



Mini project report on

RTO MANAGEMENT

Submitted in partial fulfilment of the requirements for the award of degree of

Bachelor of Technology

in

Computer Science & Engineering

UE20CS301 – DBMS Project

Submitted by:

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PES2UG20CS914

Under the guidance of

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AUG - DEC 2022

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
FACULTY OF ENGINEERING
PES UNIVERSITY**

(Established under Karnataka Act No. 16 of 2013)

Electronic City, Hosur Road, Bengaluru – 560 100, Karnataka, India



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CERTIFICATE

This is to certify that the mini project entitled

RTO MANAGEMENT

is a bonafide work carried out by

Parth Singh

PES2UG20CS914

In partial fulfilment for the completion of fifth semester DBMS Project (UE20CSS301) in the Program of Study - Bachelor of Technology in Computer Science and Engineering under rules and regulations of PES University, Bengaluru during the period AUG. 2022 – DEC. 2022. It is certified that all corrections / suggestions indicated for internal assessment have been incorporated in the report. The project has been approved as it satisfies the 5th semester academic requirements in respect of project work.

Signature

Prof. Nivedita Kasturi
Assistant Professor

DECLARATION

We hereby declare that the DBMS Project entitled **Detection of Natural Disasters using machine learning and computer vision by augmenting the need of sensors** has been carried out by us under the guidance of **Prof. Nivedita Kasturi, Assistant Professor** and submitted in partial fulfilment of the course requirements for the award of degree of **Bachelor of Technology in Computer Science and Engineering of PES University, Bengaluru** during the academic semester AUG – DEC 2022.

Parth Singh

PES2UG20CS914 *Parth Singh*

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ABSTRACT

The Regional Transport Office (RTO) is a government organisation responsible for issuing driving licenses, maintaining databases of vehicles and sells personalised registration of vehicles. It has been observed since years that the RTO is not able to deliver quality public services to the citizen without delay. That is, it has been a difficult job for citizens to get a driving license and to register their vehicles. Hence, this project is aimed at developing a computerised system for the functioning of RTO. This system will reduce the manpower required in the RTO and make the existing system fast and efficient. The aim is to build a user-friendly webpage where the citizens can apply for learner's license, driving license and vehicle registration. The webpage also provides provision for citizens to submit their complaints.

TABLE OF CONTENTS

Chapter No.	Title	Page No.
1.	INTRODUCTION	11
2.	PROBLEM DEFINITION	12
3.	ER MODEL	13
4.	ER TO RELATIONAL MAPPING	14
5.	DDL STATEMENTS	15
6.	DML STATEMENTS	20
7.	QUERIES (SET OPERATION, NESTED, WITH, CASE, GROUP BY, AGGREGATE, ORDER BY, HAVING)	23
8.	STORED PROCEDURE, FUNCTIONS AND TRIGGERS	30
9.	FRONT END DEVELOPMENT	40
REFERENCES/BIBLIOGRAPHY		41
APPENDIX A DEFINITIONS, ACRONYMS AND ABBREVIATIONS		42

i. citizen

	N A M E	T Y P E	DESCRIPTION
	<u>first_n ame</u>	VARCH AR (30)	
	<u>middl e_nam e</u>	VARCH AR (30)	
	<u>last_n ame</u>	VARCH AR (30)	
	<u>aadha r</u>	CHAR (12)	Primary Key
	<u>gende r</u>	CHAR (1)	
	<u>dob</u>	DATE	
	<u>phone _no</u>	CHAR (10)	
	<u>mail_i d</u>	VARCH AR (50)	

ii. address

	N A M E	T Y P E	DESCRIPTION
	<u>aadha</u>	CHAR	Primary key, Foreign

	<u>r</u>	(12)	key
	street	VARCHA R (100)	
	city	VARCHA R (30)	
	state	VARCHA R (20)	

iii. offices

	N A M E	T Y P E	DESCRIPTION
	<u>district</u>	VARCH AR (30)	Primary key
	rto_address	VARCH AR (200)	

iv. inspector

	N A M E	T Y P E	DESCRIPTION
	<u>id</u>	INT	Primary Key
	user name	VARCH AR (50)	
	pass word	VARCH AR	

		(100)	
	privilege	VARCHAR (5)	

v. llr

	N A M E	T Y P E	DESCRIPTION
	aadha r	CHAR (20)	Foreign Key
	name	VARCHAR (50)	
	cov	VARCHAR (20)	
	edate	DATE	
	eid	VARCHAR (10)	
	<u>llr_id</u>	INT	Primary Key
	epwd	CHAR (10)	
	passw d	VARCHAR (50)	
	mail_i d	VARCHAR (50)	
	llr_st atus	INT	
	llr_is ue_dat	DATE	

	e		
--	---	--	--

vi. reg

	N A M E	T Y P E	DESCRIPT ION
	aadhar	CHAR (12)	Foreign key
	name	VARC HAR (50)	
	cov	VARC HAR (30)	
	model	VARC HAR (20)	
	compan y	VARC HAR (20)	
	rdate	DATE	
	<u>r_id</u>	INT	Primary key
	passwd	VARC HAR (30)	
	mail_id	VARC HAR (50)	

	<code>reg_status</code>	INT	
	<code>reg_issue_date</code>	DATE	
	<code>vno</code>	VARCHAR HAR (20)	
	<code>reg_expiry_date</code>	DATE	

vii. dl

	N A M E	T Y P E	DESCRIPTION
	<code>aadhaar</code>	CHAR (12)	Foreign Key
	<code>name</code>	VARCHAR AR (50)	
	<code>cov</code>	VARCHAR AR (20)	
	<code>edate</code>	DATE	
	<code>eid</code>	VARCHAR AR (10)	
	<code>dl_id</code>	INT	Primary key
	<code>passw d</code>	VARCHAR AR (50)	
	<code>mail_i d</code>	VARCHAR AR (50)	
	<code>dl_stat us</code>	INT	

	dl_issue_date	DATE	
--	----------------------	-------------	--

viii. license

	N A M E	T Y P E	DESCRIP TION
	<u>id</u>	INT	Primary Key
	<u>aadhar</u>	CHAR (12)	Primary Key, Foreign key
	name	VARC HAR (50)	
	license_no	VARC HAR (20)	
	cov	VARC HAR (20)	
	license_issue_date	DATE	
	license_expiry_date	DATE	
	mail_id	VARC HAR (50)	

ix. complaint

	N A M E	T Y P E	DESCRIPTI ON
	aadha r	CHAR (12)	Foreign Key
	cdate	DATE	
	cdesc	TEXT	
	<u>cid</u>	INT	Primary key

1. INTRODUCTION

The project intends to provide quality services to the citizens of the state. It does so by reducing the delay in services provided by the RTO through computerisation of the system. Imagine if the RTO system was offline based, then the citizens must go to any one of the RTO offices just to apply for learner's license, driving license and vehicle registration. This is not an easy job for citizens and even for the RTO officials too where they must maintain huge amount of offline records. That's the primary reason why the system is computerised. This also reduces the burden on manpower working in the RTO. Since the project is web based, the changes or modifications required by the system over a long term of period can be done very easily. This helps in easy system maintenance and be up to date with the user requirements. That means updating the system as per the user requirements will be an effortless job to the system maintenance group.

Mainly, the website is used for issuing of license. An individual can apply for learning license and driving license online. Accordingly, slots and dates are generated for the respective test. Moreover, this application sends an alert message for renewal of driving license to an individual when his driving license is about to expire. The applications

received will be verified and approved by the RTO officials. The applicant can monitor the status of their application and download the approved license. The website also publishes latest news and events conducted by the state transport department.

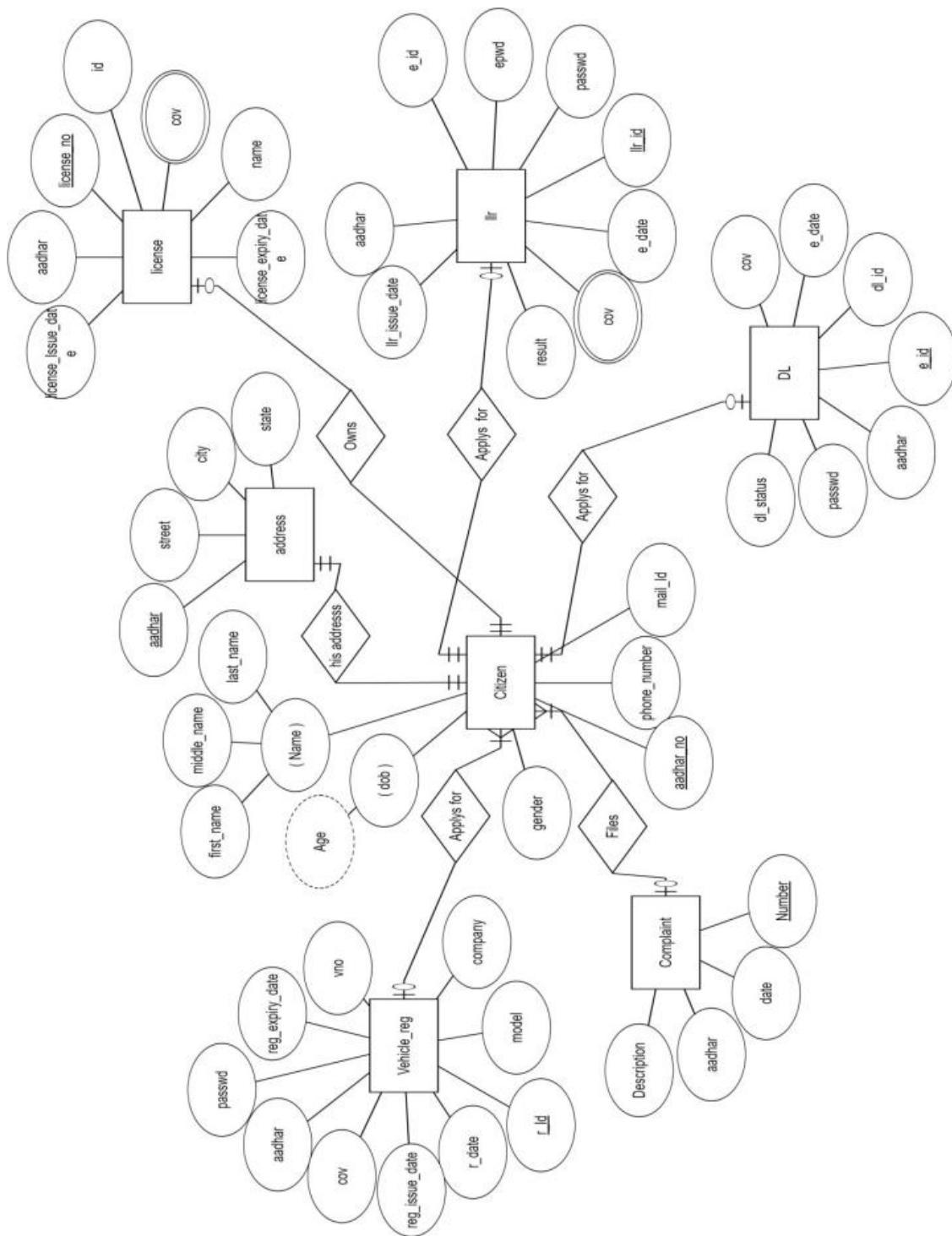
The system is implemented as 2-tier approach with a backend database handled by the system administrator and a web browser as the front-end client. This document will discuss each of the underlying technologies used to create and implement online RTO management website. To implement this we have used Streamlit, which is platform independent and therefore, can be run on all major operating systems. Streamlit provides support to all major servers like Apache and databases like MySQL. Since it uses its own memory, the loading time is decreased and processing time is increased. We have used Streamlit for front-end implementation as well. They provide a front-end development framework to create fully responsive web pages and define proper styles and presentation of the document. Lastly, MySQL is used as the back-end database since it is one of the most popular open source databases, and it provides fast data access, easy installation and simplicity.

The project is an attempt to reduce the delay in the services provided by the RTO offices and it consists of the following users:

As the project is an attempt to make the existing RTO system fast and efficient, the built online RTO website provides numerous functionalities makes the job of the RTO officials easier and helps the citizens of the state in the most efficient way. From this, citizens get their job done as soon as possible in a systematic way with no difficulties, whether it may be acquiring license or registering their vehicles or submitting queries.

The data to be stored include the details of citizens applying for learner's license, driving license, vehicle registration and citizens who submit complaints/queries. The database also stores the information of RTO Inspectors who verify and update the status of learner's license, driving license and vehicle registration.

