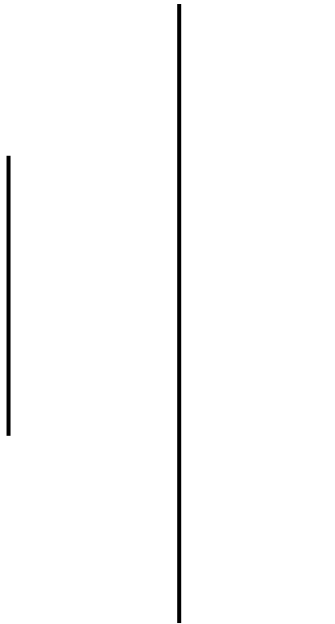


KATHMANDU UNIVERSITY

DHULIKHEL, KAVRE



Subject: COMP 232 Database Management Systems
Lab exercise no: 3

Submitted By:

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Roll no: 44

Group: CE 2nd year 2nd sem

Level: UNG

Submitted To:

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Date of Submission:

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Kathmandu University
Department of Computer Science and Engineering
COMP 232 - Lab Practice

Following database schema is defined for bank. Read it carefully and make a logical design.

Branch(branch_id , staff_id, branch_add, assets)
Customer(cust_id cust_name, cust_add, cust_phone, cust_dob)
Loan(loan_number, branch_id, amount)
Borrower(cust_id, loan_number)
Account(account_number, branch_id, balance)
Depositor(cust_id, account_number)
Staff(staff_id, staff_name, staff_add)

1. Create database of your name and create the tables as specified above.
2. Populate at least 10 data record in each tables. Your value should look like realistic.
3. Display all the data of each of the tables.
4. Add an attribute in the table staff as designation.
5. Display all the data of staff.
6. Update your table staff with at least 2 managers, 5 Assistant, 2 officers, 1 guard.
7. Display all the data of staff
8. Smith is no longer staff in the bank. Update the table/s accordingly.
9. Display all the data of staff and look whether smith is still there or not.
10. Find the account number who has the maximum balance.
11. Can you tell me how much balance will remain after I withdrew 5000 from my account number "005S".
12. Find the youngest customer in the bank.
13. List the ID of the branches which has issued the loan amount greater than 10000.
14. Can you list the number of the customer from address "Nayasadak".
15. Drop database your name.

