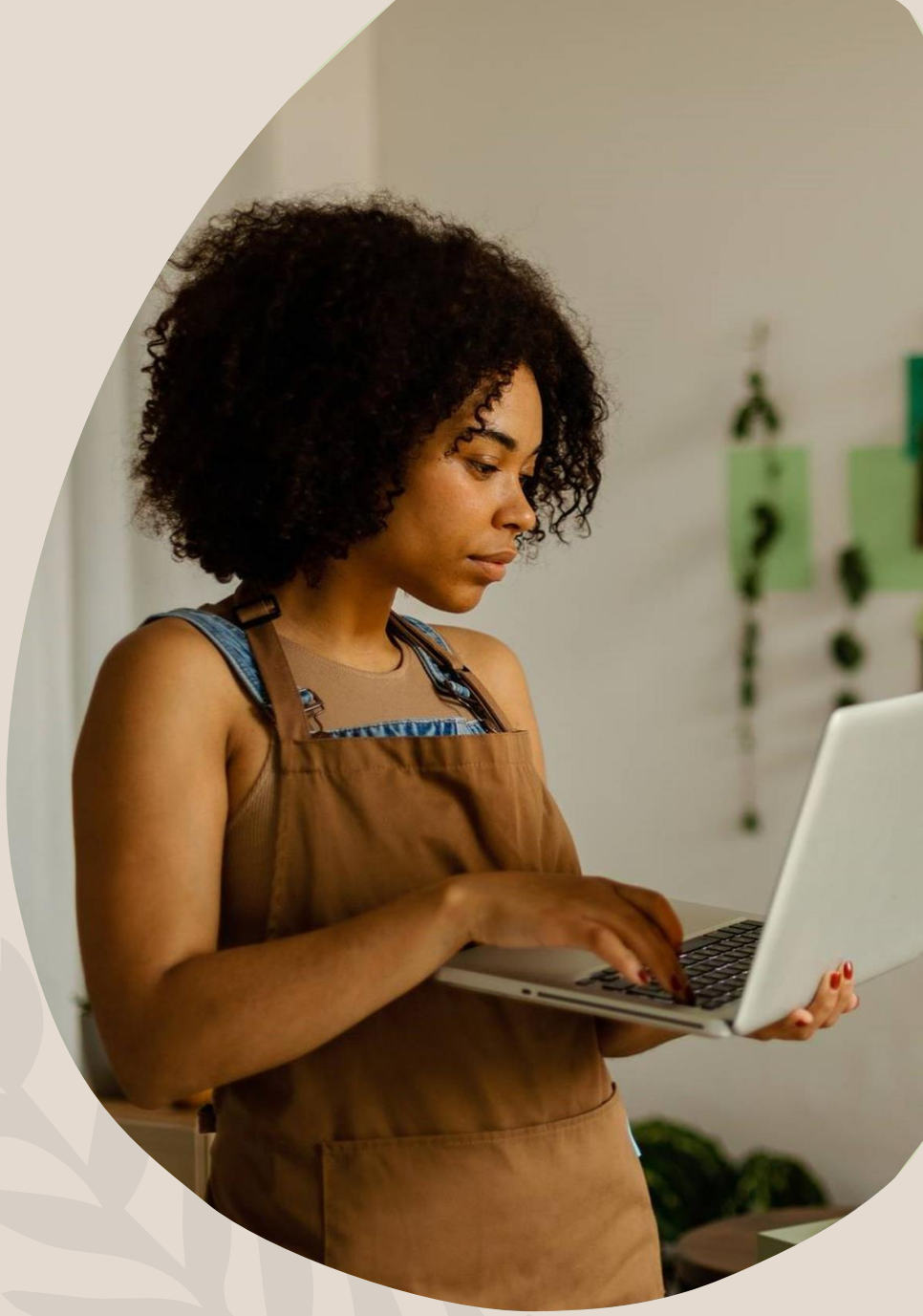
MySQL Project Report

~By Alok

Business Requirement

- Creating Employees Database from scratch
- Perform various manipulation operations
- Payroll management
- Updating the Database