3. ER MODEL



4. ER TO RELATIONAL MAPPING

4.1 STEPS OF ALGORITHM FOR CHOOSEN PROBLEM

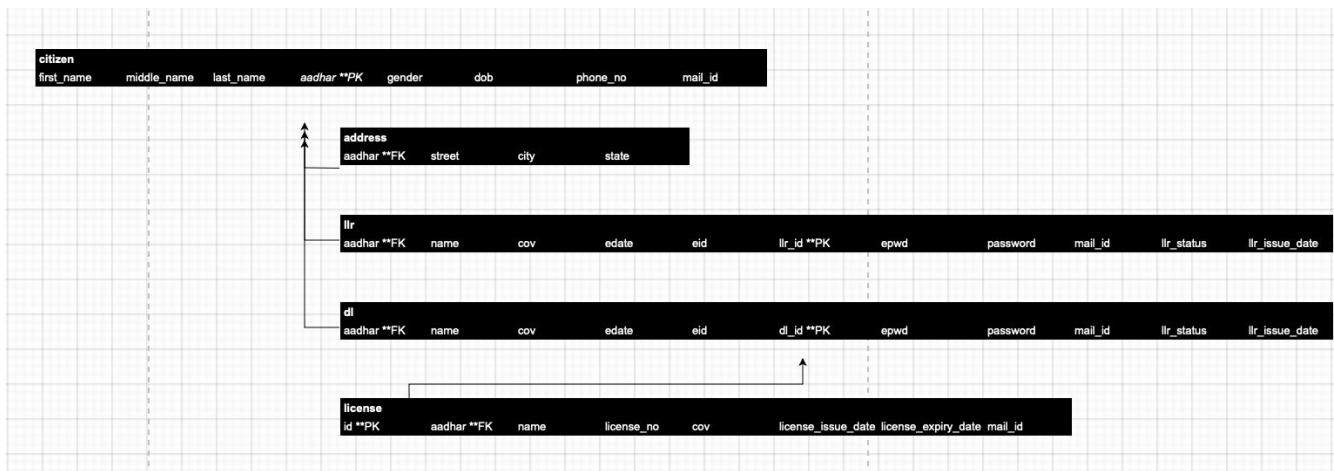
Step 2: Mapping of Regular Entity Types

citizen										
first_name	middle_name	last_name	aadhar **PK	gender	dob	phone_no	mail_id			
address										
aadhar **FK	street	city		state						
complaint										
aadhar	cdate	cdesc		cid						
llr										
aadhar **FK	name	cov	edate	eid	llr_id **PK	epwd	password	mail_id	llr_status	llr_issue_date
reg										
aadhar **FK	name	cov	model	company	rdate	r_id **PK	passwd	mail_id		
dl										
aadhar **FK	name	cov	edate	eid	dl_id **PK	epwd	password	mail_id	llr_status	llr_issue_date
license										
id **PK	aadhar **FK	name	license_no	cov		license_issue_date	license_expiry_date	mail_id		

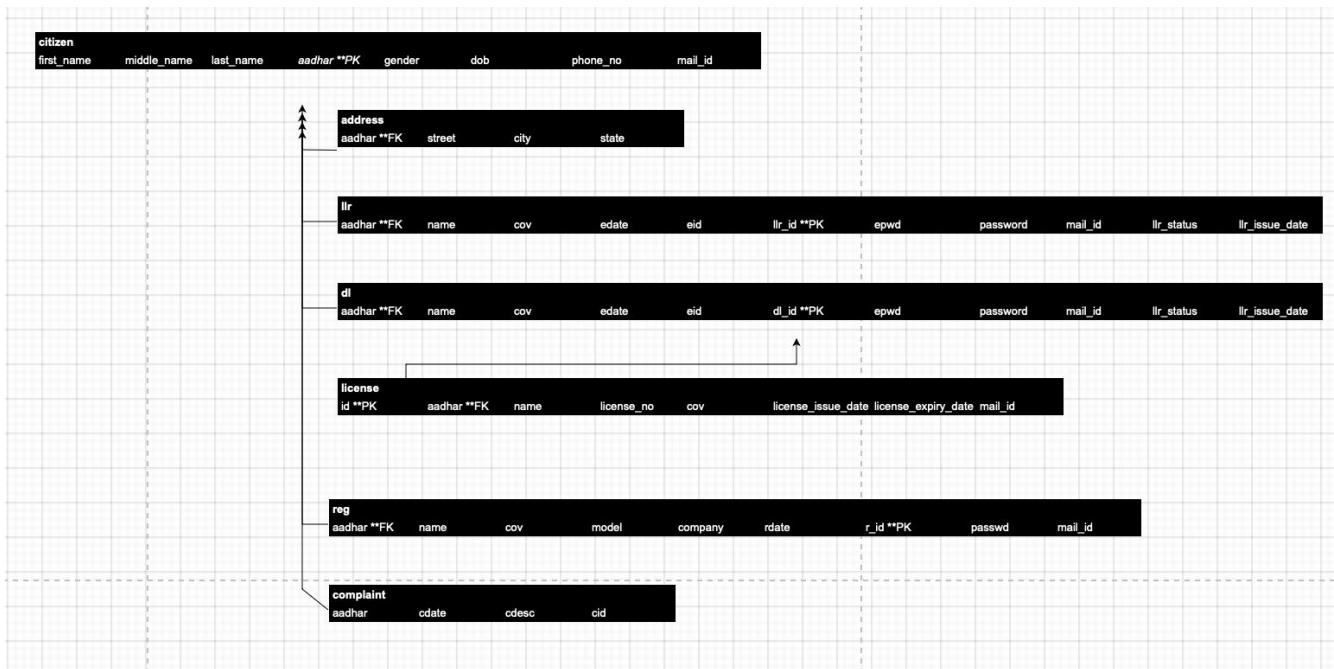
Step 2: Mapping of Weak Entity Types

NO WEAK ENTITY TYPES

Step 3: Mapping of Binary 1:1 Relation Types



Step 4: Mapping of Binary 1:N Relationship Types



Step 5: Mapping of Binary M:N Relationship Types

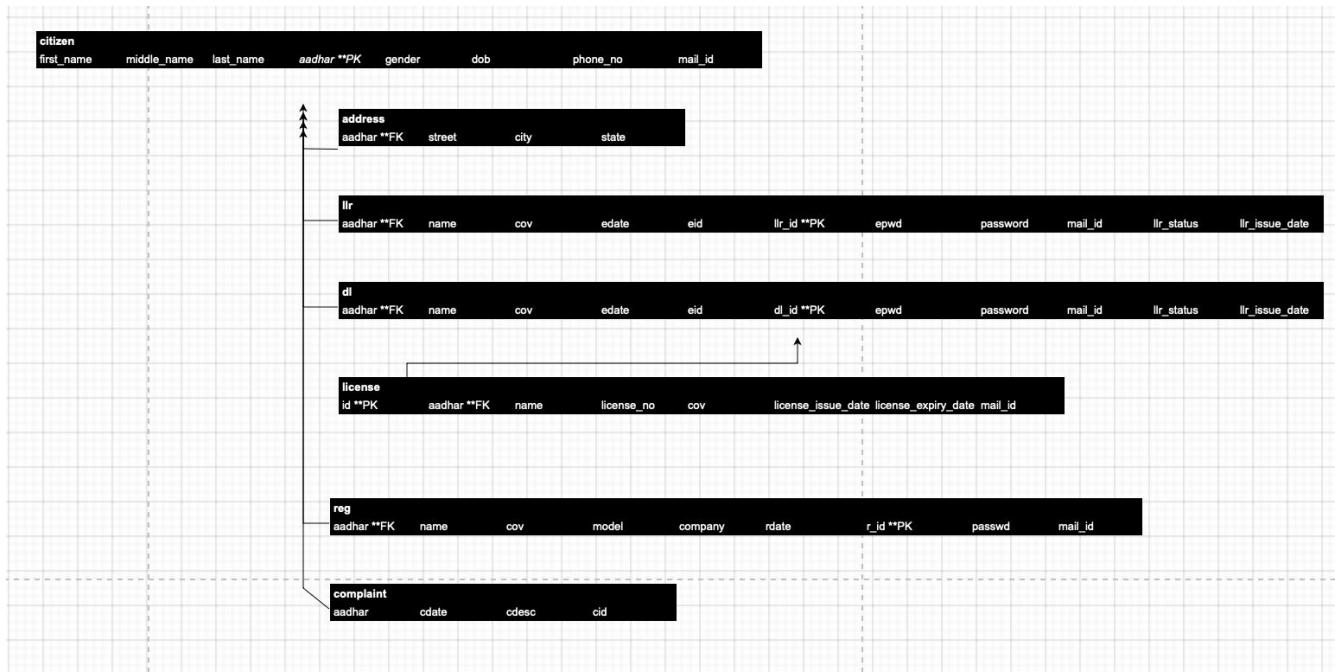
NO M:N Relationship types

Step 6: Mapping of Multivalued attributes

Step 7: Mapping of N-ary Relationship Types.

NO Multivalued and N-ary Relationship types

4.2 COMPLETE DIAGRAM OF RELATIONAL MAPPING



5. DDL STATEMENTS

STATEMENTS WITH SCREEN SHOTS OF THE TABLE CREATION

```
-- MySQL dump 10.13 Distrib 8.0.30, for macos12 (x86_64)
--
-- Host: localhost Database: dbms_p1
-----
-- Server version      8.0.30

/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40103 SET NAMES utf8 */;
/*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
/*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
/*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS,
FOREIGN_KEY_CHECKS=0 */;
/*!40101 SET @OLD_SQL_MODE=@@SQL_MODE,
SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
/*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;

--
-- Table structure for table `address`
--

DROP TABLE IF EXISTS `address`;
```

```

/*!40101 SET @saved_cs_client    = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;

CREATE TABLE `address` (
  `aadhar` varchar(12) NOT NULL,
  `street` varchar(100) NOT NULL,
  `city` varchar(30) NOT NULL,
  `state` varchar(20) NOT NULL,
  PRIMARY KEY (`aadhar`),
  CONSTRAINT `aadhar` FOREIGN KEY (`aadhar`) REFERENCES `citizen` (`aadhar`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

-- 
-- Dumping data for table `address`
-- 

LOCK TABLES `address` WRITE;

/*!40000 ALTER TABLE `address` DISABLE KEYS */;
INSERT INTO `address` VALUES ('111111111111','Avenue 3','Greater Noida ','Uttar Padesh'),('222222222222','Avenue 2','Greater Noida ','Uttar Pradesh'),('333333333333','Avenue 4','Greater Noida ','Uttar Pradesh'),('444444444444','Avenue 5','Bangalore ','Karnataka'),('555555555555','Avenue 6','Banalore','Karnataka ');
/*!40000 ALTER TABLE `address` ENABLE KEYS */;

UNLOCK TABLES;

-- 
-- Table structure for table `backup`
-- 

DROP TABLE IF EXISTS `backup`;

/*!40101 SET @saved_cs_client    = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;

CREATE TABLE `backup` (

```

```
`first_name` varchar(30) NOT NULL,  
 `middle_name` varchar(30) NOT NULL,  
 `last_name` varchar(30) NOT NULL,  
 `aadhar` varchar(12) NOT NULL,  
 `gender` varchar(1) NOT NULL,  
 `dob` date NOT NULL,  
 `phone_no` int NOT NULL,  
 `mail_id` varchar(50) NOT NULL  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;  
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--  
-- Dumping data for table `backup`
```

```
--  
LOCK TABLES `backup` WRITE;  
/*!40000 ALTER TABLE `backup` DISABLE KEYS */;  
/*!40000 ALTER TABLE `backup` ENABLE KEYS */;  
UNLOCK TABLES;
```

```
--  
-- Table structure for table `citizen`
```

```
--  
DROP TABLE IF EXISTS `citizen`;  
/*!40101 SET @saved_cs_client    = @@character_set_client */;  
/*!50503 SET character_set_client = utf8mb4 */;  
CREATE TABLE `citizen` (  
 `first_name` varchar(30) NOT NULL,  
 `middle_name` varchar(30) NOT NULL,  
 `last_name` varchar(30) NOT NULL,  
 `aadhar` varchar(12) NOT NULL,  
 `gender` varchar(1) NOT NULL,
```

```

`dob` date NOT NULL,
`phone_no` bigint NOT NULL,
`mail_id` varchar(50) NOT NULL,
`age` int NOT NULL,
PRIMARY KEY (`aadhar`)

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

-- 
-- Dumping data for table `citizen`
-- 

LOCK TABLES `citizen` WRITE;

/*!40000 ALTER TABLE `citizen` DISABLE KEYS */;
INSERT INTO `citizen` VALUES ('Parth','Raj','Singh','111111111111','M','2002-06-10',9205767228,'dearparthsingh@gmail.com',20),('Kundan ','Raj ','Singh','222222222222','M','1972-11-28',9910267228,'dearkundan@gmail.com',47),('Aekta ','Suman ','Singh','333333333333','F','1978-11-25',9810368094,'aekta.suman@gmail.com',45),('Varun ','Raj','Singh','444444444444','M','2003-12-30',9765679234,'dearvarun@gmail.com',19),('Mia ','Raj','Khurana ','555555555555','F','2004-08-09',9873634321,'dearmia@gmail.com',18),('An','S ','Sharma','666666666666','F','2001-09-01',9342345432,'dearann@gmail.com',18),('Atul','R ','Verma','777777777777','F','2001-09-01',9342345432,'dearann@gmail.com',18);

/*!40000 ALTER TABLE `citizen` ENABLE KEYS */;

UNLOCK TABLES;

/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client  = utf8mb4 */ ;
/*!50003 SET character_set_results = utf8mb4 */ ;
/*!50003 SET collation_connection = utf8mb4_general_ci */ ;
/*!50003 SET @saved_sql_mode      = @@sql_mode */ ;

```

```

/*!50003 SET sql_mode      =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,
ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' ;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER='root'@'localhost' */ /*!50003 TRIGGER `trigger_for_age`
BEFORE INSERT ON `citizen` FOR EACH ROW BEGIN
IF NEW.age < 0 THEN SET NEW.age = 18;
END IF;
END */;;
DELIMITER ;
/*!50003 SET sql_mode      = @saved_sql_mode */ ;
/*!50003 SET character_set_client = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection = @saved_col_connection */ ;

