1. Grant:

\* firstly we create user name and password of the user

\* then we grant the SQL command permission particular database to user

Ex:

Grant all privileges on datadase.\* to username@’%’

Flush privileges

Show grants for username

1. Revoke:

\* we remove the grant permission on particular user by using this DCL command.

12.MySQL Binary installation main steps

Ans:

\*firstly we should download linux mysql file through website

\*it is zip file so we unzip the file

\*we create directores like /mnt/data/mysql3306

\*we should give mysql permission on each directories.

\*then we create my.cnf file in mysql3306 directory

\*we can save configuration variables data on my.cnf file.

\*execute bin&base&data direc ,then auto generate socket key,we can save it.

\*we create a datafiles in mnt directory then create mysqllog3306 then create error file

\*execute bin/mysql safe .it means linux is installed as per our plan directores.

\*if in case we are geeting any errors in above step we go error file and check the error and trouble shoot the issue

\*create support files and copy bin total info to user bin

\*execute the root socket linux command and change the password

\*finally login root login and password then change linux command prompt to mysql

command prompt .