

DATABASE MANAGEMENT AND DATABASE DESIGN

DATABASE FOR A BANK

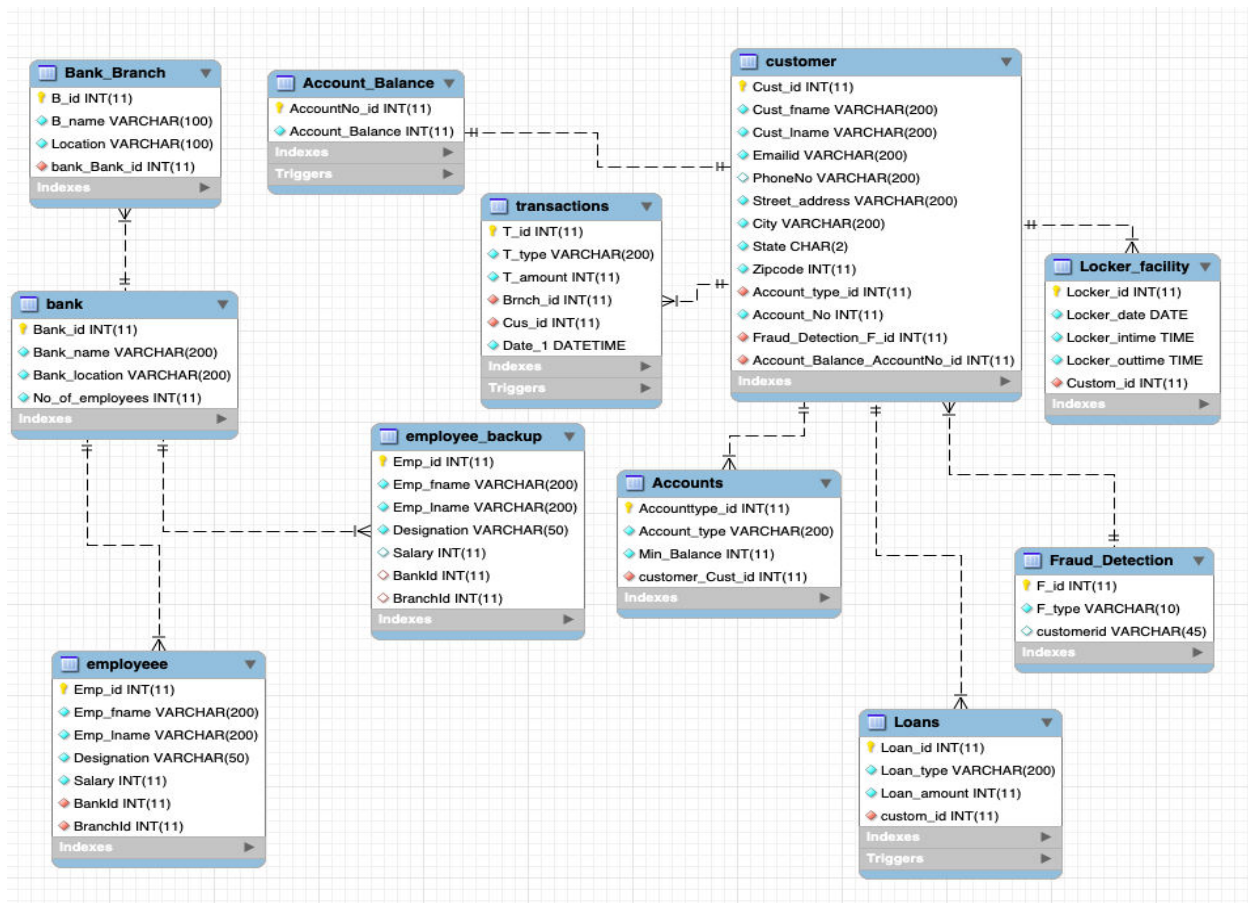
PROBLEM STATEMENT:

- A Bank keeps a record of thousands of customers, transaction details, employee details and other information.
- The services provided by bank are:
 1. Withdrawal/Deposits
 2. Savings/ Checking Account Opening
 3. FOREX transactions
 4. Cashing check
 5. Extending loans to customers and for business
 6. Other financial advisory services
- Therefore, maintaining such a huge amount of data manually becomes very difficult

APPROACH:

- To avoid the database to be maintained manually, it is necessary to build a database which keeps a record of every single service provided by the bank
- The database stores different types of data in a systematic way
- Information can be retrieved easily when the data is stored in the database
- Data can also be stored and retrieved for many years

ER DIAGRAM:



SQL QUERIES:

Functions: AVG – Calculates the average of column value

```
SELECT AVG(<col_name>)
```

CONCAT_WS – Combines two column values

```
SELECT CONCAT_WS(<separator> , <col_name> , <column_name>);
```

