

# CheatSheet: SQL & MySql

## INTERVIEW

- PDF Link: [cheatsheet-mysql-A4.pdf](#), Category: interview
- Blog URL: <https://cheatsheet.dennyzhang.com/cheatsheet-mysql-A4>
- Related posts: CheatSheet: System Design For Job Interview, interview

File me Issues or star this repo.

## 1.1 SQL Problems

| Name  | Problem   |
|---|---|
| Reference   | Leetcode SQL problems   |
| Use having with group-by                              | <code>group by class having count(distinct student)&gt;4</code> Leetcode: Class   |
| Update records with case clause                       | <code>set sex = case when sex = 'm' then 'f' else 'm' end</code> LeetCode:        |
| Sum with case   | <code>sum(case when state = 'approved' then 1 else 0 end)</code> LeetCode:        |
| Subquery  | <code>where (customer_id, order_date) in (select ...</code> LeetCode: Imme        |
| Sql isnull and if                                     | <code>if(s1.id%2=0, s1.student, if(isnull(s2.student), s1.student,</code>         |
| round float   | <code>(round(accepts/requests, 2)</code> Leetcode: Friend Requests I: Overall Ac  |
| Rank score  | <code>(select @rank := 0, @prev := -1) as rows</code> LeetCode: Rank Scores       |
| Select clause add an incremental id                   | <code>select (@cnt1 := @cnt1 + 1) as id</code> LeetCode: Students Report By Geogr |
| MySQL DATE <sub>SUB</sub>                             | <code>DATE_SUB(record_date, INTERVAL 6 DAY)</code>                                |
| Get accumulated sum for each group                    | LeetCode: Last Person to Fit in the Elevator                                      |
| nth element in each group                             | LeetCode: Nth Highest Salary, LeetCode: Get the Second Most Recent                |
| topn entris for each group                            | LeetCode: Department Top Three Salaries   |
| union vs union all                                    | LeetCode: Friend Requests II: Who Has the Most Friends                            |
| Convert float to int                                  | <code>cast(amount as SIGNED)</code>   |
| If no match show null                                 | LeetCode: Second Highest Salary   |
| Get maximum of multiple columns                       | LeetCode: Triangle Judgement  |
| Tree hierachy in SQL                                  | LeetCode: All People Report to the Given Manager                                  |
| Mysql distinct in having clause                       | LeetCode: Active Users  |
| mysql doesn't support full outer join                 | LeetCode: Monthly Transactions II   |
| When left join+groupby, group by which tables' field? | LeetCode: Team Scores in Football Tournament                                      |
| <code>sum(if(isnull( vs ifnull(sum(</code>            | LeetCode: Team Scores in Football Tournament                                      |
| Three tables' inner join                              | LeetCode: Students and Examinations   |
| Find Continuous Ranges                                | Find the Start and End Number of Continuous Ranges                                |
| Impressive sql problems                               | Leetcode: Find Median Given Frequency of Numbers, LeetCode: Consec                |
| Impressive sql problems                               | LeetCode: Rank Scores, LeetCode: Exchange Seats, LeetCode: Students               |

## 1.2 SQL Statement

| Name                               | Command  |
|------------------------------------|--|
| Select with regexp in where clause | <code>select * from expenses where date regexp '2013-0[4-5]' limit 2;</code> |
| Select with like in where clause   | <code>select * from expenses where date like '2013-0%' limit 2;</code>       |
| Select unix timestamp              | <code>select unix_timestamp(createtime) from expenses limit 1;</code>        |
| Offset limit                       | <code>select * from student limit 4 offset 9</code>                          |
| Use replace function               | <code>UPDATE tb1 SET f1=REPLACE(f1, 'abc', 'def');</code>                    |
| Use if function                    | <code>select Db, IF(IFNULL(User, "")="", DB, User) from db;</code>           |