Functions Used

SELECT,LENGTH,LIKE,REPLACE

MAX,MIN,LPAD,REPLACE,

MONTHNAME,UPPER,BINARY,

RIGHT,SUBSTRING_INDEX,LIMIT 6

LEFT,INSTR,MONTH,DAY 11

Table Characteristics

```
mysql> describe employees2024;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| job_id         | varchar(20) | YES  |     | NULL    |       |
| employee_id    | int         | NO   | PRI | NULL    |       |
| first_name     | varchar(20) | YES  |     | NULL    |       |
| last_name      | varchar(20) | YES  |     | NULL    |       |
| street_address | varchar(40) | YES  |     | NULL    |       |
| phone_no       | int         | YES  |     | NULL    |       |
| hire_date      | date        | YES  |     | NULL    |       |
| email          | varchar(40) | YES  |     | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
```

Table

```
mysql> select * from employees2024;
+--------+-------------+------------+----------+---------------+----------+------------+------------------------+
| job_id | employee_id | first_name | last_name | street_address | phone_no | hire_date  | email                  |
+--------+-------------+------------+----------+---------------+----------+------------+------------------------+
| ae_ele |       40105 | arjun      | parihar  | udaipur       | 84951876 | 2017-06-15 | arjun.parihar@hrk.com  |
| ae_pro |       40118 | bijay      | agarwal  | ratlam        | 85642341 | 2017-06-17 | bijay.agarwal@hrk.com  |
| ae_pro |       40133 | akash      | kataria  | rohtak        | 79541253 | 2018-07-11 | akash.kataria@hrk.com  |
| ae_pro |       40156 | nikita     | mhatre   | nagpur        | 76547124 | 2019-08-22 | nikita.mhatre@hrk.com  |
| ao_pro |       40189 | madhushmita | sharma  | sambalpur     | 99312789 | 2020-07-18 | madhu.sharma@hrk.com   |
| ao_mgr |       40201 | amitanshu  | gupta    | jaipur        | 78512468 | 2021-06-22 | amitanshu.gupta@hrk.com |
| ao_pro |       40202 | rohit      | pawar    | pune          | 90388366 | 2021-06-22 | rohit.pawar@hrk.com    |
| ae_fin |       40206 | jitesh     | ranjan   | bhubaneswar   | 99987124 | 2021-06-24 | amit.ranjan@hrk.com    |
| ae_lea |       40209 | anuradha   | dixit    | lucknow       | 99743698 | 2021-06-25 | anu.dixit@hrk.com      |
| ae_hr  |       40217 | sumit      | kumar    | bhopal        | 98745486 | 2012-06-01 | sumit.kumar@hrk.com    |
+--------+-------------+------------+----------+---------------+----------+------------+------------------------+
```

1. Write a query to get the job_id and related employee's id.

```
mysql> select job_id,employee_id
    -> from employees2024;
+--------+-------------+
| job_id | employee_id |
+--------+-------------+
| ae_ele |       40105 |
| ae_pro |       40118 |
| ae_pro |       40133 |
| ae_pro |       40156 |
| ao_pro |       40189 |
| ao_mgr |       40201 |
| ao_pro |       40202 |
| ae_fin |       40206 |
| ae_lea |       40209 |
| ae_hr  |       40217 |
+--------+-------------+
```

2. Write a query to update the portion of the phone_number in the employees table, within the phone number the substring '124' will be replaced by '999'.

```
mysql> select employee_id,phone_no
    ->  from employees2024
    ->  where phone_no like '%124%';
+-------------+----------+
| employee_id | phone_no |
+-------------+----------+
|       40156 | 76547124 |
|       40201 | 78512468 |
|       40206 | 99987124 |
+-------------+----------+
3 rows in set (0.01 sec)

mysql> select employee_id,replace
    -> (phone_no,'124','999') as new_phone_no
    -> from employees2024 where phone_no like '%124%'
+-------------+--------------+
| employee_id | new_phone_no |
+-------------+--------------+
|       40156 | 76547999     |
|       40201 | 78599968     |
|       40206 | 99987999     |
+-------------+--------------+
```