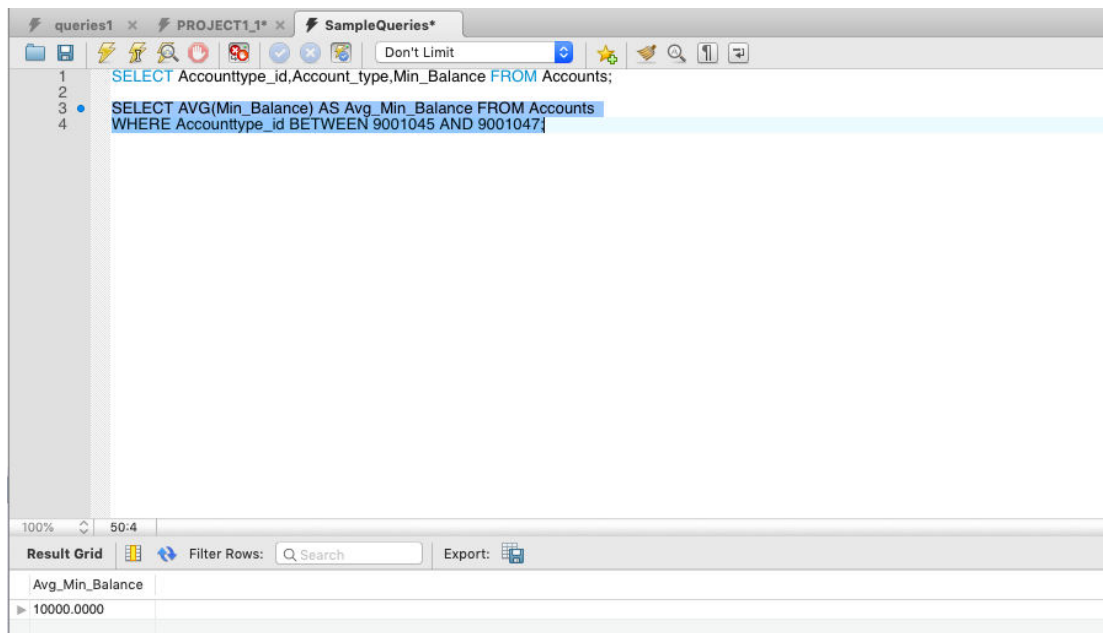
TIMEDIFF- Returns difference between two time values

```
SELECT TIMEDIFF(<time>,<time>)
```

Example: -

```
SELECT TIMEDIFF ('11:00:00','9:45:00');
```

Returns 1:15:00



queries1 x PROJECT1_1 x Functions*

Don't Limit

```
1 SELECT Accounttype_id,Account_type,Min_Balance FROM Accounts;
2
3
4 • SELECT AVG(Min_Balance) AS Avg_Min_Balance FROM Accounts
5 WHERE Accounttype_id BETWEEN 9001045 AND 9001047;
6
7 • SELECT Cust_id,CONCAT_WS(' ',Cust_fname,Cust_lname) AS Customer_Name FROM customer WHERE Cust_id=2006;
8
```

100% 104:6

Result Grid Filter Rows: Search Export:

Cust_id	Customer_Name
▶ 2006	Dan Christ

queries1 x PROJECT1_1 x Functions*

Don't Limit

```
1 SELECT Accounttype_id,Account_type,Min_Balance FROM Accounts;
2
3
4 • SELECT AVG(Min_Balance) AS Avg_Min_Balance FROM Accounts
5 WHERE Accounttype_id BETWEEN 9001045 AND 9001047;
6
7 • SELECT Cust_id,CONCAT_WS(' ',Cust_fname,Cust_lname) AS Customer_Name FROM customer WHERE Cust_id=2006;
8 • SELECT Locker_id,TIMEDIFF(Locker_outtime,Locker_intime) AS Total_Time_Spent FROM Locker_facility;
```

100% 98:8

Result Grid Filter Rows: Search Export:

Locker_id	Total_Time_Spent
▶ 101	00:20:00
202	00:35:00
303	00:50:01
404	00:05:00
505	01:00:00

TRIGGERS –Triggers are database operations that are automatically performed when a specified database event occurs

Syntax,

```
DELIMITER //
CREATE TRIGGER <trigger_name>
BEFORE/AFTER
INSERT/UPDATE/DELETE
ON table_name
FOR EACH ROW
BEGIN
<triggered SQL statement>
END //
```

The screenshot shows a database management tool interface. The top pane displays the following SQL code for a trigger:

```
1
2
3
4 DELIMITER //
5 CREATE TRIGGER date_while_transaction
6 BEFORE INSERT
7 ON transactions
8 FOR EACH ROW
9 BEGIN
10 SET NEW.Date_1=NOW();
11 END//
12
13
14
15
16
17 INSERT INTO transactions(T_id,T_type,T_amount,Brnch_id,Cus_id) VALUES(90510,'Card Deposit',5600,5002,2005);
18
19
20 SELECT * FROM transactions;
21
```

The bottom pane shows a 'Result Grid' with the following data:

T_id	T_type	T_amount	Brnch_id	Cus_id	Date_1
90501	Cash Deposit	7500	5001	2002	2018-03-25 00:00:00
90502	Card Deposit	8850	5003	2001	2018-06-13 00:00:00
90503	Card Withdrawal	300	5002	2002	2018-07-27 00:00:00
90504	Card Withdrawal	1000	5002	2007	2018-12-09 00:00:00
90505	Cash Deposit	9099	5001	2006	2018-02-15 00:00:00
90506	Cash Withdrawal	4500	5001	2005	2018-01-02 00:00:00
90507	Cash Deposit	20	5003	2003	2018-10-16 00:00:00
90508	Card Withdrawal	50	5003	2004	2018-11-01 00:00:00
90509	Cash Deposit	1300	5001	2004	2018-12-12 20:24:11
90510	Card Deposit	5600	5002	2005	2018-12-12 20:27:19
NOTE	NOTE	NOTE	NOTE	NOTE	NOTE

The bottom status bar indicates 'transactions 9'.