ayush_lab3.sql

```
drop database ayush;
create database ayush;
use ayush;
create table Branch(branch_id char(50) primary key,staff_id char(50),branch_add char(50),assets int);
create table Customer(cust_id char(50) primary key,cust_name char(50),cust_add char(50),cust_phone
char(50), cust_dob date);
create table Loan(loan_number int primary key,branch_id char(50),amount int);
create table Borrower(cust_id char(50) primary key,loan_number int);
create table Account(account_number char(50) primary key,branch_id char(50),balance int);
create table Depositor(cust_id char(50) primary key,account_number int);
create table Staff(staff_id char(50) primary key,staff_name char(50),staff_add char(50));
insert into Branch values('BNPB001','BS001','Banepa',12000),
                        ('KTMA102','AKS002','Kathmandu',10000),
                        ('BKTA120','AN102','Bhaktapur',8000),
                        ('LLTR120','RM145','Lalitpur',13000),
                        ('KAVE180','ES182','Kavre',7000),
                        ('JNKA052','AS150','Janakpur',5000),
                        ('POKS130','SP102','Pokhara',4500),
                        ('MAKP050','PP089','Makwanpur',4000),
                        ('HTDP780','PK082','Hetauda',8000),
                        ('BTNA120','AA102','Biratnagar',7000);

insert into Customer values('BNPA001','Ayush Kumar Shah','Banepa',0614481509,'2054-02-06'),
                        ('KTMB102','Bibash Shrestha','Kathmandu',014663125,'2052-03-06'),
                        ('BKTR120','Rajan Mali','Bhaktapur',0614413225,'2054-02-29'),
                        ('LLTA120','Araju Nepal','Lalitpur',015541236,'2054-07-06'),
                        ('KAVS180','Sunil Prajapati','Kavre',0214412569,'2055-12-06'),
                        ('JNKE052','Eva Shrestha','Janakpur',0416631259,'2054-11-15'),
                        ('POKP130','Prakash Poudyal','Pokhara',0514456987,'2045-06-15'),
                        ('NAKP050','Prerana Khatiwoda','Nayasadak',0714123658,'2054-01-06'),
                        ('HTDR780','Rajan Kalwar','Hetauda',0146631259,'2052-03-06'),
                        ('BTNB120','Akash Amatya','Biratnagar',0146631259,'2052-03-06');

insert into Loan values(1001,'BNPB001',12000),
                        (1043,'KTMA102',10000),
                        (1020,'BKTA120',8000),
                        (1019,'LLTR120',13000),
                        (1044,'KAVE180',7000),
                        (1021,'JNKA052',5000),
```

```
(1065,'POKS130',4500),  
(1077,'MAKP050',4000),  
(1022,'HTDP780',8000),  
(1031,'BTNA120',7000);
```

```
insert into Borrower values('BNPA001',1005),  
('KTMB102',1004),  
('BKTR120',1048),  
('LLTA120',1098),  
('KAVS180',1047),  
('JNKE052',1052),  
('POKP130',1074),  
('MAKP050',1022),  
('HTDR780',1041),  
('BTNB120',1001);
```

```
insert into Account values('474D','BNPB001',12000),  
('833A','KTMA102',10000),  
('005S','BKTA120',8000),  
('177B','LLTR120',13000),  
('547A','KAVE180',7000),  
('855W','JNKA052',5000),  
('122D','POKS130',4500),  
('474E','MAKP050',4000),  
('885B','HTDP780',8000),  
('455C','BTNA120',7000);
```

```
insert into Depositor values('BNPA001',8323),  
('KTMB102',4746),  
('BKTR120',8854),  
('LLTA120',9985),  
('KAVS180',1123),  
('JNKE052',4112),  
('POKP130',7745),  
('MAKP050',6658),  
('HTDR780',6586),  
('BTNB120',8547);
```

```
insert into Staff values('BNPA001','Ayush Kumar Shah','Banepa'),
                        ('KTMB102','Bibash Shrestha','Kathmandu'),
                        ('BKTR120','Rajan Mali','Bhaktapur'),
                        ('LLTA120','Araju Nepal','Lalitpur'),
                        ('KAVS180','Smith','Kavre'),
                        ('JNKE052','Eva Shrestha','Janakpur'),
                        ('POKP130','Prakash Poudyal','Pokhara'),
                        ('MAKP050','Prerana Khatiwoda','Makwanpur'),
                        ('HTDR780','Rajan Kalwar','Hetauda'),
                        ('BTNB120','Akash Amatya','Biratnagar');
```

```
select * from Branch;
select * from Customer;
select * from Loan;
select * from Borrower;
select * from Account;
select * from Depositor;
select * from Staff;
```

```
alter table Staff add designation char(50);
```

```
select * from Staff;
```

```
UPDATE Staff SET designation='Manager' Where staff_add in ('Banepa','Kathmandu');
UPDATE Staff SET designation='Assistant' Where staff_add in ('Bhaktapur','Lalitpur',
'Kavre','Janakpur','Pokhara');
UPDATE Staff SET designation='Officer' Where staff_add in ('Makwanpur','Hetauda');
UPDATE Staff SET designation='Guard' Where staff_add in ('Biratnagar');
```

```
select * from Staff;
```

```
delete from Staff where staff_name = 'Smith';
```

```
select * from Staff;
```

```
select account_number from account where balance = (select MAX(balance) from account);
```

```
update Account set balance=balance-5000 where account_number='005S';
```

```
select balance from Account where account_number='005S';
```

```
select * from Customer where cust_dob=(select max(cust_dob) from Customer);
```

```
select branch_id from Loan where amount>10000;
```

```
select count(cust_name) from Customer where cust_add='Nayasadak';
```

```
drop database ayush;
```

MySQL console

Enter password:

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 5

Server version: 5.1.53-community-log MySQL Community Server (GPL)

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

```
mysql> source D:\KU_CE\4th sem\COMP232 DBMS\ayush_lab3.sql
```

Query OK, 0 rows affected (0.00 sec)

Query OK, 1 row affected (0.00 sec)

Database changed

Query OK, 0 rows affected (0.14 sec)

Query OK, 0 rows affected (0.09 sec)

Query OK, 0 rows affected (0.07 sec)

Query OK, 0 rows affected (0.04 sec)

Query OK, 0 rows affected (0.07 sec)

Query OK, 0 rows affected (0.09 sec)

Query OK, 0 rows affected (0.03 sec)

Query OK, 10 rows affected (0.00 sec)

Records: 10 Duplicates: 0 Warnings: 0

Query OK, 10 rows affected, 1 warning (0.00 sec)

Records: 10 Duplicates: 0 Warnings: 1

Query OK, 10 rows affected (0.00 sec)