```

```
--  
-- Table structure for table `complaint`  
--
```

```

DROP TABLE IF EXISTS `complaint`;
/*!40101 SET @saved_cs_client  = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;
CREATE TABLE `complaint` (
  `aadhar` varchar(12) NOT NULL,
  `cdate` date NOT NULL,
  `cdesc` text NOT NULL,
  `cid` int NOT NULL,
  PRIMARY KEY (`cid`),
  KEY `aadhar6` (`aadhar`),
  CONSTRAINT `aadhar6` FOREIGN KEY (`aadhar`) REFERENCES `citizen` (`aadhar`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
/*!40101 SET character_set_client = @saved_cs_client */;
```

```

-- 
-- Dumping data for table `complaint`


LOCK TABLES `complaint` WRITE;
/*!40000 ALTER TABLE `complaint` DISABLE KEYS */;
INSERT INTO `complaint` VALUES ('333333333333','2022-10-04','Not able to apply for LL',1);
/*!40000 ALTER TABLE `complaint` ENABLE KEYS */;
UNLOCK TABLES;

-- 
-- Table structure for table `dl`


DROP TABLE IF EXISTS `dl`;
/*!40101 SET @saved_cs_client    = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;

CREATE TABLE `dl` (
  `aadhar` varchar(12) NOT NULL,
  `name` varchar(50) NOT NULL,
  `cov` varchar(20) NOT NULL,
  `edate` date NOT NULL,
  `eid` varchar(20) NOT NULL,
  `dl_id` int NOT NULL,
  `passwd` varchar(50) NOT NULL,
  `mail_id` varchar(50) NOT NULL,
  `dl_status` int NOT NULL,
  `dl_issue_date` date NOT NULL,
  PRIMARY KEY (`dl_id`),
  KEY `aadhar4` (`aadhar`),
  CONSTRAINT `aadhar4` FOREIGN KEY (`aadhar`) REFERENCES `citizen` (`aadhar`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
/*!40101 SET character_set_client = @saved_cs_client */;
```

```

--  

-- Dumping data for table `dl`  

--  

--  

LOCK TABLES `dl` WRITE;  

/*!40000 ALTER TABLE `dl` DISABLE KEYS */;  

INSERT INTO `dl` VALUES ('222222222222','Kundan ','A','2022-09-  

10','1',1,'password','dearkundan@gmail.com',1,'2022-11-05'),('5555555555555','Mia','B','2022-08-  

11','4',2,'password','dearmia@gmail.com',1,'2022-11-01');  

/*!40000 ALTER TABLE `dl` ENABLE KEYS */;  

UNLOCK TABLES;  

--  

-- Table structure for table `inspector`  

--  

--  

DROP TABLE IF EXISTS `inspector`;  

/*!40101 SET @saved_cs_client    = @@character_set_client */;  

/*!50503 SET character_set_client = utf8mb4 */;  

CREATE TABLE `inspector` (  

`id` int NOT NULL,  

`username` varchar(50) NOT NULL,  

`password` varchar(100) NOT NULL,  

`privilege` varchar(5) NOT NULL,  

PRIMARY KEY (`id`)  

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;  

/*!40101 SET character_set_client = @saved_cs_client */;  

--  

-- Dumping data for table `inspector`  

--
```

```
LOCK TABLES `inspector` WRITE;
/*!40000 ALTER TABLE `inspector` DISABLE KEYS */;
INSERT INTO `inspector` VALUES
(1,'ins','password','all'),(2,'ins2','password','all'),(3,'ins3','password','all');
/*!40000 ALTER TABLE `inspector` ENABLE KEYS */;
UNLOCK TABLES;
```

```
--  
-- Table structure for table `license`
```

```
DROP TABLE IF EXISTS `license`;
```

```
/*!40101 SET @saved_cs_client    = @@character_set_client */;  
/*!50503 SET character_set_client = utf8mb4 */;
```

```
CREATE TABLE `license` (
  `id` int NOT NULL,
  `aadhar` varchar(12) NOT NULL,
  `name` varchar(50) NOT NULL,
  `license_no` varchar(20) NOT NULL,
  `cov` varchar(20) NOT NULL,
  `license_issue_date` date NOT NULL,
  `license_expiry_date` date NOT NULL,
  `mail_id` varchar(50) NOT NULL,
  PRIMARY KEY (`id`,`aadhar`),
  KEY `aadhar5` (`aadhar`),
  CONSTRAINT `aadhar5` FOREIGN KEY (`aadhar`) REFERENCES `citizen` (`aadhar`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--  
-- Dumping data for table `license`
```

```

LOCK TABLES `license` WRITE;
/*!40000 ALTER TABLE `license` DISABLE KEYS */;
INSERT INTO `license` VALUES (1,'111111111111','parth','1111','A','2022-11-05','2024-11-05','dearparthsingh@gmail.com'),(2,'222222222222','kundan','2222','A','2022-11-05','2024-11-05','dearkundan@gmail.com'),(3,'333333333333','varun','3333','A','2022-11-05','2024-11-05','dearvarun@gmail.com');
/*!40000 ALTER TABLE `license` ENABLE KEYS */;
UNLOCK TABLES;

```

```

--  

-- Table structure for table `llr`  

--
```

```

DROP TABLE IF EXISTS `llr`;
/*!40101 SET @saved_cs_client    = @@character_set_client */;  

/*!50503 SET character_set_client = utf8mb4 */;  

CREATE TABLE `llr` (  

  `aadhar` varchar(12) NOT NULL,  

  `name` varchar(50) NOT NULL,  

  `cov` varchar(20) NOT NULL,  

  `edate` date NOT NULL,  

  `eid` varchar(10) NOT NULL,  

  `llr_id` int NOT NULL,  

  `epwd` varchar(10) NOT NULL,  

  `passwd` varchar(50) NOT NULL,  

  `mail_id` varchar(50) NOT NULL,  

  `llr_status` int NOT NULL,  

  `llr_issue_date` date NOT NULL,  

  PRIMARY KEY (`llr_id`),  

  KEY `aadhar2` (`aadhar`),  

  CONSTRAINT `aadhar2` FOREIGN KEY (`aadhar`) REFERENCES `citizen` (`aadhar`)  

) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;  

/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--  
-- Dumping data for table `llr`  
  
--  
  
LOCK TABLES `llr` WRITE;  
/*!40000 ALTER TABLE `llr` DISABLE KEYS */;  
INSERT INTO `llr` VALUES ('111111111111','Parth','A','2022-11-  
04','2',1,'abcd','password','dearparthsingh@gmail.com',1,'2022-11-  
05'),('444444444444','Varun','A','2022-10-01','3',2,'abcd','password','dearvarun@gmail.com',1,'2022-  
11-04'),('222222222222','Kundan ','A','2020-10-  
01','0',3,'abcd','password','dearkundan@gmail.com',1,'2022-11-09'),('555555555555','Mia','B','2019-09-  
02','5',4,'abcd','password','dearmia@gmail.com',1,'2022-11-29');  
/*!40000 ALTER TABLE `llr` ENABLE KEYS */;  
UNLOCK TABLES;
```

```
--  
-- Table structure for table `office`  
  
--  
  
DROP TABLE IF EXISTS `office`;  
/*!40101 SET @saved_cs_client    = @@character_set_client */;  
/*!50503 SET character_set_client = utf8mb4 */;  
CREATE TABLE `office` (  
  `district` varchar(30) NOT NULL,  
  `rto_address` varchar(200) NOT NULL,  
  PRIMARY KEY (`district`)  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;  
/*!40101 SET character_set_client = @saved_cs_client */;
```

```
--  
-- Dumping data for table `office`  
  
--
```

```
LOCK TABLES `office` WRITE;
/*!40000 ALTER TABLE `office` DISABLE KEYS */;
INSERT INTO `office` VALUES ('Agra','Agra'),('Gautum Budh Nagar
','Noida'),('Mathura','Mathura'),('Udipi','Udipi');
/*!40000 ALTER TABLE `office` ENABLE KEYS */;
UNLOCK TABLES;
```

--

-- Table structure for table `reg`

--

```
DROP TABLE IF EXISTS `reg`;
/*!40101 SET @saved_cs_client    = @@character_set_client */;
/*!50503 SET character_set_client = utf8mb4 */;

CREATE TABLE `reg` (
  `aadhar` varchar(12) NOT NULL,
  `name` varchar(50) NOT NULL,
  `cov` varchar(30) NOT NULL,
  `model` varchar(20) NOT NULL,
  `company` varchar(20) NOT NULL,
  `rdate` date NOT NULL,
  `r_id` int NOT NULL,
  `passwd` varchar(30) NOT NULL,
  `mail_id` varchar(50) NOT NULL,
  `reg_status` int NOT NULL,
  `reg_issue_date` date NOT NULL,
  `vno` varchar(20) NOT NULL,
  `reg_expiry_date` date NOT NULL,
  PRIMARY KEY (`r_id`),
  KEY `aadhar3` (`aadhar`),
  CONSTRAINT `aadhar3` FOREIGN KEY (`aadhar`) REFERENCES `citizen` (`aadhar`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_general_ci;
```

```

/*!40101 SET character_set_client = @saved_cs_client */;

-- 
-- Dumping data for table `reg` 

-- 

LOCK TABLES `reg` WRITE;

/*!40000 ALTER TABLE `reg` DISABLE KEYS */;
INSERT INTO `reg` VALUES ('111111111111','Parth ','A','Accord ','Honda ','2022-10-10',1,'password','dearparthsingh@gmail.com',1,'2022-11-04','DL5CN2232','2024-11-04'),('222222222222','Kundan','A','530d','Bmw','2022-10-09',2,'password','dearkundan@gmail.com',1,'2022-11-04','DL5CC4985','2024-11-04');

/*!40000 ALTER TABLE `reg` ENABLE KEYS */;

UNLOCK TABLES;

-- 
-- Dumping events for database 'dbms_p1' 

-- 

-- 
-- Dumping routines for database 'dbms_p1' 

-- 

/*!50003 DROP FUNCTION IF EXISTS `getMonths` */;

/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client  = utf8mb4 */ ;
/*!50003 SET character_set_results = utf8mb4 */ ;
/*!50003 SET collation_connection = utf8mb4_general_ci */ ;
/*!50003 SET @saved_sql_mode      = @@sql_mode */ ;
/*!50003 SET sql_mode            = 
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,
ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */;
```

```

DELIMITER ;;

CREATE DEFINER='root'@'localhost' FUNCTION `getMonths`(sampledate date) RETURNS int
    DETERMINISTIC

BEGIN
DECLARE currentDate DATE;
Select current_date()into currentDate;
RETURN (12 * (YEAR(currentDate)
- YEAR(sampledate))
+ (MONTH(currentDate)
- MONTH(sampledate)));
END ;;

DELIMITER ;

/*!50003 SET sql_mode      = @saved_sql_mode */ ;
/*!50003 SET character_set_client = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection = @saved_col_connection */ ;
/*!50003 DROP FUNCTION IF EXISTS `isEligible` */;

/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client = utf8mb4 */ ;
/*!50003 SET character_set_results = utf8mb4 */ ;
/*!50003 SET collation_connection = utf8mb4_general_ci */ ;
/*!50003 SET @saved_sql_mode      = @@sql_mode */ ;
/*!50003 SET sql_mode      =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,
ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */ ;

DELIMITER ;;

CREATE DEFINER='root'@'localhost' FUNCTION `isEligible`( age INTEGER
) RETURNS varchar(20) CHARSET utf8mb4
    DETERMINISTIC

BEGIN
IF age > 17 THEN

```

```

RETURN ("yes");
ELSE
RETURN ("No");
END IF;
END ;;
DELIMITER ;

/*!50003 SET sql_mode      = @saved_sql_mode */ ;
/*!50003 SET character_set_client = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection = @saved_col_connection */ ;
/*!50003 DROP PROCEDURE IF EXISTS `createNewsletter` */;
/*!50003 SET @saved_cs_client    = @@character_set_client */ ;
/*!50003 SET @saved_cs_results   = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client = utf8mb4 */ ;
/*!50003 SET character_set_results = utf8mb4 */ ;
/*!50003 SET collation_connection = utf8mb4_general_ci */ ;
/*!50003 SET @saved_sql_mode    = @@sql_mode */ ;
/*!50003 SET sql_mode          =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,
ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */ ;
DELIMITER ;;

CREATE DEFINER='root'@'localhost' PROCEDURE `createNewsletter`(INOUT emails
VARCHAR(4000))

BEGIN
    DECLARE terminate INT DEFAULT FALSE;
    DECLARE emailAddr VARCHAR(255) DEFAULT "";
    DECLARE collect_email CURSOR FOR SELECT mail_id FROM dbms_p1.llr;
    DECLARE CONTINUE HANDLER FOR NOT FOUND SET terminate = TRUE;
    OPEN collect_email;
    getEmails: LOOP
        FETCH collect_email INTO emailAddr;
        IF terminate = TRUE THEN

```

```

        LEAVE getEmails;
    END IF;
    SET emails = CONCAT(emailAddr, ", ", emails);
END LOOP getEmails;
CLOSE collect_email;

END ::

DELIMITER ;

/*!50003 SET sql_mode      = @saved_sql_mode */ ;
/*!50003 SET character_set_client = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection = @saved_col_connection */ ;
/*!50003 DROP PROCEDURE IF EXISTS `createNewsletter2` */;
/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client = utf8mb4 */ ;
/*!50003 SET character_set_results = utf8mb4 */ ;
/*!50003 SET collation_connection = utf8mb4_general_ci */ ;
/*!50003 SET @saved_sql_mode      = @@sql_mode */ ;
/*!50003 SET sql_mode      =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,
ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */ ;
DELIMITER ;;

CREATE DEFINER='root'@'localhost' PROCEDURE `createNewsletter2`(INOUT emails
VARCHAR(4000))

BEGIN

    DECLARE terminate INT DEFAULT FALSE;
    DECLARE emailAddr VARCHAR(255) DEFAULT "";
    DECLARE collect_email CURSOR FOR SELECT mail_id FROM dbms_p1.llr;
    DECLARE CONTINUE HANDLER FOR NOT FOUND SET terminate = TRUE;
    OPEN collect_email;
    getEmails: LOOP