## 1.3 Mysql Packages

| Name                         | Command   |
|------------------------------|---|
| Install mysql server         | <code>apt-get install mysql-server</code>   |
| Install mysql client         | <code>apt-get install mysql-client libmysqlclient-dev, yum install mysql-devel</code> |
| Install python mysql library | <code>easy_install mysql-python</code>  |

## 1.4 DB Management

| Name   | Command   |
|--|---|
| mysql connect                                | <code>mysql -u\$username -p\$password -P\$port -h\$dbhost \$dbname</code> |
| database encoding                            | <code>set names utf8;</code>  |
| List databases                               | <code>show databases;</code>  |
| List tables for current db                   | <code>show tables;</code>   |
| Check table definition                       | <code>describe \$tablename;</code>  |
| Run sql in non-interactive way               | <code>mysql -uUSER -pPASSWORD databasename -e "select * from t lin</code> |
| Import db                                    | <code>mysql -uUSER -pPASSWORD dbname &lt; backup.sql</code>               |
| export db                                    | <code>mysqldump -uUSER -pPASSWORD DATABASE &gt; backup.sql</code>         |
| export db without schema                     | <code>mysqldump -uUSER -pPASSWORD DATABASE --no-data=true --add-d</code>  |
| Grant access                                 | <code>GRANT SUPER ON 'DBNAME'.'user' TO 'DBUSER'@'%'</code>               |
| Add column                                   | <code>ALTER TABLE expenses ADD COLUMN createtime timestamp not nul</code> |
| Delete Column                                | <code>ALTER TABLE expenses DROP COLUMN createtime;</code>                 |
| Delete index                                 | <code>DROP INDEX indexname ON table_name;</code>                          |
| Create index                                 | <code>create index idindex on table_name(col_name) using btree;</code>    |
| Reset password                               | <code>UPDATE mysql.user SET Password=PASSWORD('MyNewPass') WH</code>      |
| ERROR 1396 (HY000): Operation CREATE USER... | <code>drop user 'braindenny'@'%' ; flush privileges; CREATE USER..</code> |
| mysql8 create user with password             | <code>CREATE USER 'myuser'@'%' IDENTIFIED BY 'MYPASSWORD';</code>         |
| mysql8 grant privileges to user              | <code>GRANT ALL PRIVILEGES ON mydbname.* TO 'myuser'@'%' WITH GRAN</code> |

## 1.5 PSQL/Postgres

| Name                          | Command  |
|-------------------------------|--|
| Install postgres in Ubuntu    | <code>apt-get install postgresql postgresql-client postgresql-contrib</code>         |
| Install postgres in Mac OS    | <code>brew install postgres</code>   |
| Check postgres status         | <code>service postgresql status</code>   |
| Check version                 | <code>psql --version</code>  |
| Connect postgresql            | <code>psql -U postgres</code>  |
| Create user                   | <code>CREATE USER tom WITH PASSWORD '';</code>                                       |
| Grant access                  | <code>GRANT ALL PRIVILEGES ON DATABASE launchpad_empty to tom;</code>                |
| Postgres configuration        | <code>/var/lib/pgsql/data/pg_hba.conf, /etc/postgresql/*/main/postgresql.conf</code> |
| Promote to super admin        | <code>ALTER USER myuser WITH SUPERUSER;</code>                                       |
| List datbases                 | <code>\l</code>  |
| List all tables in a database | <code>\d</code>  |
| Change database               | <code>\connect launchpad_dev;</code>   |
| Show tables                   | <code>\ds</code>   |
| Copy databse                  | <code>createdb -O root -T launchpad_dev launchpad_ustack_cn</code>                   |
| Drop database                 | <code>drop database launchpad_ustack_cn;</code>                                      |
| Connect db                    | <code>psql -h myhost -d mydb -U myuser -W</code>                                     |
| Create user                   | <code>CREATE USER tom WITH PASSWORD 'myPassword';</code>                             |
| Create db                     | <code>CREATE DATABASE jerry;</code>  |

## 1.6 More Resources

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