3. Write a query to get the details of the employees where the length of the first name greater than or equal to 8.

```
mysql> select job_id,employee_id,first_name,Last_name
    -> from employees2024 where length(first_name)>=8;
+--------+-------------+------------+-----------+
| job_id | employee_id | first_name | Last_name |
+--------+-------------+------------+-----------+
| ao_pro |       40189 | madhushmita | sharma    |
| ao_mgr |       40201 | amitanshu   | gupta     |
| ae_lea |       40209 | anuradha    | dixit     |
+--------+-------------+------------+-----------+
```

4. Write a query to display leading zeros before maximum and minimum salary.

```
mysql> select first_name,salary
    -> from employees2024;
+-------------+--------+
| first_name  | salary |
+-------------+--------+
| arjun       |  18900 |
| bijay       |  18700 |
| akash       |  18700 |
| nikita      |  18700 |
| madhushmita |  44500 |
| amitanshu   |  58300 |
| rohit       |  44500 |
| jitesh      |  19100 |
| anuradha    |  18300 |
| sumit       |  19500 |
+-------------+--------+
10 rows in set (0.00 sec)

mysql>
mysql> select
    -> lpad(min(salary), 10, '0') AS min_salary,
    -> lpad(max(salary), 10, '0') AS max_salary
    -> from employees2024;
+------------+------------+
| min_salary | max_salary |
+------------+------------+
| 0000018300 | 0000058300 |
+------------+------------+
1 row in set (0.00 sec)
```

5. Write a query to append '@example.com' to email field.

```
mysql> select job_id,email from employees2024;
+--------+------------------------+
| job_id | email                  |
+--------+------------------------+
| ae_ele | arjun.parihar@hrk.com  |
| ae_pro | bijay.agarwal@hrk.com  |
| ae_pro | akash.kataria@hrk.com  |
| ae_pro | nikita.mhatre@hrk.com  |
| ao_pro | madhu.sharma@hrk.com   |
| ao_mgr | amitanshu.gupta@hrk.com |
| ao_pro | rohit.pawar@hrk.com    |
| ae_fin | amit.ranjan@hrk.com    |
| ae_lea | anu.dixit@hrk.com      |
| ae_hr  | sumit.kumar@hrk.com    |
+--------+------------------------+
10 rows in set (0.01 sec)

mysql> select job_id,replace
    -> (email,'@hrk.com','@example.com')
    -> as new_email from employees2024;
+--------+---------------------------+
| job_id | new_email                 |
+--------+---------------------------+
| ae_ele | arjun.parihar@example.com |
| ae_pro | bijay.agarwal@example.com |
| ae_pro | akash.kataria@example.com |
| ae_pro | nikita.mhatre@example.com |
| ao_pro | madhu.sharma@example.com  |
| ao_mgr | amitanshu.gupta@example.com |
| ao_pro | rohit.pawar@example.com   |
| ae_fin | amit.ranjan@example.com   |
| ae_lea | anu.dixit@example.com     |
| ae_hr  | sumit.kumar@example.com   |
+--------+---------------------------+
```