```

```

        FETCH collect_email INTO emailAddr;
        IF terminate = TRUE THEN
            LEAVE getEmails;
        END IF;
        SET emails = CONCAT(emailAddr, "|", emails);
    END LOOP getEmails;
    CLOSE collect_email;

END ::

DELIMITER ;

/*!50003 SET sql_mode      = @saved_sql_mode */ ;
/*!50003 SET character_set_client = @saved_cs_client */ ;
/*!50003 SET character_set_results = @saved_cs_results */ ;
/*!50003 SET collation_connection = @saved_col_connection */ ;
/*!50003 DROP PROCEDURE IF EXISTS `display_earliest_expirydate` */;
/*!50003 SET @saved_cs_client      = @@character_set_client */ ;
/*!50003 SET @saved_cs_results     = @@character_set_results */ ;
/*!50003 SET @saved_col_connection = @@collation_connection */ ;
/*!50003 SET character_set_client = utf8mb4 */ ;
/*!50003 SET character_set_results = utf8mb4 */ ;
/*!50003 SET collation_connection = utf8mb4_general_ci */ ;
/*!50003 SET @saved_sql_mode      = @@sql_mode */ ;
/*!50003 SET sql_mode      =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,
ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */ ;
DELIMITER ::

CREATE DEFINER='root'@'localhost' PROCEDURE `display_earliest_expirydate`(OUT
earliest_expiry_date date)
BEGIN
DECLARE earliest_expiry date;
SELECT MIN(license_expiry_date) INTO earliest_expiry FROM license;

END ::
```

```

DELIMITER ;

/*!50003 SET sql_mode      = @saved_sql_mode */;
/*!50003 SET character_set_client = @saved_cs_client */;
/*!50003 SET character_set_results = @saved_cs_results */;
/*!50003 SET collation_connection = @saved_col_connection */;
/*!50003 DROP PROCEDURE IF EXISTS `finding_the_youngest` */;
/*!50003 SET @saved_cs_client    = @@character_set_client */;
/*!50003 SET @saved_cs_results   = @@character_set_results */;
/*!50003 SET @saved_col_connection = @@collation_connection */;
/*!50003 SET character_set_client = utf8mb4 */;
/*!50003 SET character_set_results = utf8mb4 */;
/*!50003 SET collation_connection = utf8mb4_general_ci */;
/*!50003 SET @saved_sql_mode    = @@sql_mode */;
/*!50003 SET sql_mode          =
'ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_DATE,
ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */;

DELIMITER ;;

CREATE DEFINER='root'@'localhost' PROCEDURE `finding_the_youngest`(OUT youngest int)
BEGIN
SELECT MIN(age) INTO youngest FROM citizen;

END ;;

DELIMITER ;

/*!50003 SET sql_mode      = @saved_sql_mode */;
/*!50003 SET character_set_client = @saved_cs_client */;
/*!50003 SET character_set_results = @saved_cs_results */;
/*!50003 SET collation_connection = @saved_col_connection */;
/*!40103 SET TIME_ZONE=@OLD_TIME_ZONE */;

/*!40101 SET SQL_MODE=@OLD_SQL_MODE */;
/*!40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS */;
/*!40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS */;
/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;
```

```
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;  
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;  
/*!40111 SET SQL_NOTES=@OLD_SQL_NOTES */;
```

```
-- Dump completed on 2022-11-15 22:27:00
```

MySQL Workbench

Local instance 3306

Administration Schemas

Table: address

Columns:

- aadhar: varchar(12) PK
- street: varchar(100)
- city: varchar(30)
- state: varchar(20)

Action Output

Time	Action	Response	Duration / Fetch Time
13:26:11	SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00042 sec / 0.0000...
13:26:38	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	2 row(s) returned	0.00073 sec / 0.0000...
13:27:12	use dbms_p1	0 row(s) affected	0.00024 sec
13:27:12	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
13:41:26	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0000...
13:41:38	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
13:41:54	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...

SQL script saved to '/Users/parthsingh/Documents/DBMS/Queries/FINAL/corelated_query.sql'

MySQL Workbench

Local instance 3306

Administration Schemas

Table: citizen

Columns:

- first_name: VARCHAR(30) PK
- middle_name: VARCHAR(30)
- last_name: VARCHAR(30)
- aadhar: varchar(12)
- gender: VARCHAR(1)
- dob: DATE
- phone_no: BIGINT
- mai_id: VARCHAR(50)
- age: INT

Action Output

Time	Action	Response	Duration / Fetch Time
13:26:11	SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00042 sec / 0.0000...
13:26:38	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	2 row(s) returned	0.00073 sec / 0.0000...
13:27:12	use dbms_p1	0 row(s) affected	0.00024 sec
13:27:12	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
13:41:26	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0000...
13:41:38	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
13:41:54	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...

SQL script saved to '/Users/parthsingh/Documents/DBMS/Queries/FINAL/corelated_query.sql'

MySQL Workbench

Local instance 3306

Administration Schemas

Table: address

Columns:

- aadhar varchar(12) PK
- street varchar(100)
- city varchar(30)
- state varchar(20)

Action Output

Time	Action	Response	Duration / Fetch Time
13:26:11	SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00042 sec / 0.0000...
13:26:38	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	2 row(s) returned	0.00073 sec / 0.0000...
13:27:12	use dbms_p1	0 row(s) affected	0.00024 sec
13:27:12	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
13:41:26	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0000...
13:41:38	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
13:41:54	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...

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MySQL Workbench

Local instance 3306

Administration Schemas

Table: address

Columns:

- aadhar varchar(12) PK
- street varchar(100)
- city varchar(30)
- state varchar(20)

Action Output

Time	Action	Response	Duration / Fetch Time
13:26:11	SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00042 sec / 0.0000...
13:26:38	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	2 row(s) returned	0.00073 sec / 0.0000...
13:27:12	use dbms_p1	0 row(s) affected	0.00024 sec
13:27:12	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
13:41:26	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0000...
13:41:38	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
13:41:54	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...

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MySQL Workbench

Local instance 3306

Administration Schemas

SCHEMAS

dbms_p1

Tables

address citizen complaint dl inspector license llr office reg Views Stored Procedures Functions functions railways sys

Name: **inspector** Schema: dbms_p1

Column Datatype PK NN UQ B... UN ZF AI G Default / Expression

id INT ✓ ✓ ✓ ✓ ✓ ✓ ✓

username VARCHAR(50) ✓ ✓ ✓ ✓ ✓ ✓ ✓

password VARCHAR(100) ✓ ✓ ✓ ✓ ✓ ✓ ✓

privilege VARCHAR(5) ✓ ✓ ✓ ✓ ✓ ✓ ✓

Column details 'id'

Column Name: **id** Datatype: INT

Charset/Collation: Default Charset Default Collation

Comments:

Storage: VIRTUAL STORED

Primary Key Not NULL Unique Binary Unsigned ZeroFill Auto Increment Generated

Columns Indexes Foreign Keys Triggers Partitioning Options Apply Revert

Action Output

	Time	Action	Response	Duration / Fetch Time
13	13:26:11	SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00042 sec / 0.0000...
14	13:26:38	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	2 row(s) returned	0.00073 sec / 0.0000...
15	13:27:12	use dbms_p1	0 row(s) affected	0.00024 sec
16	13:27:12	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
17	13:41:26	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0000...
18	13:41:38	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
19	13:41:54	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...

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MySQL Workbench

Local instance 3306

Administration Schemas

SCHEMAS

dbms_p1

Tables

address citizen complaint dl inspector license llr office reg Views Stored Procedures Functions functions railways sys

Name: **license** Schema: dbms_p1

Column Datatype PK NN UQ B... UN ZF AI G Default / Expression

id INT ✓ ✓ ✓ ✓ ✓ ✓ ✓

aadhar VARCHAR(12) ✓ ✓ ✓ ✓ ✓ ✓ ✓

name VARCHAR(50) ✓ ✓ ✓ ✓ ✓ ✓ ✓

license_no VARCHAR(20) ✓ ✓ ✓ ✓ ✓ ✓ ✓

cov VARCHAR(20) ✓ ✓ ✓ ✓ ✓ ✓ ✓

license_issue... DATE ✓ ✓ ✓ ✓ ✓ ✓ ✓

license_expir... DATE ✓ ✓ ✓ ✓ ✓ ✓ ✓

mail_id VARCHAR(50) ✓ ✓ ✓ ✓ ✓ ✓ ✓

cost INT ✓ ✓ ✓ ✓ ✓ ✓ ✓

Column details 'id'

Column Name: **id** Datatype: INT

Charset/Collation: Default Charset Default Collation

Comments:

Storage: VIRTUAL STORED

Primary Key Not NULL Unique Binary Unsigned ZeroFill Auto Increment Generated

Columns Indexes Foreign Keys Triggers Partitioning Options Apply Revert

Action Output

	Time	Action	Response	Duration / Fetch Time
13	13:26:11	SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00042 sec / 0.0000...
14	13:26:38	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	2 row(s) returned	0.00073 sec / 0.0000...
15	13:27:12	use dbms_p1	0 row(s) affected	0.00024 sec
16	13:27:12	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
17	13:41:26	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0000...
18	13:41:38	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
19	13:41:54	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...

SQL script saved to '/Users/partsingh/Documents/DBMS/Queries/FINAL/corelated_query.sql'

MySQL Workbench

Local instance 3306

Administration Schemas

Table: address

Columns:

- aadhar varchar(12) PK
- street varchar(100)
- city varchar(30)
- state varchar(20)

Action Output

Time	Action	Response	Duration / Fetch Time
13:26:11	SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00042 sec / 0.0000...
13:26:38	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	2 row(s) returned	0.00073 sec / 0.0000...
13:27:12	use dbms_p1	0 row(s) affected	0.00024 sec
13:27:12	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
13:41:26	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0000...
13:41:38	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
13:41:54	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...

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MySQL Workbench

Local instance 3306

Administration Schemas

Table: address

Columns:

- aadhar varchar(12) PK
- street varchar(100)
- city varchar(30)
- state varchar(20)

Action Output

Time	Action	Response	Duration / Fetch Time
13:26:11	SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00042 sec / 0.0000...
13:26:38	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	2 row(s) returned	0.00073 sec / 0.0000...
13:27:12	use dbms_p1	0 row(s) affected	0.00024 sec
13:27:12	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
13:41:26	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0000...
13:41:38	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
13:41:54	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...

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MySQL Workbench

Local instance 3306

Administration Schemas

SCHEMAS

dbms_p1

Tables

address citizen complaint dl inspector license llr office reg

Views

Stored Procedures

Functions

functions

railways

sys

Object Info Session

Table: address

Columns:

- aadhar varchar(12) PK
- street varchar(100)
- city varchar(30)
- state varchar(20)

Action Output

Time	Action	Response	Duration / Fetch Time
13:26:11	SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00042 sec / 0.0000...
13:26:38	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	2 row(s) returned	0.00073 sec / 0.0000...
13:27:12	use dbms_p1	0 row(s) affected	0.00024 sec
13:27:12	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
13:41:26	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0000...
13:41:38	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
13:41:54	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...

SQL script saved to '/Users/partsingh/Documents/DBMS/Queries/FINAL/corelated_query.sql'

MySQL Workbench

Local instance 3306

Administration Schemas

SCHEMAS

dbms_p1

Tables

address citizen complaint dl inspector license llr office reg

Views

Stored Procedures

Functions

functions

railways

sys

Object Info Session

Table: address

Columns:

- rdate DATE
- r_id INT
- passwd VARCHAR(30)
- mail_id VARCHAR(50)
- reg_status INT
- reg_issue_date DATE
- vno VARCHAR(20)
- reg_expiry_d...

Action Output

Time	Action	Response	Duration / Fetch Time
13:26:11	SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00042 sec / 0.0000...
13:26:38	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	2 row(s) returned	0.00073 sec / 0.0000...
13:27:12	use dbms_p1	0 row(s) affected	0.00024 sec
13:27:12	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
13:41:26	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0000...
13:41:38	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
13:41:54	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...

SQL script saved to '/Users/partsingh/Documents/DBMS/Queries/FINAL/corelated_query.sql'

6. DML STATEMENTS

STATEMENTS WITH SCREEN SHOTS OF THE TABLE WITH INSERTED VALUES

The screenshot shows the MySQL Workbench interface. The left sidebar displays the schema 'dbms_p1' with tables 'address', 'citizen', 'complaint', 'dl', 'inspector', 'license', 'llr', 'office', 'reg', 'Views', 'Stored Procedures', 'Functions', 'functions', 'railways', and 'sys'. The central pane shows a query editor with the following SQL statement:

```
1 •  SELECT * FROM dbms_p1.address;
```

The result grid displays the following data:

aadhar	street	city	state
111111111111	Avenue 3	Greater Noida	Uttar Pradesh
222222222222	Avenue 2	Greater Noida	Uttar Pradesh
333333333333	Avenue 4	Greater Noida	Uttar Pradesh
444444444444	Avenue 5	Bangalore	Karnataka
555555555555	Avenue 6	Banalore	Karnataka
NULL	NULL	NULL	NULL

The bottom pane shows the 'Action Output' tab with a log of database actions:

Time	Action	Response	Duration / Fetch Time
14 13:26:38	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	2 row(s) returned	0.00073 sec / 0.0000...
15 13:27:12	use dbms_p1	0 row(s) affected	0.00024 sec
16 13:27:12	SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
17 13:41:26	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0000...
18 13:41:38	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
19 13:41:54	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...
20 13:45:55	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.00045 sec / 0.0000...

MySQL Workbench

Local instance 3306

Administration Schemas

SCHEMAS

dbms_p1

- Tables
 - address
 - citizen
 - complaint
 - dl
 - inspector
 - license
 - llr
 - office
 - reg
- Views
- Stored Procedures
- Functions
- functions
- railways
- sys

Object Info Session

Table: address

Columns:

aadhar	varchar(12) PK
street	varchar(100)
city	varchar(30)
state	varchar(20)

Action Output

Time	Action	Response	Duration / Fetch Time
15	13:27:12 use dbms_p1	0 row(s) affected	0.00024 sec
16	13:27:12 SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
17	13:41:26 SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0001...
18	13:41:38 SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
19	13:41:54 SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...
20	13:45:55 SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.00045 sec / 0.0000...
21	13:46:02 SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
21	13:46:02 SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.00042 sec / 0.0000...