Records: 10 Duplicates: 0 Warnings: 0

Query OK, 10 rows affected (0.00 sec)
Records: 10 Duplicates: 0 Warnings: 0

Query OK, 10 rows affected (0.00 sec)
Records: 10 Duplicates: 0 Warnings: 0

Query OK, 10 rows affected (0.00 sec)
Records: 10 Duplicates: 0 Warnings: 0

Query OK, 10 rows affected (0.00 sec)
Records: 10 Duplicates: 0 Warnings: 0

```
+-----+-----+-----+-----+
| branch_id | staff_id | branch_add | assets |
+-----+-----+-----+-----+
| BNPB001   | BS001   | Banepa    | 12000 |
| KTMA102   | AKS002   | Kathmandu | 10000 |
| BKTA120   | AN102   | Bhaktapur | 8000  |
| LLTR120   | RM145   | Lalitpur  | 13000 |
| KAVE180   | ES182   | Kavre     | 7000  |
| JNKA052   | AS150   | Janakpur  | 5000  |
| POKS130   | SP102   | Pokhara   | 4500  |
| MAKPO50   | PP089   | Makwanpur | 4000  |
| HTDP780   | PK082   | Hetauda   | 8000  |
| BTNA120   | AA102   | Biratnagar | 7000  |
+-----+-----+-----+-----+
```

10 rows in set (0.00 sec)

```
+-----+-----+-----+-----+-----+
| cust_id | cust_name      | cust_add | cust_phone | cust_dob |
+-----+-----+-----+-----+-----+
| BNPA001 | Ayush Kumar Shah | Banepa   | 614481509 | 2054-02-06 |
| KTMB102 | Bibash Shrestha  | Kathmandu | 14663125 | 2052-03-06 |
| BKTR120 | Rajan Mali       | Bhaktapur | 614413225 | 0000-00-00 |
| LLTA120 | Araju Nepal      | Lalitpur  | 15541236 | 2054-07-06 |
| KAVS180 | Sunil Prajapati  | Kavre    | 214412569 | 2055-12-06 |
| JNKE052 | Eva Shrestha     | Janakpur  | 416631259 | 2054-11-15 |
| POKP130 | Prakash Poudyal  | Pokhara   | 514456987 | 2045-06-15 |
| NAKP050 | Prerana Khatiwoda | Nayasadak | 714123658 | 2054-01-06 |
| HTDR780 | Rajan Kalwar     | Hetauda   | 146631259 | 2052-03-06 |
| BTNB120 | Akash Amatya     | Biratnagar | 146631259 | 2052-03-06 |
+-----+-----+-----+-----+-----+
```


10 rows in set (0.00 sec)

loan_number	branch_id	amount
1001	BNPB001	12000
1043	KTMA102	10000
1020	BKTA120	8000
1019	LLTR120	13000
1044	KAVE180	7000
1021	JNKA052	5000
1065	POKS130	4500
1077	MAKP050	4000
1022	HTDP780	8000
1031	BTNA120	7000

10 rows in set (0.00 sec)

cust_id	loan_number
BNPA001	1005
KTMB102	1004
BKTR120	1048
LLTA120	1098
KAVS180	1047
JNKE052	1052
POKP130	1074
MAKP050	1022
HTDR780	1041
BTNB120	1001

10 rows in set (0.00 sec)

```

+-----+-----+-----+
| account_number | branch_id | balance |
+-----+-----+-----+
| 474D          | BNPB001  | 12000 |
| 833A          | KTMA102  | 10000 |
| 005S          | BKTA120  | 8000  |
| 177B          | LLTR120  | 13000 |
| 547A          | KAVE180  | 7000  |
| 855W          | JNKA052  | 5000  |
| 122D          | POKS130  | 4500  |
| 474E          | MAKPO50  | 4000  |
| 885B          | HTDP780  | 8000  |
| 455C          | BTNA120  | 7000  |
+-----+-----+-----+

```

10 rows in set (0.00 sec)

```

+-----+-----+
| cust_id | account_number |
+-----+-----+
| BNPA001 |      8323 |
| KTMB102 |      4746 |
| BKTR120 |      8854 |
| LLTA120 |      9985 |
| KAVS180 |      1123 |
| JNKE052 |      4112 |
| POKP130 |      7745 |
| MAKPO50 |      6658 |
| HTDR780 |      6586 |
| BTNB120 |      8547 |
+-----+-----+