6.Write a query to get the employee id, first name and hire month.

```
mysql> select employee_id,first_name,hire_date
    -> from employees2024;
+-------------+------------+-----------+
| employee_id | first_name | hire_date |
+-------------+------------+-----------+
|       40105 | arjun      | 2017-06-15 |
|       40118 | bijay      | 2017-06-17 |
|       40133 | akash      | 2018-07-11 |
|       40156 | nikita     | 2019-08-22 |
|       40189 | madhushmita | 2020-07-18 |
|       40201 | amitanshu  | 2021-06-22 |
|       40202 | rohit      | 2021-06-22 |
|       40206 | jitesh     | 2021-06-24 |
|       40209 | anuradha   | 2021-06-25 |
|       40217 | sumit      | 2012-06-01 |
+-------------+------------+-----------+
10 rows in set (0.01 sec)

mysql> select employee_id,first_name,monthname
    -> (hire_date) as hire_month
    -> from employees2024;
+-------------+------------+------------+
| employee_id | first_name | hire_month |
+-------------+------------+------------+
|       40105 | arjun      | June       |
|       40118 | bijay      | June       |
|       40133 | akash      | July       |
|       40156 | nikita     | August     |
|       40189 | madhushmita | July      |
|       40201 | amitanshu  | June       |
|       40202 | rohit      | June       |
|       40206 | jitesh     | June       |
|       40209 | anuradha   | June       |
|       40217 | sumit      | June       |
+-------------+------------+------------+
```

7. Write a query to get the employee id, email id (discard the last three characters).

```
mysql> select employee_id,email
    -> from employees2024;
+-------------+------------------------+
| employee_id | email                  |
+-------------+------------------------+
|       40105 | arjun.parihar@hrk.com  |
|       40118 | bijay.agarwal@hrk.com  |
|       40133 | akash.kataria@hrk.com  |
|       40156 | nikita.mhatre@hrk.com  |
|       40189 | madhu.sharma@hrk.com   |
|       40201 | amitanshu.gupta@hrk.com |
|       40202 | rohit.pawar@hrk.com    |
|       40206 | amit.ranjan@hrk.com    |
|       40209 | anu.dixit@hrk.com      |
|       40217 | sumit.kumar@hrk.com    |
+-------------+------------------------+
10 rows in set (0.04 sec)

mysql> select employee_id,replace
    -> (email,right(email,3),'') as email_new
    -> from employees2024;
+-------------+---------------------+
| employee_id | email_new           |
+-------------+---------------------+
|       40105 | arjun.parihar@hrk.  |
|       40118 | bijay.agarwal@hrk.  |
|       40133 | akash.kataria@hrk.  |
|       40156 | nikita.mhatre@hrk.  |
|       40189 | madhu.sharma@hrk.   |
|       40201 | amitanshu.gupta@hrk. |
|       40202 | rohit.pawar@hrk.    |
|       40206 | amit.ranjan@hrk.    |
|       40209 | anu.dixit@hrk.      |
|       40217 | sumit.kumar@hrk.    |
+-------------+---------------------+
```

8. Write a query to find all employees where first names are in upper case.

```
mysql> select employee_id,first_name
    -> from employees2024;
+-------------+-------------+
| employee_id | first_name  |
+-------------+-------------+
|       40105 | ARJUN       |
|       40118 | bijay       |
|       40133 | AKASH       |
|       40156 | NIKITA      |
|       40189 | madhushmita |
|       40201 | amitanshu   |
|       40202 | rohit       |
|       40206 | jitesh      |
|       40209 | ANURADHA    |
|       40217 | sumit       |
+-------------+-------------+
10 rows in set (0.01 sec)

mysql> select employee_id,first_name
    -> from employees2024
    -> where binary first_name
    -> = UPPER(first_name);
+-------------+------------+
| employee_id | first_name |
+-------------+------------+
|       40105 | ARJUN      |
|       40133 | AKASH      |
|       40156 | NIKITA     |
|       40209 | ANURADHA   |
+-------------+------------+
```