Result Grid

Query 15

citizen llr nested_query corelated_query COMBINED_DUMP address citizen complaint

1 • `SELECT * FROM dbms_p1.citizen;`

Result Grid

first_name middle_name last_name aadhar gender dob phone_no mail_id

Parth	Raj	Singh	1111111111	M	2002-06-10	9205767228	dearparthsingh@gmail.com	20
Kundan	Raj	Singh	2222222222	M	1972-11-28	9910267228	dearkundan@gmail.com	47
Aekta	Suman	Singh	3333333333	F	1973-11-25	9810368094	aeakta.suman@gmail.com	45
Varun	Raj	Singh	4444444444	M	2003-12-30	9765679234	dearvarun@gmail.com	19
Mia	Raj	Khurana	5555555555	F	2004-08-09	987634321	dearmia@gmail.com	18
An	S	Sharma	6666666666	F	2001-09-01	9342345432	dearann@gmail.com	18
Atul	R	Verma	7777777777	F	2001-09-01	9342345432	dearann@gmail.com	18

Object Info Session

Table: citizen

Action Output

Time	Action	Response	Duration / Fetch Time
15	13:27:12 use dbms_p1	0 row(s) affected	0.00024 sec
16	13:27:12 SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
17	13:41:26 SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0001...
18	13:41:38 SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
19	13:41:54 SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...
20	13:45:55 SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.00045 sec / 0.0000...
21	13:46:02 SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
21	13:46:02 SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.00043 sec / 0.0000...

Result Grid

Query Completed

MySQL Workbench

Local instance 3306

Administration Schemas

SCHEMAS

dbms_p1

- Tables
 - address
 - citizen
 - complaint
 - dl
 - inspector
 - license
 - llr
 - office
 - reg
- Views
- Stored Procedures
- Functions
- functions
- railways
- sys

Object Info Session

Table: address

Columns:

aadhar	varchar(12) PK
street	varchar(100)
city	varchar(30)
state	varchar(20)

Action Output

Time	Action	Response	Duration / Fetch Time
16	13:27:12 SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
17	13:41:26 SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0001...
18	13:41:38 SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
19	13:41:54 SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...
20	13:45:55 SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.00045 sec / 0.0000...
21	13:46:02 SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
22	13:46:08 SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.00043 sec / 0.0000...

Result Grid

Query 15

citizen llr nested_query corelated_query COMBINED_DUMP address citizen complaint

1 • `SELECT * FROM dbms_p1.complaint;`

Result Grid

aadhar cdate cdesc cid

3333333333	2022-10-04	Not able to apply for LL	1

Object Info Session

Table: citizen

Action Output

Time	Action	Response	Duration / Fetch Time
16	13:27:12 SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...	3 row(s) returned	0.00070 sec / 0.0000...
17	13:41:26 SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.0022 sec / 0.0001...
18	13:41:38 SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
19	13:41:54 SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...
20	13:45:55 SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.00045 sec / 0.0000...
21	13:46:02 SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
22	13:46:08 SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.00043 sec / 0.0000...

Result Grid

Query Completed

The screenshot shows the MySQL Workbench interface. The left sidebar displays the schema structure of the database 'dbms_p1'. The 'Tables' section is expanded, showing tables like address, citizen, complaint, dl, inspector, license, llr, office, reg, and Views. The 'Stored Procedures', 'Functions', and 'sys' sections are also visible. The main workspace shows a query results grid for a SELECT query on the 'dl' table. The results grid has columns: aadhar, name, cov, edate, eid, dl_id, passwd, mail_id, dl_status, and dl_issue_date. Two rows are displayed: one for Kundan A and another for Mia B. Below the results grid is a 'di 1' tab. The bottom left shows the 'Table: address' and 'Action Output' sections. The 'Action Output' section lists 23 actions with their corresponding time, query, response, and duration. The bottom right shows a toolbar with various icons.

MySQL Workbench - Local instance 3306

Schemas

Filter objects

Tables

- address
- citizen
- complaint
- dl
- inspector
- license
- lir
- office
- reg

Views

Stored Procedures

Functions

functions

railways

sys

Object Info

Session

Table: inspector

Columns:

id	int PK
username	varchar(50)
password	varchar(100)
privilege	varchar(5)

Action Output

	Time	Action	Response	Duration / Fetch Time
18	13:41:38	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
19	13:41:54	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...
20	13:45:55	SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.00045 sec / 0.000...
21	13:46:02	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.0000...
22	13:46:08	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.00043 sec / 0.000...
23	13:46:15	SELECT * FROM dbms_p1.dl LIMIT 0, 1000	2 row(s) returned	0.0021 sec / 0.0000...
24	13:46:42	SELECT * FROM dbms_p1.inspector LIMIT 0, 1000	3 row(s) returned	0.0024 sec / 0.0002...

Query Completed

MySQL Workbench

Local instance 3306

Administration Schemas

Filter objects

SCHEMAS dbms_p1

- Tables: address, citizen, complaint, dl, inspector, license, llr, office, reg
- Views
- Stored Procedures
- Functions
- railways
- sys

Object Info Session

Table: inspector

Columns:

id	int PK
username	varchar(50)
password	varchar(100)
privilege	varchar(5)

Action Output

Time	Action	Response	Duration / Fetch Time
19	13:41:54 SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.0020 sec / 0.0000...
20	13:45:55 SELECT * FROM dbms_p1.address LIMIT 0, 1000	5 row(s) returned	0.00045 sec / 0.000...
21	13:46:02 SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.000...
22	13:46:08 SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.00043 sec / 0.000...
23	13:46:15 SELECT * FROM dbms_p1.dl LIMIT 0, 1000	2 row(s) returned	0.0021 sec / 0.0000...
24	13:46:42 SELECT * FROM dbms_p1.inspector LIMIT 0, 1000	3 row(s) returned	0.0024 sec / 0.00002...
25	13:46:51 SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00046 sec / 0.000...

Query Completed

MySQL Workbench

Local instance 3306

Administration Schemas

Filter objects

SCHEMAS dbms_p1

- Tables: address, citizen, complaint, dl, inspector, license, llr, office, reg
- Views
- Stored Procedures
- Functions
- railways
- sys

Object Info Session

Table: inspector

Columns:

id	int PK
username	varchar(50)
password	varchar(100)
privilege	varchar(5)

Action Output

Time	Action	Response	Duration / Fetch Time
21	13:46:02 SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00042 sec / 0.000...
22	13:46:08 SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.00043 sec / 0.000...
23	13:46:15 SELECT * FROM dbms_p1.dl LIMIT 0, 1000	2 row(s) returned	0.0021 sec / 0.0000...
24	13:46:42 SELECT * FROM dbms_p1.inspector LIMIT 0, 1000	3 row(s) returned	0.0024 sec / 0.00002...
25	13:46:51 SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00046 sec / 0.000...
26	13:46:56 SELECT * FROM dbms_p1.llr LIMIT 0, 1000	5 row(s) returned	0.00036 sec / 0.000...
27	13:47:08 SELECT * FROM dbms_p1.llr LIMIT 0, 1000	4 row(s) returned	0.0018 sec / 0.00001...

Query Completed

MySQL Workbench

Local instance 3306

Administration Schemas

SCHEMAS

dbms_p1

- Tables: address, citizen, complaint, dl, inspector, license, llr, office, reg
- Views
- Stored Procedures
- Functions
- functions
- railways
- sys

Object Info Session

Table: inspector

Columns:

	id	int PK
	username	varchar(50)
	password	varchar(100)
	privilege	varchar(5)

Result Grid

```
1 • SELECT * FROM dbms_p1.office;
```

district rto_address

Agra	Agra
Gautum Budh Nagar	Noida
Mathura	Mathura
Udipi	Udipi
WLS	WLS

Action Output

Time	Action	Response	Duration / Fetch Time
22 13:46:08	SELECT * FROM dbms_p1.complaint LIMIT 0, 1000	1 row(s) returned	0.00043 sec / 0.000...
23 13:46:15	SELECT * FROM dbms_p1.dl LIMIT 0, 1000	2 row(s) returned	0.0021 sec / 0.0000...
24 13:46:42	SELECT * FROM dbms_p1.inspector LIMIT 0, 1000	3 row(s) returned	0.0024 sec / 0.00002...
25 13:46:51	SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00046 sec / 0.000...
26 13:46:56	SELECT * FROM dbms_p1.llr LIMIT 0, 1000	5 row(s) returned	0.00036 sec / 0.000...
27 13:47:08	SELECT * FROM dbms_p1.llr LIMIT 0, 1000	4 row(s) returned	0.0018 sec / 0.00001...
28 13:47:14	SELECT * FROM dbms_p1.office LIMIT 0, 1000	4 row(s) returned	0.0018 sec / 0.00000...

Query Completed

MySQL Workbench

Local instance 3306

Administration Schemas

SCHEMAS

dbms_p1

- Tables: address, citizen, complaint, dl, inspector, license, llr, office, reg
- Views
- Stored Procedures
- Functions
- functions
- railways
- sys

Object Info Session

Table: inspector

Columns:

	id	int PK
	username	varchar(50)
	password	varchar(100)
	privilege	varchar(5)

Result Grid

```
1 • SELECT * FROM dbms_p1.reg;
```

aadhar name cov model company rdate r_id passwd mail_id reg_status reg_issue_date vno reg_expiry_da...

1111111111...	Parth	A	Accord	Honda	2022-10-10	1	password	dearparthsingh@gmail.com	1	2022-11-04	DL5CN2232	2024-11-04
2222222222...	Kundan	A	530d	Bmw	2022-10-09	2	password	dearkundan@gmail.com	1	2022-11-04	DL5CC4985	2024-11-04
WLS	WLS	WLS	WLS	WLS	WLS	WLS	WLS	WLS	WLS	WLS	WLS	WLS

Action Output

Time	Action	Response	Duration / Fetch Time
23 13:46:15	SELECT * FROM dbms_p1.dl LIMIT 0, 1000	2 row(s) returned	0.0021 sec / 0.0000...
24 13:46:42	SELECT * FROM dbms_p1.inspector LIMIT 0, 1000	3 row(s) returned	0.0024 sec / 0.00002...
25 13:46:51	SELECT * FROM dbms_p1.license LIMIT 0, 1000	5 row(s) returned	0.00046 sec / 0.000...
26 13:46:56	SELECT * FROM dbms_p1.llr LIMIT 0, 1000	5 row(s) returned	0.00036 sec / 0.000...
27 13:47:08	SELECT * FROM dbms_p1.llr LIMIT 0, 1000	4 row(s) returned	0.0018 sec / 0.00001...
28 13:47:14	SELECT * FROM dbms_p1.office LIMIT 0, 1000	4 row(s) returned	0.0018 sec / 0.00000...
29 13:47:21	SELECT * FROM dbms_p1.reg LIMIT 0, 1000	2 row(s) returned	0.0019 sec / 0.00001...

Query Completed

7. QUERIES

7.2

SET OPERATION

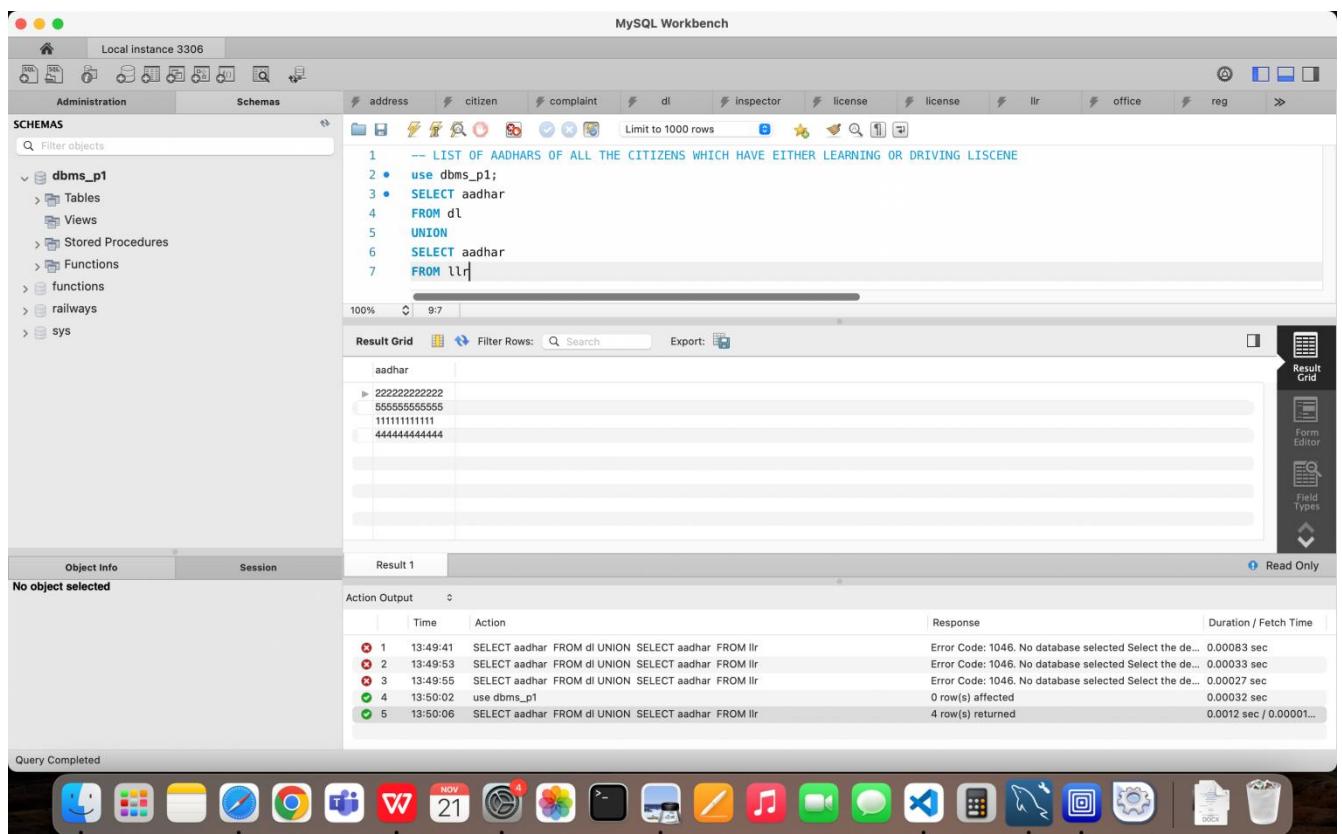
SELECT aadhar

FROM dl

UNION

SELECT aadhar

FROM llr



The screenshot shows the MySQL Workbench interface. In the SQL editor, a query is written:

```
-- LIST OF AADHARS OF ALL THE CITIZENS WHICH HAVE EITHER LEARNING OR DRIVING LISCENE
use dbms_p1;
SELECT aadhar
FROM dl
UNION
SELECT aadhar
FROM llr;
```

The Result Grid displays the output of the query:

aadhar
222222222222
555555555555
111111111111
444444444444

Below the Result Grid, the Action Output pane shows the history of actions:

Action	Time	Response	Duration / Fetch Time
1 13:49:41 SELECT aadhar FROM dl UNION SELECT aadhar FROM llr	13:49:41	Error Code: 1046. No database selected Select the de...	0.000083 sec
2 13:49:53 SELECT aadhar FROM dl UNION SELECT aadhar FROM llr	13:49:53	Error Code: 1046. No database selected Select the de...	0.000033 sec
3 13:49:55 SELECT aadhar FROM dl UNION SELECT aadhar FROM llr	13:49:55	Error Code: 1046. No database selected Select the de...	0.000027 sec
4 13:50:02 use dbms_p1	13:50:02	0 row(s) affected	0.000032 sec
5 13:50:06 SELECT aadhar FROM dl UNION SELECT aadhar FROM llr	13:50:06	4 row(s) returned	0.00012 sec / 0.00001...