queries*

PROJECT1_1

Functions

joins

triggers*

storedprocedures

Don't Limit

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```

CREATE TABLE employee_backup
(
  Emp_id INT NOT NULL PRIMARY KEY,
  Emp_fname VARCHAR(200) NOT NULL,
  Emp_lname VARCHAR(200) NOT NULL,
  Designation VARCHAR(50) NOT NULL,
  Salary INT
);

DELIMITER $$
CREATE TRIGGER employee_backup
BEFORE DELETE
ON employee
FOR EACH ROW
BEGIN
  INSERT INTO employee_backup VALUES (OLD.Emp_id, OLD.Emp_fname, OLD.Emp_lname, OLD.Designation, OLD.Salary, OLD.BranchId);
END $$

DELETE from employee WHERE Emp_id=4012;

SELECT * FROM employee_backup;

```

100%

31:76

Result Grid

Filter Rows:

Export:

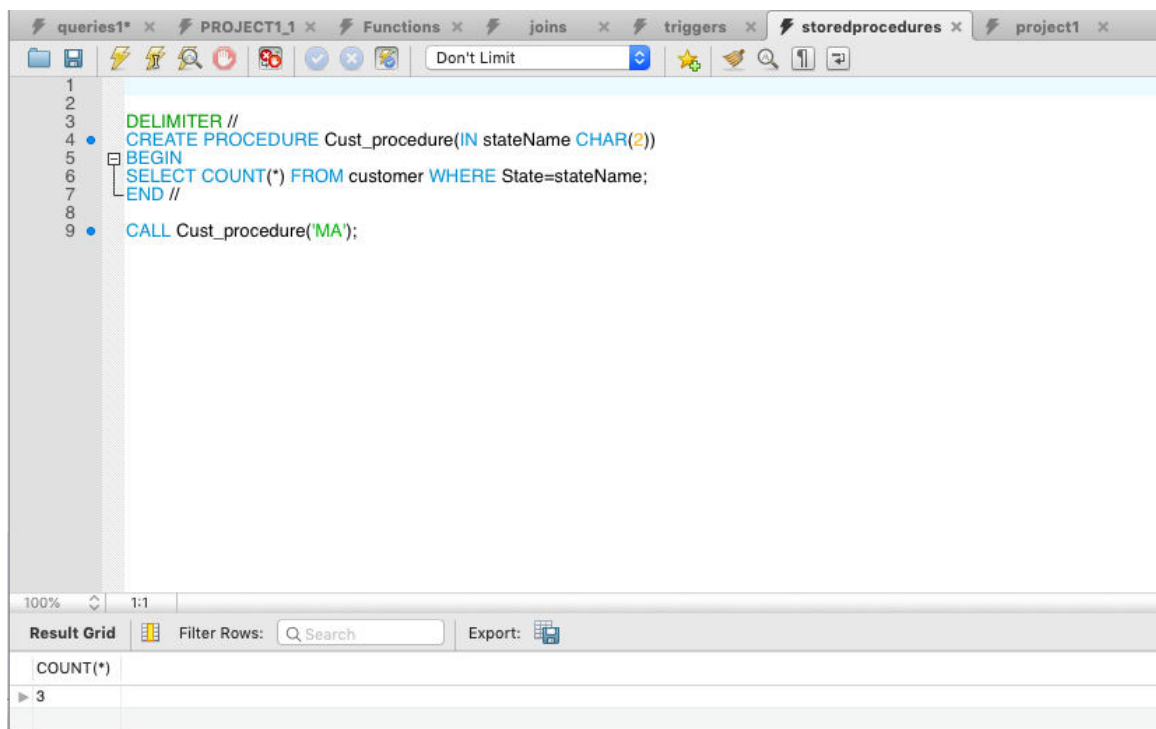
Emp_id	Emp_fname	Emp_lname	Designation	Salary	BankId	BranchId
▶ 4012	Lily	Clifford	Officer	75000	1001	5002

STORED PROCEDURES - Routines made of predefined SQL statements that take some sort of action on the data in the database

Syntax,

```
DELIMITER //
CREATE PROCEDURE Procedure_Name(<Parameter(s)>)
BEGIN
    <required SQL statement>
END //

CALL Procedure_Name(<Parameter(s)>);
```



queries1*PROJECT11Functionsjoinsstoredproceduresproject1Administration - Data Export

Don't Limit

1
2
3
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```
DELIMITER //
CREATE PROCEDURE Cust_procedure(IN stateName CHAR(2))
BEGIN
  SELECT COUNT(*) FROM customer WHERE State=stateName;
END //

CALL Cust_procedure('MA');

DELIMITER $$
CREATE PROCEDURE Get_Amt(IN LoanAmt INT)
BEGIN
  SELECT Loan_amount FROM Loans
  WHERE Loan_amount<=LoanAmt;
END $$

CALL Get_Amt(100000);
```

100%22:18

Result Grid

Filter Rows: Search

Export:

Loan_amount	
90000	

VIEWS – A Virtual table whose definition is stored in the database but does not actually contain data

Syntax,

```
CREATE VIEW View_Name AS  
<SQL statement>
```

```
SELECT * FROM View_Name;
```

The screenshot shows a database management tool interface with multiple tabs. The active tab is 'view*', which displays the following SQL code:

```
1 CREATE VIEW Customer_Locker_View AS  
2 SELECT I.Locker_id,I.Locker_date,I.Locker_intime,I.Locker_outtime  
3 FROM Locker_facility I  
4 JOIN Customer c  
5 ON I.Custom_id=c.Cust_id;  
6  
7  
8 SELECT * FROM Customer_Locker_View;  
9
```

Below the code editor, the 'Result Grid' is visible, showing the output of the query. The grid has four columns: Locker_id, Locker_date, Locker_intime, and Locker_outtime. The data is as follows:

Locker_id	Locker_date	Locker_intime	Locker_outtime
101	2018-01-25	11:00:00	11:20:00
202	2018-09-17	09:25:00	10:00:00
303	2018-08-04	18:25:08	19:15:09
404	2018-02-21	22:55:00	23:00:00
505	2018-07-26	20:45:01	21:45:01

The interface also includes a 'Filter Rows' search bar, an 'Export' button, and a 'Read Only' status indicator at the bottom right.