9. Write a query to extract the last 4 character of phone numbers.

```
mysql> select employee_id,phone_no
    -> from employees2024;
+-------------+----------+
| employee_id | phone_no |
+-------------+----------+
|       40105 | 84951876 |
|       40118 | 85642341 |
|       40133 | 79541253 |
|       40156 | 76547124 |
|       40189 | 99312789 |
|       40201 | 78512468 |
|       40202 | 90388366 |
|       40206 | 99987124 |
|       40209 | 99743698 |
|       40217 | 98745486 |
+-------------+----------+
10 rows in set (0.00 sec)

mysql> select employee_id,
    -> right(phone_no,4) as new_no
    -> from employees2024;
+-------------+--------+
| employee_id | new_no |
+-------------+--------+
|       40105 | 1876   |
|       40118 | 2341   |
|       40133 | 1253   |
|       40156 | 7124   |
|       40189 | 2789   |
|       40201 | 2468   |
|       40202 | 8366   |
|       40206 | 7124   |
|       40209 | 3698   |
|       40217 | 5486   |
+-------------+--------+
10 rows in set (0.00 sec)
```

10. Write a query to get the last word of the street address.

```
mysql> select employee_id,street_address from employees2024;
+-------------+-------------------+
| employee_id | street_address    |
+-------------+-------------------+
|       40105 | Bhubaneswar,Odisha |
|       40118 | Jaipur,Rajasthan  |
|       40133 | Udaipur,Rajasthan |
|       40156 | Ratlam,MP         |
|       40189 | Bopal,MP          |
|       40201 | Sambalpur,Odisha  |
|       40202 | Nagpur,Maharashtra |
|       40206 | Lucknow,UP        |
|       40209 | Pune,Maharashtra  |
|       40217 | Rohtak,Haryana    |
+-------------+-------------------+
10 rows in set (0.00 sec)

mysql> select street_address,substring_index
    -> (street_address,',',-1) as state
    -> from employees2024;
+-------------------+------------+
| street_address    | state      |
+-------------------+------------+
| Bhubaneswar,Odisha | Odisha     |
| Jaipur,Rajasthan  | Rajasthan  |
| Udaipur,Rajasthan | Rajasthan  |
| Ratlam,MP         | MP         |
| Bopal,MP          | MP         |
| Sambalpur,Odisha  | Odisha     |
| Nagpur,Maharashtra | Maharashtra |
| Lucknow,UP        | UP         |
| Pune,Maharashtra  | Maharashtra |
| Rohtak,Haryana    | Haryana    |
+-------------------+------------+
```

11. Write a query to get the locations that have minimum street length.

```
mysql> select employee_id,
    -> street_address
    -> from employees2024;
+-------------+-------------------+
| employee_id | street_address    |
+-------------+-------------------+
|       40105 | Bhubaneswar,Odisha |
|       40118 | Jaipur,Rajasthan  |
|       40133 | Udaipur,Rajasthan |
|       40156 | Ratlam,MP         |
|       40189 | Bhopal,MP         |
|       40201 | Sambalpur,Odisha  |
|       40202 | Nagpur,Maharashtra |
|       40206 | Lucknow,UP        |
|       40209 | Pune,Maharashtra  |
|       40217 | Rohtak,Haryana    |
+-------------+-------------------+
10 rows in set (0.00 sec)

mysql> select employee_id, street_address
    -> from employees2024
    -> order by length(street_address) asc
    -> limit 1;
+-------------+----------------+
| employee_id | street_address |
+-------------+----------------+
|       40156 | Ratlam,MP      |
+-------------+----------------+
```

12. Write a query to display the first word from those job titles which contains more than one words.

```
mysql> select employee_id,job_title
    -> from employees2024;
+-------------+---------------------+
| employee_id | job_title           |
+-------------+---------------------+
|       40105 | electrical executive |
|       40118 | executive           |
|       40133 | executive           |
|       40156 | process executive   |
|       40189 | associate manager   |
|       40201 | manager             |
|       40202 | assistant manager   |
|       40206 | executive           |
|       40209 | leaching executive  |
|       40217 | hr executive        |
+-------------+---------------------+
10 rows in set (0.00 sec)

mysql> select job_title,
    -> left(job_title,instr(job_title, ' ')-1)
    -> as first_word
    -> from employees2024
    -> where instr(job_title,' ')>0;
+---------------------+------------+
| job_title           | first_word |
+---------------------+------------+
| electrical executive | electrical |
| process executive   | process    |
| associate manager   | associate  |
| assistant manager   | assistant  |
| leaching executive  | leaching   |
| hr executive        | hr         |
+---------------------+------------+
```