SELECT aadhar

FROM dl

UNION ALL

SELECT aadhar

FROM llr

The screenshot shows the MySQL Workbench interface with a query editor and results grid.

Query Editor:

```
1 -- LIST OF AADHARS OF ALL THE CITIZENS WHICH HAVE EITHER LEARNING OR DRIVING LISCENE
2 • SELECT aadhar
3   FROM dl
4 UNION ALL
5   SELECT aadhar
6   FROM llr
```

Result Grid:

aadhar
222222222222
555555555555
1111111111
222222222222
444444444444
555555555555

Action Output:

Action	Time	Response	Duration / Fetch Time
SELECT * FROM dbms_p1.dl LIMIT 0, 1000	13:51:55	2 row(s) returned	0.00097 sec / 0.0000...
SELECT * FROM dbms_p1.llr LIMIT 0, 1000	13:52:02	4 row(s) returned	0.00056 sec / 0.000...
select name from llr except select name from dl	13:54:33	Error Code: 1064. You have an error in your SQL syntax... 0.00035 sec	
SELECT * FROM dbms_p1.dl LIMIT 0, 1000	13:54:44	2 row(s) returned	0.00086 sec / 0.000...
select name from llr where dl_status=1 except select name from dl where dl_status=1	13:55:06	Error Code: 1064. You have an error in your SQL syntax... 0.00032 sec	
SELECT aadhar FROM dl UNION ALL SELECT aadhar FROM llr	13:55:52	6 row(s) returned	0.034 sec / 0.00070...

select aadhar

from citizen where aadhar not in

(select aadhar

from llr)

MySQL Workbench

Local instance 3306

Administration Schemas Query 1 dl llr union* not_in*

Filter objects

SCHEMAS

dbms_p1

- Tables
 - address
 - citizen
 - complaint
 - dl
 - inspector
 - license
 - llr
 - office
 - reg
- Views
- Stored Procedures
 - Functions
 - functions
 - railways
 - sys

Object Info Session

No object selected

Action Output

Time	Action	Response	Duration / Fetch Time
8 13:54:33	select name from llr except select name from dl	Error Code: 1064. You have an error in your SQL syntax...	0.00035 sec
9 13:54:44	SELECT * FROM dbms_p1.dl LIMIT 0, 1000	2 row(s) returned	0.00086 sec / 0.000...
10 13:55:06	select name from llr where dl_status=1 except select name from dl where dl_status=1	Error Code: 1064. You have an error in your SQL syntax...	0.00032 sec
11 13:55:52	SELECT aadhar FROM dl UNION ALL SELECT aadhar FROM llr	6 row(s) returned	0.034 sec / 0.00070...
12 13:58:28	use dbms_p1	0 row(s) affected	0.0057 sec
13 13:58:31	select aadhar from citizen where aadhar not in (select aadhar from llr) LIMIT 0, 1000	3 row(s) returned	0.014 sec / 0.000017...

Query Completed

7.2 NESTED

select aadhar

from complaint

where aadhar IN (

select aadhar

from license

where cov='A')

MySQL Workbench

Local instance 3306

Administration Schemas

SCHEMAS

dbms_p1

Tables

address
citizen
complaint
dl
inspector
license
lir
office
reg

Views

Stored Procedures

Functions

functions
railways

sys

Object Info Session

No object selected

Query 1 nested_query

```

1  -- find all the citizens who have complained with cov=A
2  select aadhar
3  from complaint
4  where aadhar IN (
5  select aadhar
6  from license
7  where cov='A')

```

Result Grid Filter Rows: Search Export:

aadhar
333333333333

complaint 1

Action Output

Time	Action	Response	Duration / Fetch Time
09 13:54:44	SELECT * FROM dbms_p1.dl LIMIT 0, 1000	2 row(s) returned	0.00086 sec / 0.000...
10 13:55:06	select name from lir where dl_status=1 except select name from dl where dl_status=1	Error Code: 1064. You have an error in your SQL syntax...	0.00032 sec
11 13:55:52	SELECT aadhar FROM dl UNION ALL SELECT aadhar FROM lir	6 row(s) returned	0.034 sec / 0.00070...
12 13:56:28	use dbms_p1	0 row(s) affected	0.0057 sec
13 13:56:31	select aadhar from citizen where aadhar not in (select aadhar from lir) LIMIT 0, 1000	3 row(s) returned	0.014 sec / 0.000017...
14 13:59:14	select aadhar from complaint where aadhar IN (select aadhar from license where cov...	1 row(s) returned	0.0058 sec / 0.00001...

Query Completed

7.3 Correlated query

`SELECT * FROM citizen where`

`EXISTS (SELECT aadhar FROM license`

`WHERE license.aadhar=citizen.aadhar AND approved=0);`

The screenshot shows the MySQL Workbench interface. In the top right, the title bar says "MySQL Workbench". The left sidebar shows the "Administration" tab selected, with a tree view of "SCHEMAS" containing "dbms_p1" which has "Tables" like "address", "citizen", "complaint", etc. Below "Tables" are "Views", "Stored Procedures", "Functions", and "sys". The main area is a "Query 1" editor with the following SQL code:

```

14  -- find the details of citizens who have applied for license but hasn't been approved yet
15  • use dbms_p1;
16  -- SELECT * FROM citizen where
17  -- EXISTS (SELECT aadhar FROM license
18  -- WHERE license.aadhar=citizen.aadhar AND approved=1);
19
20
21  • SELECT * FROM citizen where
22  EXISTS (SELECT aadhar FROM license
  WHERE license.aadhar=citizen.aadhar AND approved=0);

```

The "Result Grid" below shows a table with columns: first_name, middle_name, last_name, aadhar, gender, dob, phone_no, mail_id. The data includes rows for Parth, Suman, and Mia.

first_name	middle_name	last_name	aadhar	gender	dob	phone_no	mail_id
Parth	Raj	Singh	111111111111	M	2002-06-10	9205767228	dearparthsingh@gmail.com
Aekta	Suman	Singh	333333333333	F	1978-11-25	9810368094	aekta.suman@gmail.com
Mia	Raj	Khurana	555555555555	F	2004-08-09	9873634321	dearmia@gmail.com

The "Action Output" section shows the execution history:

Action	Time	Response	Duration / Fetch Time
11 13:55:52 SELECT aadhar FROM dl UNION ALL SELECT aadhar FROM llr		6 row(s) returned	0.034 sec / 0.00070...
12 13:56:28 use dbms_p1		0 row(s) affected	0.0057 sec
13 13:56:31 select aadhar from citizen where aadhar not in (select aadhar from llr) LIMIT 0, 1000		3 row(s) returned	0.014 sec / 0.000017...
14 13:59:14 select aadhar from complaint where aadhar IN (select aadhar from license where cov...)		1 row(s) returned	0.0058 sec / 0.00001...
15 14:01:52 use dbms_p1		0 row(s) affected	0.00070 sec
16 14:01:53 SELECT * FROM citizen where EXISTS (SELECT aadhar FROM license WHERE license.a...		3 row(s) returned	0.0028 sec / 0.00001...

7.4 AGREGATE FUNCTION

SELECT cov, sum(cost) as c FROM license GROUP BY cov HAVING SUM(cost)> 20;

The slide has a dark background with white text. At the top, it says "Which Departments earns the most and how much?". Below that is a red-bordered button labeled "COUNT". Underneath it is a green-bordered button labeled "True". A table follows:

	0	1
0	A	30
1	C	100

```
select cov, min(llr_issue_date) from llr group by cov;
```

First learning license ever

FETCH

True

	0	1
0	A	2022-11-04
1	B	2022-11-29

```
select cov, min(dl_issue_date) from dl group by cov;
```

First driving liscene ever

FETCH

True

	0	1
0	A	2022-11-05
1	B	2022-11-01

7.7. ORDER BY

```
select aadhar, name, license_expiry_date from license order by  
license_expiry_date;
```

Upcoming Expiry Dates for License

FETCH

True



	0	1	2
0	222222222222	kundan	2024-01-05
1	333333333333	varun	2024-01-23
2	555555555555	aekta	2024-06-10
3	111111111111	parth	2024-10-05
4	444444444444	mia	2024-12-09
5	666666666666	An	2025-11-13
6	777777777777	Atul	2025-11-14

```
select first_name, city, state, street, phone_no, mail_id  
from address natural join citizen
```

order by city

The screenshot shows the MySQL Workbench interface with a query editor window. The query is:

```
4
5
6 -- select aadhar, name, license_expiry_date from license order by license_expiry_date;
7
8 -- select cov, min(dl_issue_date) from dl group by cov;
9 -- select cov, min(llr_issue_date) from llr group by cov;
10 -- SELECT cov, sum(cost) as c FROM license GROUP BY cov HAVING SUM(cost) > 20;
11
12 • select first_name, city, state, street, phone_no, mail_id
13   from address natural join citizen
14   order by city
```

The Result Grid shows the following data:

first_name	city	state	street	phone_no	mail_id
Mia	Banalore	Karnataka	Avenue 6	9873634321	dearmia@gmail.com
Parth	Faridabad	Uttar Pradesh	Avenue 3	9205767228	dearparthsingh@gmail.com
Kundan	Greater Noida	Uttar Pradesh	Avenue 2	9910267228	dearkundan@gmail.com
Varun	Mysore	Karnataka	Avenue 5	9755679234	dearvarun@gmail.com
Aekta	Noida	Uttar Pradesh	Avenue 4	9810368094	aeakta.suman@gmail.com

The Action Output table shows the following log entries:

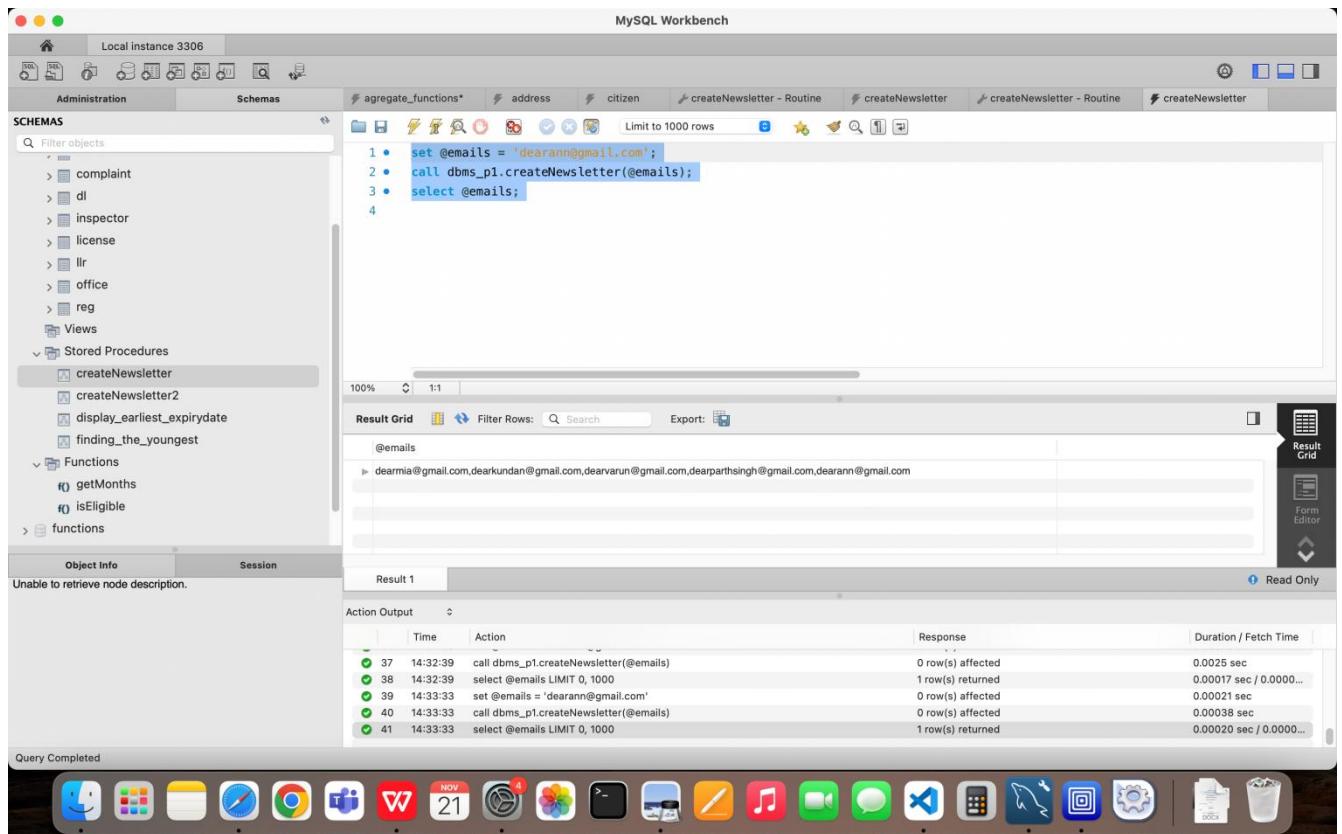
Time	Action	Response	Duration / Fetch Time
31 14:27:48	select first_name, city from address natural join citizen order by city LIMIT 0, 1000	5 row(s) returned	0.00067 sec / 0.000...
32 14:28:19	select first_name, city from address natural join citizen where state='Karnataka' order b...	0 row(s) returned	0.00039 sec / 0.000...
33 14:28:26	select first_name, city from address natural join citizen order by city LIMIT 0, 1000	5 row(s) returned	0.00047 sec / 0.000...
34 14:28:47	SELECT * FROM dbms_p1.citizen LIMIT 0, 1000	7 row(s) returned	0.00046 sec / 0.000...
35 14:29:07	select first_name, city, state, street, phone_no, mail_id from address natural join citizen...	5 row(s) returned	0.00050 sec / 0.000...