INDEX - Indexes maintain a sorting order on a column or set of columns in a table

Syntax,

```
CREATE INDEX Index_Name  
ON Table_Name;
```

The screenshot displays a database management interface with two main panels. The top panel shows a SQL query editor with the following code:

```
1  
2  
3 CREATE INDEX Frauddetectiongroup  
4 ON Fraud_Detection(F_type);
```

The bottom panel shows the 'Fraud_Detection' table configuration. The 'Indexes' tab is selected, displaying a list of indexes:

Index	Type
PRIMARY	PRIMARY
customeridfk_idx	INDEX
Frauddetectiong...	INDEX
<click to edit>	

The 'Frauddetectiong...' index is selected, and its details are shown in the 'Index details 'Frauddetectiongroup'' panel:

Index Columns	#	Order	Length
<input type="checkbox"/> F_id		ASC	
<input checked="" type="checkbox"/> F_type	1	ASC	
<input type="checkbox"/> customerid		ASC	

On the right side of the index details panel, there are additional configuration options: Storage Type, Key Block Size, Parser, Visibility, and Comments.

JOINS – The 4 types are: Full Join, Inner Join, Left Join, Right Join

Syntax,

```
SELECT a.col_name , b.col_name
FROM Table a
JOIN/INNER JOIN/LEFT JOIN/RIGHT JOIN Table b
ON a.col_name1=b.col_name1;
```

The screenshot shows a database query editor with a query window and a results grid. The query is an inner join between a customer table and an account table. The results grid displays 7 rows of data with columns for customer and account information.

Query:

```
SELECT c.Cust_Id,c.Cust_Name,c.Cust_Iname,c.EmailId,c.PhoneNo,c.Street_address,c.City,c.State,c.ZipCode,
c.Account_Type_Id,a.Account_Balance
FROM customer c JOIN Account_Balance a
ON c.Account_No=a.AccountNo_Id;
```

Results:

Cust_Id	Cust_fname	Cust_Iname	EmailId	PhoneNo	Street_address	City	State	ZipCode	Account_Type_Id	Account_Balance
2001	John	Christ	jc@gmail.com	4567891234	Camden st	Austin	TX	74321	9001045	60000
2002	Ruby	Dacruz	rd@gmail.com	8571002001	Northampton st	Boston	MA	2116	9001046	51234
2003	Jane	Brown	jbr@gmail.com	8264912000	Mission st	Quincy	MA	2118	9001047	90000
2004	Micky	Williams	mickw@yahoo.com	4691239087	Allston st	Cambridge	MA	2125	9001046	5000
2005	Nick	Stans	stansnick@gmail.com	8965432169	Brighton st	San Francisco	CA	98712	9001045	76391
2006	Dan	Christ	chdan@gmail.com	9876543211	Kellys st	Detroit	MI	56710	9001045	600
2007	Jacob	Abraham	abraham1@yahoo.com	4488771234	Leon st	Manhattan	NY	89567	9001047	30001

APPENDIX:

```
-- MySQL dump 10.13 Distrib 8.0.12, for macos10.13 (x86_64)
--
-- Host: localhost Database: dbank
--
-----
-- Server version      8.0.12

/*!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 */;
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 `Account_Balance`
--

DROP TABLE IF EXISTS `Account_Balance`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `Account_Balance` (
  `AccountNo_id` int(11) NOT NULL,
  `Account_Balance` int(11) NOT NULL,
  PRIMARY KEY (`AccountNo_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `Account_Balance`
--

LOCK TABLES `Account_Balance` WRITE;
/*!40000 ALTER TABLE `Account_Balance` DISABLE KEYS */;
```

```

INSERT          INTO          `Account_Balance`          VALUES
(7001,60000),(7002,51234),(7003,90000),(7004,5000),(7005,76391),(7006,600),(7007,30001),(7
008,90001),(7009,56456);
/*!40000 ALTER TABLE `Account_Balance` ENABLE KEYS */;
UNLOCK TABLES;
--
-- WARNING: old server version. The following dump may be incomplete.
--
DELIMITER ;;
/*!50003          SET          SESSION
SQL_MODE="ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_D
ATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION" */;;
/*!50003 CREATE */ /*!50017 DEFINER=`root`@`localhost` */ /*!50003 TRIGGER `sum_amt`
BEFORE INSERT ON `Account_Balance` FOR EACH ROW BEGIN
SET @amtsum= @amtsum+NEW.Account_Balance;
END */;;
DELIMITER ;
--
-- WARNING: old server version. The following dump may be incomplete.
--
DELIMITER ;;
/*!50003          SET          SESSION
SQL_MODE="ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_D
ATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION" */;;
/*!50003 CREATE */ /*!50017 DEFINER=`root`@`localhost` */ /*!50003 TRIGGER `sum_amt1`
BEFORE INSERT ON `Account_Balance` FOR EACH ROW BEGIN
SET @amtsum= @amtsum+NEW.Account_Balance;
END */;;
DELIMITER ;
/*!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 2018-12-13 4:53:33