```

10 rows in set (0.00 sec)

```

+-----+-----+-----+
| staff_id | staff_name | staff_add |
+-----+-----+-----+
| BNPA001 | Ayush Kumar Shah | Banepa |
| KTMB102 | Bibash Shrestha | Kathmandu |
| BKTR120 | Rajan Mali | Bhaktapur |
| LLTA120 | Araju Nepal | Lalitpur |
| KAVS180 | Smith | Kavre |
| JNKE052 | Eva Shrestha | Janakpur |
| POKP130 | Prakash Poudyal | Pokhara |
| MAKP050 | Prerana Khatiwoda | Makwanpur |
| HTDR780 | Rajan Kalwar | Hetauda |
| BTNB120 | Akash Amatya | Biratnagar |
+-----+-----+-----+

```

10 rows in set (0.00 sec)

Query OK, 10 rows affected (0.07 sec)
Records: 10 Duplicates: 0 Warnings: 0

```

+-----+-----+-----+-----+
| staff_id | staff_name | staff_add | designation |
+-----+-----+-----+-----+
| BNPA001 | Ayush Kumar Shah | Banepa | NULL |
| KTMB102 | Bibash Shrestha | Kathmandu | NULL |
| BKTR120 | Rajan Mali | Bhaktapur | NULL |
| LLTA120 | Araju Nepal | Lalitpur | NULL |
| KAVS180 | Smith | Kavre | NULL |
| JNKE052 | Eva Shrestha | Janakpur | NULL |
| POKP130 | Prakash Poudyal | Pokhara | NULL |
| MAKP050 | Prerana Khatiwoda | Makwanpur | NULL |
| HTDR780 | Rajan Kalwar | Hetauda | NULL |
| BTNB120 | Akash Amatya | Biratnagar | NULL |
+-----+-----+-----+-----+

```

10 rows in set (0.00 sec)

Query OK, 2 rows affected (0.00 sec)
Rows matched: 2 Changed: 2 Warnings: 0

Query OK, 5 rows affected (0.00 sec)
Rows matched: 5 Changed: 5 Warnings: 0

Query OK, 2 rows affected (0.00 sec)
Rows matched: 2 Changed: 2 Warnings: 0

Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

```
+-----+-----+-----+-----+
| staff_id | staff_name | staff_add | designation |
+-----+-----+-----+-----+
| BNPA001 | Ayush Kumar Shah | Banepa | Manager |
| KTMB102 | Bibash Shrestha | Kathmandu | Manager |
| BKTR120 | Rajan Mali | Bhaktapur | Assistant |
| LLTA120 | Araju Nepal | Lalitpur | Assistant |
| KAVS180 | Smith | Kavre | Assistant |
| JNKE052 | Eva Shrestha | Janakpur | Assistant |
| POKP130 | Prakash Poudyal | Pokhara | Assistant |
| MAKP050 | Prerana Khatiwoda | Makwanpur | Officer |
| HTDR780 | Rajan Kalwar | Hetauda | Officer |
| BTNB120 | Akash Amatya | Biratnagar | Guard |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)
```

Query OK, 1 row affected (0.00 sec)

```
+-----+-----+-----+-----+
| staff_id | staff_name | staff_add | designation |
+-----+-----+-----+-----+
| BNPA001 | Ayush Kumar Shah | Banepa | Manager |
| KTMB102 | Bibash Shrestha | Kathmandu | Manager |
| BKTR120 | Rajan Mali | Bhaktapur | Assistant |
| LLTA120 | Araju Nepal | Lalitpur | Assistant |
| JNKE052 | Eva Shrestha | Janakpur | Assistant |
| POKP130 | Prakash Poudyal | Pokhara | Assistant |
| MAKP050 | Prerana Khatiwoda | Makwanpur | Officer |
| HTDR780 | Rajan Kalwar | Hetauda | Officer |
| BTNB120 | Akash Amatya | Biratnagar | Guard |
+-----+-----+-----+-----+
9 rows in set (0.00 sec)
```

```

+-----+
| account_number |
+-----+
| 177B          |
+-----+
1 row in set (0.00 sec)

```

Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

```

+-----+
| balance |
+-----+
| 3000    |
+-----+
1 row in set (0.00 sec)

```

```

+-----+-----+-----+-----+-----+
| cust_id | cust_name   | cust_add | cust_phone | cust_dob |
+-----+-----+-----+-----+-----+
| KAVS180 | Sunil Prajapati | Kavre   | 214412569 | 2055-12-06 |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

```

```

+-----+
| branch_id |
+-----+
| BNPB001   |
| LLTR120   |
+-----+
2 rows in set (0.00 sec)

```

```

+-----+
| count(cust_name) |
+-----+
| 1                 |
+-----+
1 row in set (0.00 sec)

```

Query OK, 7 rows affected (0.05 sec)