8. STORED PROCEDURES, FUNCTIONS AND TRIGGERS

8.1 STORED PROCEDURES OR FUNCTIONS

```
CREATE DEFINER='root'@'localhost' PROCEDURE
`createNewsletter`(INOUT emails VARCHAR(4000))
BEGIN
    DECLARE terminate INT DEFAULT FALSE;
    DECLARE emailAddr VARCHAR(255) DEFAULT "";
    DECLARE collect_email CURSOR FOR SELECT mail_id FROM
dbms_p1.llr;
    DECLARE CONTINUE HANDLER FOR NOT FOUND SET terminate =
TRUE;
    OPEN collect_email;
    getEmails: LOOP
        FETCH collect_email INTO emailAddr;
        IF terminate = TRUE THEN
            LEAVE getEmails;
        END IF;
        SET emails = CONCAT(emailAddr, ",", emails);
    END LOOP getEmails;
    CLOSE collect_email;
END
```

```
set @emails = 'dearann@gmail.com';
call dbms_p1.createNewsletter(@emails);
select @emails;
```



```
CREATE DEFINER='root'@'localhost' FUNCTION `getMonths`(sampledate date)
```

```
RETURNS int
```

```
DETERMINISTIC
```

```
BEGIN
```

```
DECLARE currentDate DATE;
```

```
Select current_date()into currentDate;
```

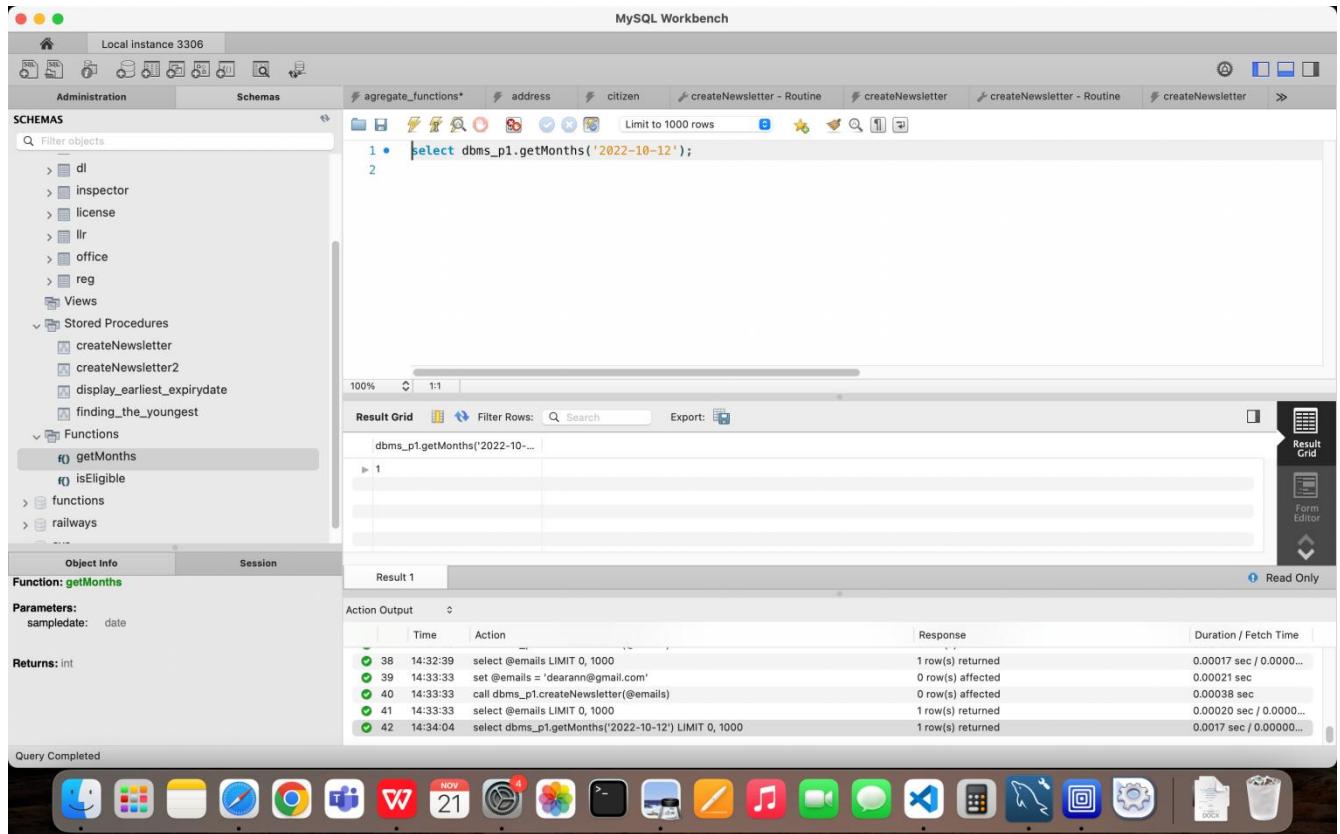
```
RETURN (12 * (YEAR(currentDate)
```

```
– YEAR(sampledate))
```

```
+ (MONTH(currentDate)
```

```
– MONTH(sampledate));
```

```
END
```



```

CREATE DEFINER='root'@'localhost' FUNCTION `isEligible`(`age` INTEGER
) RETURNS varchar(20) CHARSET utf8mb4
DETERMINISTIC
BEGIN
IF age > 17 THEN
RETURN ("yes");
ELSE
RETURN ("No");
END IF;
END
  
```

MySQL Workbench

Local instance 3306

Administration Schemas

SCHEMAS

- > dl
- > inspector
- > license
- > llr
- > office
- > reg
- Views
- Stored Procedures
 - createNewsletter
 - createNewsletter2
 - display_earliest_expirydate
 - finding_the_youngest
- Functions
 - f₀ getMonths
 - f₁ isEligible
- functions
- railways

Object Info Session

Function: **getMonths**

Parameters:

sampdate: date

Returns: int

Query Completed

Result Grid

```
1 • select dbms_p1.isEligible(19);  
2
```

Result 1

Action Output

Time	Action	Response	Duration / Fetch Time
39 14:33:33	set @emails = 'dearann@gmail.com'	0 row(s) affected	0.00021 sec
40 14:33:33	call dbms_p1.createNewsletter(@emails)	0 row(s) affected	0.00038 sec
41 14:33:33	select @emails LIMIT 0, 1000	1 row(s) returned	0.00020 sec / 0.0000...
42 14:34:04	select dbms_p1.getMonths('2022-10-12') LIMIT 0, 1000	1 row(s) returned	0.0017 sec / 0.0000...
43 14:36:03	select dbms_p1.isEligible(19) LIMIT 0, 1000	1 row(s) returned	0.00078 sec / 0.0000...

Result Grid

Form Editor

Read Only

The screenshot shows the MySQL Workbench interface on a Mac OS X desktop. The main window displays a query in the SQL editor: 'select dbms_p1.isEligible(19);'. The result grid shows a single row with the value 'yes'. Below the result grid is an 'Action Output' table detailing the execution steps and their timing.

Time	Action	Response	Duration / Fetch Time
39 14:33:33	set @emails = 'dearann@gmail.com'	0 row(s) affected	0.00021 sec
40 14:33:33	call dbms_p1.createNewsletter(@emails)	0 row(s) affected	0.00038 sec
41 14:33:33	select @emails LIMIT 0, 1000	1 row(s) returned	0.00020 sec / 0.0000...
42 14:34:04	select dbms_p1.getMonths('2022-10-12') LIMIT 0, 1000	1 row(s) returned	0.0017 sec / 0.0000...
43 14:36:03	select dbms_p1.isEligible(19) LIMIT 0, 1000	1 row(s) returned	0.00078 sec / 0.0000...

MySQL Workbench

Local instance 3306

Administration Schemas

SCHEMAS

- > dl
- > inspector
- > license
- > llr
- > office
- > reg
- Views
- Stored Procedures
 - createNewsletter
 - createNewsletter2
 - display_earliest_expirydate
 - finding_the_youngest
- Functions
 - f₀ getMonths
 - f₁ isEligible
- functions
- railways

Object Info Session

Function: **getMonths**

Parameters:

sampdate: date

Returns: int

Query Completed

Result Grid

```
1 • select dbms_p1.isEligible(16);  
2
```

Result 2

Action Output

Time	Action	Response	Duration / Fetch Time
40 14:33:33	call dbms_p1.createNewsletter(@emails)	0 row(s) affected	0.00038 sec
41 14:33:33	select @emails LIMIT 0, 1000	1 row(s) returned	0.00020 sec / 0.0000...
42 14:34:04	select dbms_p1.getMonths('2022-10-12') LIMIT 0, 1000	1 row(s) returned	0.0017 sec / 0.0000...
43 14:36:03	select dbms_p1.isEligible(16) LIMIT 0, 1000	1 row(s) returned	0.00078 sec / 0.0000...
44 14:36:19	select dbms_p1.isEligible(16) LIMIT 0, 1000	1 row(s) returned	0.00029 sec / 0.0000...

Result Grid

Form Editor

Read Only

This screenshot is identical to the one above, showing the MySQL Workbench interface. The main difference is the result of the query: 'select dbms_p1.isEligible(16);'. The result grid shows a single row with the value 'No'. The 'Action Output' table shows the same sequence of actions as the first screenshot, but the final result row corresponds to the 'No' value.

Time	Action	Response	Duration / Fetch Time
40 14:33:33	call dbms_p1.createNewsletter(@emails)	0 row(s) affected	0.00038 sec
41 14:33:33	select @emails LIMIT 0, 1000	1 row(s) returned	0.00020 sec / 0.0000...
42 14:34:04	select dbms_p1.getMonths('2022-10-12') LIMIT 0, 1000	1 row(s) returned	0.0017 sec / 0.0000...
43 14:36:03	select dbms_p1.isEligible(16) LIMIT 0, 1000	1 row(s) returned	0.00078 sec / 0.0000...
44 14:36:19	select dbms_p1.isEligible(16) LIMIT 0, 1000	1 row(s) returned	0.00029 sec / 0.0000...

8.2 TRIGGERS

```
DELIMITER //  
Create Trigger trigger_for_age_update  
BEFORE UPDATE ON citizen FOR EACH ROW  
BEGIN  
IF NEW.age < 0 THEN SET NEW.age = 18;  
END IF;  
END //
```

```
SET SQL_SAFE_UPDATES = 0;
```

```
UPDATE citizen  
SET age=10  
where first_name='An';  
SELECT * FROM citizen;
```

MySQL Workbench

Local instance 3306

Administration Schemas

SCHEMAS

dbms_p1

- Tables: address, citizen, complaint, dl, inspector, license, llr, office, reg
- Views
- Stored Procedures: createNewsletter, createNewsletter2, display_earliest_expirydate, finding_the_youngest

Object Info Session

Function: getMonths

Parameters: sampledate: date

Returns: int

Query Completed

Code Editor (SQL)

```

9 -- INSERT INTO `dbms_p1`.`citizen` (`first_name`, `middle_name`, `last_name`, `aadhar`, `gender`, `dob`, `phone_no`, `mail_id`)
10
11 • SET SQL_SAFE_UPDATES = 0;
12
13 • UPDATE citizen
14     SET age=10
15     WHERE first_name='ann';
16
17
18
19 • SELECT * FROM citizen;