```

```

-- MySQL dump 10.13  Distrib 8.0.12, for macos10.13 (x86_64)
--
-- Host: localhost  Database: dbank
-----
-- Server version      8.0.12

/*!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 */;
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 `Accounts`
--

DROP TABLE IF EXISTS `Accounts`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `Accounts` (
  `Accounttype_id` int(11) NOT NULL,
  `Account_type` varchar(200) NOT NULL,
  `Min_Balance` int(11) NOT NULL,
  PRIMARY KEY (`Accounttype_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `Accounts`
--

LOCK TABLES `Accounts` WRITE;
/*!40000 ALTER TABLE `Accounts` DISABLE KEYS */;

```

```
INSERT                                INTO                                `Accounts`                                VALUES
(9001045,'Savings',5000),(9001046,'Checking',10000),(9001047,'Fixed',15000);
/*!40000 ALTER TABLE `Accounts` ENABLE KEYS */;
UNLOCK TABLES;
/*!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 2018-12-13  4:53:34
```

```

-- MySQL dump 10.13 Distrib 8.0.12, for macos10.13 (x86_64)
--
-- Host: localhost Database: dbank
--
-- Server version      8.0.12

/*!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 */;
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 `Bank_Branch`
--

DROP TABLE IF EXISTS `Bank_Branch`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `Bank_Branch` (
  `B_id` int(11) NOT NULL,
  `B_name` varchar(100) NOT NULL,
  `Location` varchar(100) NOT NULL,
  PRIMARY KEY (`B_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `Bank_Branch`
--

LOCK TABLES `Bank_Branch` WRITE;
/*!40000 ALTER TABLE `Bank_Branch` DISABLE KEYS */;
INSERT INTO `Bank_Branch` VALUES
(5001,'Main','Boston'),(5002,'Suburb','Boston'),(5003,'County','Boston');
/*!40000 ALTER TABLE `Bank_Branch` ENABLE KEYS */;

```

UNLOCK TABLES;

/*!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 2018-12-13 4:53:33

```

-- MySQL dump 10.13 Distrib 8.0.12, for macos10.13 (x86_64)
--
-- Host: localhost Database: dbank
--
-- Server version 8.0.12

/*!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 */;
SET NAMES utf8 ;
/*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
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/*!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 `bank`
--

DROP TABLE IF EXISTS `bank`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `bank` (
  `Bank_id` int(11) NOT NULL,
  `Bank_name` varchar(200) NOT NULL,
  `Bank_location` varchar(200) NOT NULL,
  `No_of_employees` int(11) NOT NULL,
  PRIMARY KEY (`Bank_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `bank`
--

LOCK TABLES `bank` WRITE;
/*!40000 ALTER TABLE `bank` DISABLE KEYS */;
INSERT INTO `bank` VALUES (1001,'Boston Bank','Boston',100);
/*!40000 ALTER TABLE `bank` ENABLE KEYS */;
UNLOCK TABLES;

```

```

/*!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 2018-12-13  4:53:34


---


-- MySQL dump 10.13  Distrib 8.0.12, for macos10.13 (x86_64)
--
-- Host: localhost  Database: dbank
--
-- Server version      8.0.12

/*!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 */;
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 `customer`
--

DROP TABLE IF EXISTS `customer`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `customer` (
  `Cust_id` int(11) NOT NULL,
  `Cust_fname` varchar(200) NOT NULL,
  `Cust_lname` varchar(200) NOT NULL,
  `Emailid` varchar(200) NOT NULL,
  `PhoneNo` varchar(200) DEFAULT NULL,
  `Street_address` varchar(200) NOT NULL,

```

```

`City` varchar(200) NOT NULL,
`State` char(2) NOT NULL,
`Zipcode` int(11) NOT NULL,
`Account_type_id` int(11) NOT NULL,
`Account_No` int(11) NOT NULL,
PRIMARY KEY (`Cust_id`),
KEY `AccountNoFK_idx` (`Account_type_id`),
CONSTRAINT `AccountNoFK` FOREIGN KEY (`Account_type_id`) REFERENCES `accounts`
(`Accounttype_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

```

```

--
-- Dumping data for table `customer`
--

```

```

LOCK TABLES `customer` WRITE;
/*!40000 ALTER TABLE `customer` DISABLE KEYS */;
INSERT INTO `customer` VALUES (2001,'John','Christ','jc@gmail.com','4567891234','Camden
st','Austin','TX',74321,9001045,7001),(2002,'Ruby','Dcruz','rd@gmail.com','8571002001','North
ampton
st','Boston','MA',2116,9001046,7002),(2003,'Jane','Brown','jbr@gmail.com','8264912000','Missi
on
st','Quincy','MA',2118,9001047,7003),(2004,'Micky','Williams','mickw@yahoo.com','469123908
7','Allston
st','Cambridge','MA',2125,9001046,7004),(2005,'Nick','Stans','stansnick@gmail.com','89654321
69','Brighton
st','San
Francisco','CA',98712,9001045,7005),(2006,'Dan','Christ','chdan@gmail.com','9876543211','Kell
ys
st','Detroit','MI',56710,9001045,7006),(2007,'Jacob','Abraham','abraham1@yahoo.com','44887
71234','Leon st','Manhattan','NY',89567,9001047,7007);
/*!40000 ALTER TABLE `customer` ENABLE KEYS */;
UNLOCK TABLES;
/*!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 2018-12-13 4:53:33