13. Write a query to display the length of first name for employees where last name contain character 'c' after 2nd position.

```
mysql> select employee_id,first_name,last_name,
    -> length(first_name) from employees2024
    -> where last_name like '__%c%';
+-------------+------------+-----------+--------------------+
| employee_id | first_name | last_name | length(first_name) |
+-------------+------------+-----------+--------------------+
|       40133 | akash      | katoch    |                  5 |
|       40209 | anuradha   | pachauri  |                  8 |
+-------------+------------+-----------+--------------------+
```

14. Write a query that displays the first name and the length of the first name for all employees whose name starts with the letters 'A', 'J' or 'M'. Give each column an appropriate label. Sort the results by the employees' first names.

```
mysql> select first_name as name,
    -> length(first_name) as count
    -> from employees2024
    -> where first_name like 'a%'
    -> or first_name like 'j%'
    -> or first_name like 'm%'
    -> order by first_name;
+-------------+-------+
| name        | count |
+-------------+-------+
| akash       |     5 |
| amitanshu   |     9 |
| anuradha    |     8 |
| arjun       |     5 |
| jitesh      |     6 |
| madhushmita |    11 |
+-------------+-------+
```

15. Write a query to display the first name and salary for all employees. Format the salary to be 10 characters long, left-padded with the $ symbol. Label the column SALARY.

```
mysql> select first_name,
    -> lpad(salary,10,'$')
    -> as SALARY
    -> from employees2024;
+-------------+------------+
| first_name  | SALARY     |
+-------------+------------+
| arjun       | $$$$$18900 |
| bijay       | $$$$$18700 |
| akash       | $$$$$18700 |
| nikita      | $$$$$18700 |
| madhushmita | $$$$$44500 |
| amitanshu   | $$$$$58300 |
| rohit       | $$$$$44500 |
| jitesh      | $$$$$19100 |
| anuradha    | $$$$$18300 |
| sumit       | $$$$$19500 |
+-------------+------------+
10 rows in set (0.01 sec)
```

16. Write a query to display the first eight characters of the employees' first names and indicates the amounts of their salaries with '$' sign. Each '$' sign signifies a thousand dollars. Sort the data in descending order of salary.

```
mysql> select left(first_name,8)
    -> as NAME,
    -> lpad(salary,6,'$')
    -> as SALARY
    -> from employees2024;
+----------+--------+
| NAME     | SALARY |
+----------+--------+
| arjun    | $18900 |
| bijay    | $18700 |
| akash    | $18700 |
| nikita   | $18700 |
| madhushm | $44500 |
| amitansh | $58300 |
| rohit    | $44500 |
| jitesh   | $19100 |
| anuradha | $18300 |
| sumit    | $19500 |
```

17. Write a query to display the employees with their code, first name, last name and hire date who hired either on seventh day of any month or seventh month in any year.

```
mysql> select employee_id,first_name,
    -> last_name,hire_date
    -> from employees2024
    -> where month(hire_date)=07 or
    -> day(hire_date)=07;
+-------------+-------------+-----------+------------+
| employee_id | first_name  | last_name | hire_date  |
+-------------+-------------+-----------+------------+
|       40133 | akash       | katoch    | 2018-07-11 |
|       40189 | madhushmita | sharma    | 2020-07-18 |
|       40202 | rohit       | pawar     | 2021-06-07 |
|       40217 | sumit       | kumar     | 2021-06-07 |
+-------------+-------------+-----------+------------+
```

thank you

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GitHub:

https://github.com/Alokranjan265?tab=repositories