```

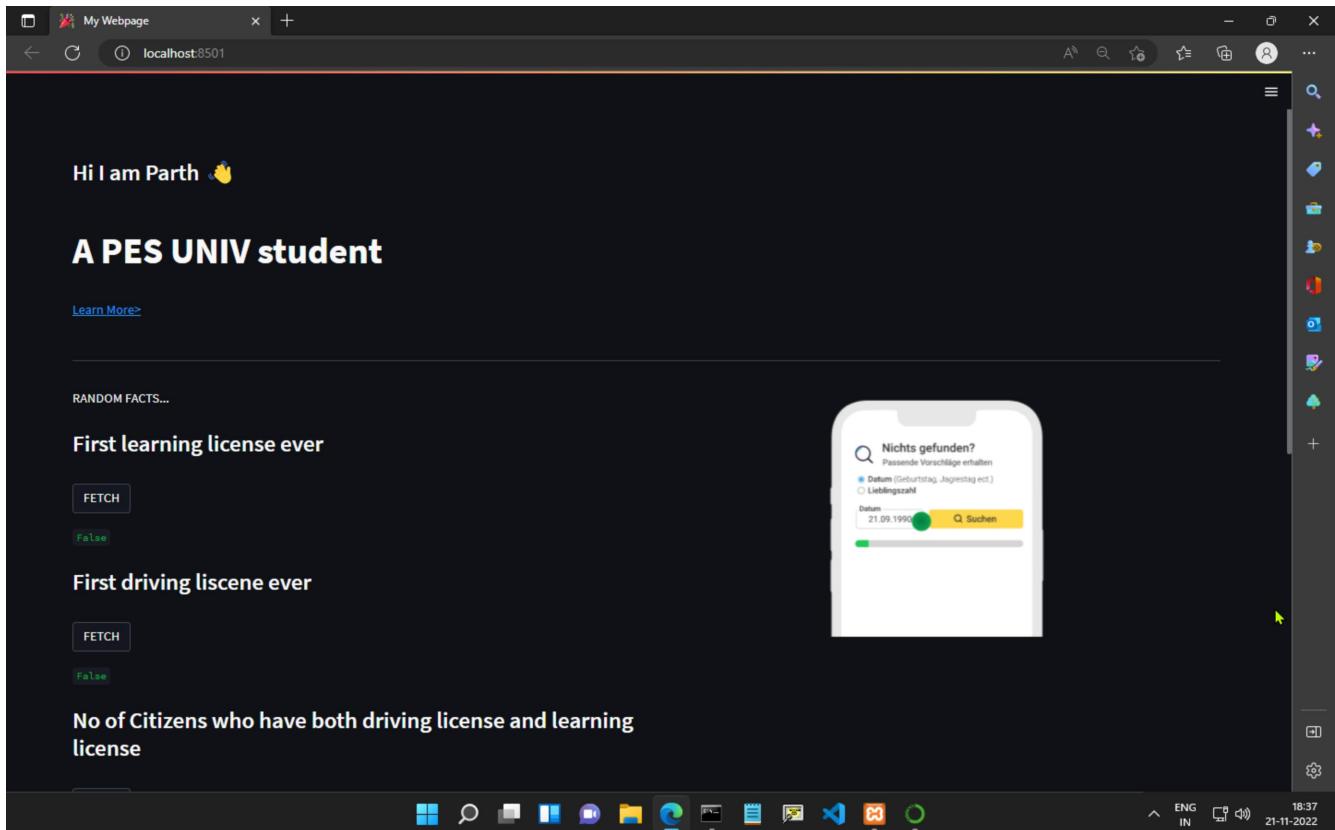
Result Grid

first_name	middle_name	last_name	aadhar	gender	dob	phone_no	mail_id	a...
Aekta	Suman	Singh	333333333333 F	1978-11-25	981036809	aekta.suman@gmail.com		45
Varun	Raj	Singh	444444444444 M	2003-12-30	976567923	dearvarun@gmail.com		19
Mia	Raj	Khurana	555555555555 F	2004-08-09	9873634321	dearmia@gmail.com		18
An	S	Sharma	666666666666 F	2001-09-01	9342345432	dearann@gmail.com		18
Atul	R	Verma	7777777777 F	2001-09-01	9342345432	dearann@gmail.com		18
			HULL	HULL	HULL	HULL	HULL	HULL

Action Output

Time	Action	Response	Duration / Fetch Time
47 14:39:27	UPDATE citizen SET age=10 where first_name='ann'	Error Code: 1175. You are using safe update mode an...	0.0052 sec
48 14:39:30	UPDATE citizen SET age=10 where first_name='ann'	Error Code: 1175. You are using safe update mode an...	0.00045 sec
49 14:40:01	SET SQL_SAFE_UPDATES = 0	0 row(s) affected	0.00054 sec
50 14:40:04	UPDATE citizen SET age=10 where first_name='ann'	0 row(s) affected Rows matched: 0 Changed: 0 War...	0.0013 sec
51 14:40:10	SELECT * FROM citizen LIMIT 0, 1000	7 row(s) returned	0.00052 sec / 0.000...

9. FRONT END DEVELOPMENT



My Webpage

localhost:8501

No of Citizens who have both driving license and learning license

False

FETCH

False

Which Departments earns the most and how much?

COUNT

False

Upcoming Expiry Dates for License

ABC5678

FETCH

False

18:37
ENG IN 21-11-2022

My Webpage

localhost:8501

A PES UNIV student

[Learn More>](#)

RANDOM FACTS...

First learning license ever

True

FETCH

	0	1
0	A	2022-11-04
1	B	2022-11-29

Nichts gefunden?
Passende Vorschläge erhalten
 Datum (Geburtstag, Jagdstag etc.)
 Lieblingszahl

Datum: 21.09.1990

XX XX 219
XX X 2190
XX X 2109

Suchen

First driving liscene ever

False

FETCH

No of Citizens who have both driving license and learning license

18:37
ENG IN 21-11-2022

My Webpage +

localhost:8501

First learning license ever

FETCH

False

First driving liscene ever

FETCH

True

	0	1
0	A	2022-11-05
1	B	2022-11-01

No of Citizens who have both driving license and learning license

FETCH

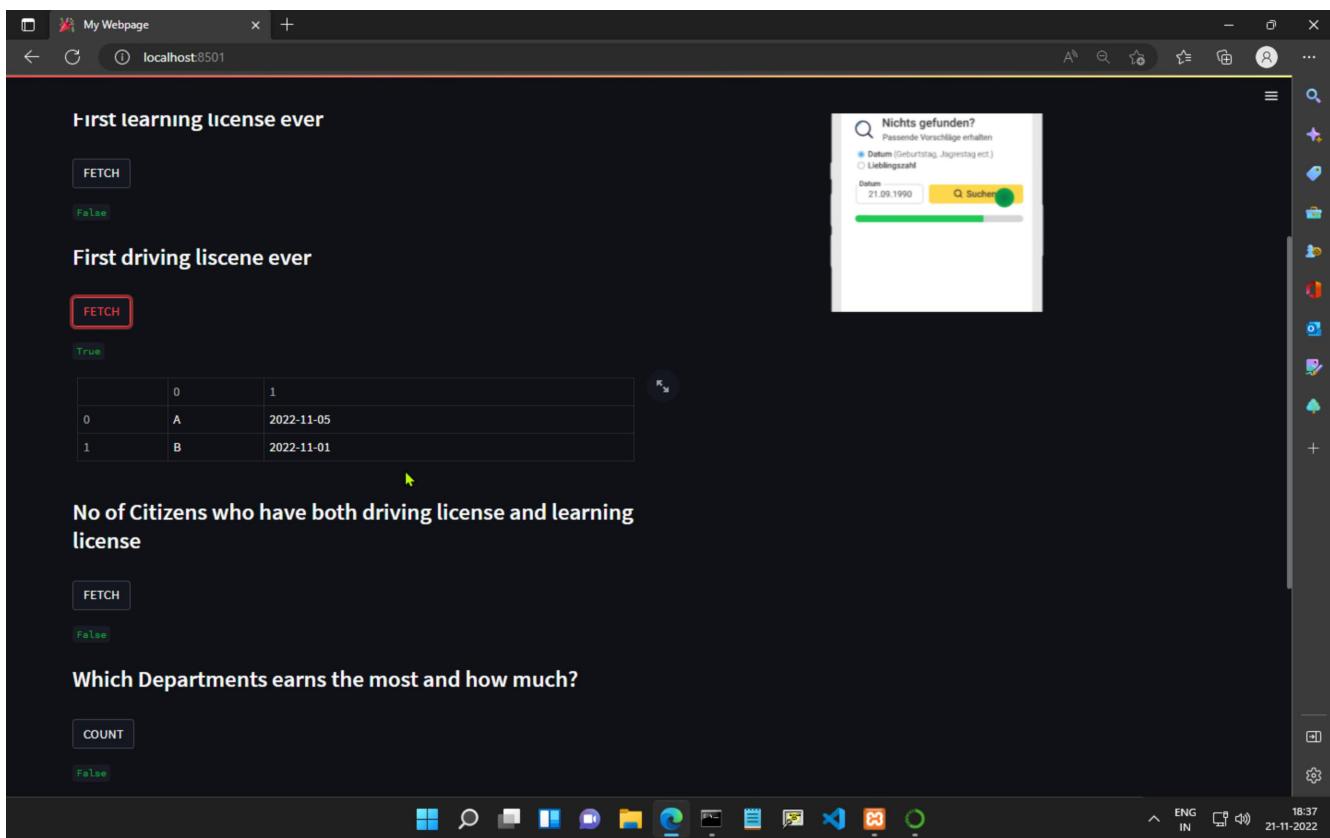
False

Which Departments earns the most and how much?

COUNT

False

18:37
ENG IN 21-11-2022



My Webpage +

localhost:8501

False

No of Citizens who have both driving license and learning license

FETCH

True

	0	2
0		

Which Departments earns the most and how much?

COUNT

False

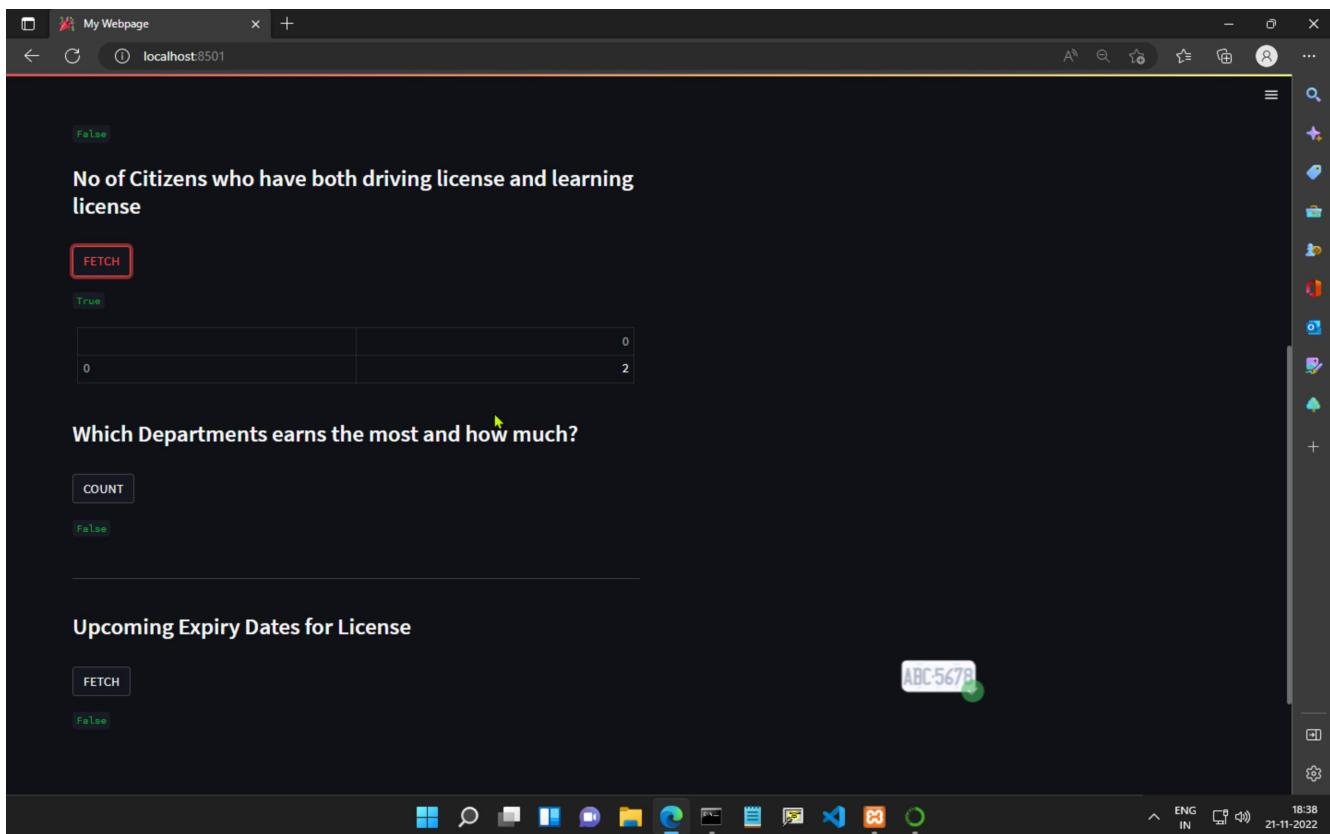
Upcoming Expiry Dates for License

FETCH

False

ABC-5678

18:38
ENG IN 21-11-2022



My Webpage

localhost:8501

FETCH

False

Which Departments earns the most and how much?

COUNT

True

	0	1
0	A	30
1	C	100

Upcoming Expiry Dates for License

ABC-5678

FETCH

False

ABC-5678

18:38
21-11-2022

This screenshot shows a Streamlit application running on localhost:8501. At the top, there's a header bar with a 'My Webpage' tab and a search bar. Below the header, a 'COUNT' button is highlighted in red, with a green 'True' status indicator. The main content displays two sections: 'Which Departments earns the most and how much?' and 'Upcoming Expiry Dates for License'. The first section shows a table with two rows: one for department A (value 30) and one for department C (value 100). The second section shows a placeholder text 'Upcoming Expiry Dates for License' and a placeholder value 'ABC-5678'. The Streamlit sidebar on the right is visible, showing various icons.

My Webpage

localhost:8501

COUNT

False

Upcoming Expiry Dates for License

FETCH

True

ABC-5678 ✓

	0	1	2
0	222222222222	kundan	2024-01-05
1	333333333333	varun	2024-01-23
2	555555555555	aekta	2024-06-10
3	111111111111	parth	2024-10-05
4	444444444444	mia	2024-12-09
5	666666666666	An	2025-11-13
6	777777777777	Atul	2025-11-14

Made with Streamlit

18:38
21-11-2022

This screenshot shows the same Streamlit application as the previous one, but with more data in the table. The table now has seven rows, each containing a unique identifier, a name, and an expiry date. The Streamlit sidebar on the right is visible, showing various icons.