```

```

-- MySQL dump 10.13 Distrib 8.0.12, for macos10.13 (x86_64)
--
-- Host: localhost Database: dbank
-- -----
-- Server version      8.0.12

/*!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 */;
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 `employee_backup`
--

DROP TABLE IF EXISTS `employee_backup`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `employee_backup` (
  `Emp_id` int(11) NOT NULL,
  `Emp_fname` varchar(200) NOT NULL,
  `Emp_lname` varchar(200) NOT NULL,
  `Designation` varchar(50) NOT NULL,
  `Salary` int(11) DEFAULT NULL,
  `BankId` int(11) DEFAULT NULL,
  `BranchId` int(11) DEFAULT NULL,
  PRIMARY KEY (`Emp_id`),
  KEY `bankid_fk_idx` (`BankId`),
  KEY `branchid_fk_idx` (`BranchId`),
  CONSTRAINT `bankid_fk` FOREIGN KEY (`BankId`) REFERENCES `bank` (`bank_id`),
  CONSTRAINT `branchid_fk` FOREIGN KEY (`BranchId`) REFERENCES `bank_branch` (`b_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

```

```
--
-- Dumping data for table `employee_backup`
--

LOCK TABLES `employee_backup` WRITE;
/*!40000 ALTER TABLE `employee_backup` DISABLE KEYS */;
INSERT INTO `employee_backup` VALUES (4012,'Lily','Clifford','Officer',50000,1001,5002);
/*!40000 ALTER TABLE `employee_backup` ENABLE KEYS */;
UNLOCK TABLES;
/*!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 2018-12-13  4:53:33
```

```

-- MySQL dump 10.13 Distrib 8.0.12, for macos10.13 (x86_64)
--
-- Host: localhost Database: dbank
--
-- Server version 8.0.12

/*!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 */;
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 `employeee`
--

DROP TABLE IF EXISTS `employeee`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `employeee` (
  `Emp_id` int(11) NOT NULL,
  `Emp_fname` varchar(200) NOT NULL,
  `Emp_lname` varchar(200) NOT NULL,
  `Designation` varchar(50) NOT NULL,
  `Salary` int(11) NOT NULL,
  `BankId` int(11) NOT NULL,
  `BranchId` int(11) NOT NULL,
  PRIMARY KEY (`Emp_id`),
  KEY `bnkfk_idx` (`BankId`),
  KEY `brnchfk_idx` (`BranchId`),
  CONSTRAINT `bnkfk` FOREIGN KEY (`BankId`) REFERENCES `bank` (`bank_id`),
  CONSTRAINT `brnchfk` FOREIGN KEY (`BranchId`) REFERENCES `bank_branch` (`b_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `employeee`

```

--

```
LOCK TABLES `employeee` WRITE;
/*!40000 ALTER TABLE `employeee` DISABLE KEYS */;
INSERT INTO `employeee` VALUES
(4001,'Mia','Adley','Manager',75000,1001,5003),(4002,'Sam','Kensley','Manager',75000,1001,5001),(4003,'Willy','Lincoln','Manager',75000,1001,5002),(4004,'Jude','Barney','Clerk',35000,1001,5002),(4005,'April','Dalton','Clerk',35000,1001,5003),(4006,'Casandra','Garfield','Clerk',35000,1001,5001),(4007,'Robin','Nash','Assistant',30000,1001,5001),(4008,'Fatima','Ramsay','Assistant',30000,1001,5002),(4009,'George','Oak','Officer',50000,1001,5003),(4010,'Catherine','Hartford','Assistant',30000,1001,5003),(4011,'Marina','Presley','Officer',50000,1001,5001);
/*!40000 ALTER TABLE `employeee` ENABLE KEYS */;
UNLOCK TABLES;
/*!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 2018-12-13 4:53:33

```

-- MySQL dump 10.13 Distrib 8.0.12, for macos10.13 (x86_64)
--
-- Host: localhost Database: dbank
-----
-- Server version      8.0.12

/*!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 */;
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 `Fraud_Detection`
--

DROP TABLE IF EXISTS `Fraud_Detection`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `Fraud_Detection` (
  `F_id` int(11) NOT NULL,
  `F_type` varchar(10) NOT NULL,
  `customerid` varchar(45) DEFAULT NULL,
  PRIMARY KEY (`F_id`),
  KEY `customeridfk_idx` (`customerid`),
  KEY `Frauddetectiongroup` (`F_type`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `Fraud_Detection`
--

LOCK TABLES `Fraud_Detection` WRITE;
/*!40000 ALTER TABLE `Fraud_Detection` DISABLE KEYS */;
INSERT INTO `Fraud_Detection` VALUES
(111,'Credit','2004'),(112,'Debit','2001'),(113,'Credit','2006');

```

```
/*!40000 ALTER TABLE `Fraud_Detection` ENABLE KEYS */;  
UNLOCK TABLES;  
/*!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 2018-12-13 4:53:34
```

```

-- MySQL dump 10.13 Distrib 8.0.12, for macos10.13 (x86_64)
--
-- Host: localhost Database: dbank
-----
-- Server version      8.0.12

/*!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 */;
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 `Loans`
--

DROP TABLE IF EXISTS `Loans`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `Loans` (
  `Loan_id` int(11) NOT NULL,
  `Loan_type` varchar(200) NOT NULL,
  `Loan_amount` int(11) NOT NULL,
  `custom_id` int(11) NOT NULL,
  PRIMARY KEY (`Loan_id`),
  KEY `customidfk_idx` (`custom_id`),
  CONSTRAINT `customidfk` FOREIGN KEY (`custom_id`) REFERENCES `customer` (`cust_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `Loans`
--

LOCK TABLES `Loans` WRITE;
/*!40000 ALTER TABLE `Loans` DISABLE KEYS */;

```

```

INSERT INTO `Loans` VALUES (9010,'Car Loan',90000,2003),(9020,'Housing
Loan',200000,2007),(9030,'Housing Loan',600500,2001),(9040,'Educational
Loan',700990,2003),(9050,'Educational Loan',804505,2006);
/*!40000 ALTER TABLE `Loans` ENABLE KEYS */;
UNLOCK TABLES;
--
-- WARNING: old server version. The following dump may be incomplete.
--
DELIMITER ;;
/*!50003 SET SESSION
SQL_MODE="ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_D
ATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION" */;;
/*!50003 CREATE */ /*!50017 DEFINER=`root`@`localhost` */ /*!50003 TRIGGER
`update_loan_amount` AFTER UPDATE ON `Loans` FOR EACH ROW BEGIN
INSERT INTO Loans VALUES (9060,'Car Loan','P',NEW.Loan_amount,2003);
END */;;
DELIMITER ;
--
-- WARNING: old server version. The following dump may be incomplete.
--
DELIMITER ;;
/*!50003 SET SESSION
SQL_MODE="ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_D
ATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION" */;;
/*!50003 CREATE */ /*!50017 DEFINER=`root`@`localhost` */ /*!50003 TRIGGER
`update_loan_amounts` AFTER UPDATE ON `Loans` FOR EACH ROW BEGIN
INSERT INTO Loans VALUES (9060,'Car Loan',NEW.Loan_amount,2003);
END */;;
DELIMITER ;
--
-- WARNING: old server version. The following dump may be incomplete.
--
DELIMITER ;;
/*!50003 SET SESSION
SQL_MODE="ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_D
ATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION" */;;
/*!50003 CREATE */ /*!50017 DEFINER=`root`@`localhost` */ /*!50003 TRIGGER
`Loan_amount_update` AFTER UPDATE ON `Loans` FOR EACH ROW BEGIN
INSERT INTO Loan_backup
(LoanID,LoanType, oldAmt, newAmt,custid)
VALUES (OLD.Loan_id, OLD.Loan_type,
OLD.Loan_amount,NEW.Loan_amount,2003);
END */;;
DELIMITER ;

```

```

--
-- WARNING: old server version. The following dump may be incomplete.
--
DELIMITER ;;
/*!50003 SET SESSION
SQL_MODE="ONLY_FULL_GROUP_BY,STRICT_TRANS_TABLES,NO_ZERO_IN_DATE,NO_ZERO_D
ATE,ERROR_FOR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION" */;;
/*!50003 CREATE */ /*!50017 DEFINER=`root`@`localhost` */ /*!50003 TRIGGER
`LoanAmount_update` AFTER UPDATE ON `Loans` FOR EACH ROW BEGIN
    UPDATE Loan_backups
    SET Loans.Loan_amount=Loans_backups.LoanAmt
    WHERE Loans.Loan_id=Loans_backups.LoanID;
END */;;
DELIMITER ;
/*!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 2018-12-13 4:53:34

```

```

-- MySQL dump 10.13 Distrib 8.0.12, for macos10.13 (x86_64)
--
-- Host: localhost Database: dbank
--
-- Server version 8.0.12

/*!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 */;
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 `Locker_facility`
--

DROP TABLE IF EXISTS `Locker_facility`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `Locker_facility` (
  `Locker_id` int(11) NOT NULL,
  `Locker_date` date NOT NULL,
  `Locker_intime` time NOT NULL,
  `Locker_outtime` time NOT NULL,
  `Custom_id` int(11) NOT NULL,
  PRIMARY KEY (`Locker_id`),
  KEY `cusidFK_idx` (`Custom_id`),
  CONSTRAINT `cusidFK` FOREIGN KEY (`Custom_id`) REFERENCES `customer` (`cust_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `Locker_facility`
--

LOCK TABLES `Locker_facility` WRITE;
/*!40000 ALTER TABLE `Locker_facility` DISABLE KEYS */;

```

```
INSERT INTO `Locker_facility` VALUES (101,'2018-01-25','11:00:00','11:20:00',2002),(202,'2018-09-17','09:25:00','10:00:00',2004),(303,'2018-08-04','18:25:08','19:15:09',2007),(404,'2018-02-21','22:55:00','23:00:00',2005),(505,'2018-07-26','20:45:01','21:45:01',2006);
/*!40000 ALTER TABLE `Locker_facility` ENABLE KEYS */;
UNLOCK TABLES;
/*!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 2018-12-13 4:53:33
```

```

-- MySQL dump 10.13 Distrib 8.0.12, for macos10.13 (x86_64)
--
-- Host: localhost Database: dbank
-----
-- Server version      8.0.12

/*!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 */;
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 */;

--
-- Dumping events for database 'dbank'
--

--
-- Dumping routines for database 'dbank'
--
/*!50003 DROP PROCEDURE IF EXISTS `Cust_procedure` */;
/*!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_0900_ai_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_F
OR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */;
DELIMITER ;;
CREATE DEFINER='root'@'localhost' PROCEDURE `Cust_procedure`(IN stateName
CHAR(2))
BEGIN
SELECT COUNT(*) FROM customer WHERE State=stateName;
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 `Get_Amt` */;
/*!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_0900_ai_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_F
OR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */ ;
DELIMITER ;;
CREATE DEFINER=`root`@`localhost` PROCEDURE `Get_Amt`(IN LoanAmt INT)
BEGIN
    SELECT Loan_amount FROM Loans
    WHERE Loan_amount<=LoanAmt;
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 `sal` */;
/*!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_0900_ai_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_F
OR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */ ;
DELIMITER ;;
CREATE DEFINER=`root`@`localhost` PROCEDURE `sal`(IN low INT,IN midm INT,IN high
INT)
BEGIN
SELECT COUNT(*) FROM employeee WHERE salary <low;
SELECT COUNT(*) FROM employeee WHERE salary <midm;
SELECT COUNT(*) FROM employeee WHERE salary <high;

```

```

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 `salary` */;
/*!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_0900_ai_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_F
OR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */ ;
DELIMITER ;;
CREATE DEFINER=`root`@`localhost` PROCEDURE `salary`(IN low INT,IN midm INT,IN
high INT)
BEGIN
SELECT COUNT(*) AS 'low_sal' FROM employeee WHERE salary <low;
SELECT COUNT(*) AS 'mid_sal' FROM employeee WHERE salary <midm;
SELECT COUNT(*) AS 'high_sal 'FROM employeee WHERE salary <high;
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 `salary_range` */;
/*!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_0900_ai_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_F
OR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */ ;
DELIMITER ;;
CREATE DEFINER=`root`@`localhost` PROCEDURE `salary_range`(OUT low INT,OUT
midm INT,OUT high INT)

```

```

BEGIN
SELECT COUNT(*) INTO low FROM employee WHERE salary <40000;
SELECT COUNT(*) INTO midm FROM employee WHERE salary <60000;
SELECT COUNT(*) INTO high FROM employee WHERE salary <80000;
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 `salary_ranges` */;
/*!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_0900_ai_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_F
OR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */ ;
DELIMITER ;;
CREATE DEFINER=`root`@`localhost` PROCEDURE `salary_ranges`(OUT low INT,OUT
midm INT,OUT high INT)
BEGIN
SELECT COUNT(*) INTO low FROM employee WHERE salary <40000;
SELECT COUNT(*) INTO midm FROM employee WHERE salary <60000;
SELECT COUNT(*) INTO high FROM employee WHERE salary <80000;
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 2018-12-13 4:53:34

```

-- MySQL dump 10.13 Distrib 8.0.12, for macos10.13 (x86_64)
--
-- Host: localhost Database: dbank
-----
-- Server version      8.0.12

/*!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 */;
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 `transactions`
--

DROP TABLE IF EXISTS `transactions`;
/*!40101 SET @saved_cs_client = @@character_set_client */;
SET character_set_client = utf8mb4 ;
CREATE TABLE `transactions` (
  `T_id` int(11) NOT NULL,
  `T_type` varchar(200) NOT NULL,
  `T_amount` int(11) NOT NULL,
  `Brnch_id` int(11) NOT NULL,
  `Cus_id` int(11) NOT NULL,
  `Date_1` datetime NOT NULL,
  PRIMARY KEY (`T_id`),
  KEY `br_idFK_idx` (`Brnch_id`),
  KEY `cidFK_idx` (`Cus_id`),
  CONSTRAINT `br_idFK` FOREIGN KEY (`Brnch_id`) REFERENCES `bank_branch` (`b_id`),
  CONSTRAINT `cidFK` FOREIGN KEY (`Cus_id`) REFERENCES `customer` (`cust_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_0900_ai_ci;
/*!40101 SET character_set_client = @saved_cs_client */;

--
-- Dumping data for table `transactions`
--

```

```

LOCK TABLES `transactions` WRITE;
/*!40000 ALTER TABLE `transactions` DISABLE KEYS */;
INSERT INTO `transactions` VALUES (90501,'Cash Deposit',7500,5001,2002,'2018-03-25
00:00:00'),(90502,'Card Deposit',8850,5003,2001,'2018-06-13 00:00:00'),(90503,'Card
Withdrawal',300,5002,2002,'2018-07-27 00:00:00'),(90504,'Card
Withdrawal',1000,5002,2007,'2018-12-09 00:00:00'),(90505,'Cash
Deposit',9099,5001,2006,'2018-02-15 00:00:00'),(90506,'Cash
Withdrawal',4500,5001,2005,'2018-01-02 00:00:00'),(90507,'Cash Deposit
',20,5003,2003,'2018-10-16 00:00:00'),(90508,'Card Withdrawal',50,5003,2004,'2018-11-01
00:00:00'),(90509,'Cash Deposit',1300,5001,2004,'2018-12-12 20:24:11'),(90510,'Card
Deposit',5600,5002,2005,'2018-12-12 20:27:19');
/*!40000 ALTER TABLE `transactions` 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_0900_ai_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_F
OR_DIVISION_BY_ZERO,NO_ENGINE_SUBSTITUTION' */;
DELIMITER ;;
/*!50003 CREATE*/ /*!50017 DEFINER=`root`@`localhost`*/ /*!50003 TRIGGER
`date_while_transaction` BEFORE INSERT ON `transactions` FOR EACH ROW BEGIN
SET NEW.Date_1=NOW();
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 2018-12-13 4:53:33