

DBMS ASSESSMENT

Bank Table Create and Desc Query

The screenshot shows the MySQL Workbench interface with the 'CREATE AND DESC BANK TA...' query editor. The query contains the following SQL statements:

```
1 use bank;
2
3 create table Banktable(Branch_id varchar(50),Branch_name varchar(50),Branch_city varchar(50));
4
5 DESC banktable;
6
```

The 'Result Grid' shows the table structure for 'Banktable':

Field	Type	Null	Key	Default	Extra
Branch_id	varchar(50)	YES			
Branch_name	varchar(50)	YES			
Branch_city	varchar(50)	YES			

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
38	13:59:11	DESC loanable	5 row(s) returned	0.016 sec / 0.000 sec
39	14:01:06	use bank	0 row(s) affected	0.000 sec
40	14:01:06	drop table banktable	0 row(s) affected	0.015 sec
41	14:01:22	use bank	0 row(s) affected	0.000 sec
42	14:01:22	create table Banktable(Branch_id varchar(50),Branch_name varchar(50),Branch_city varchar(50))	0 row(s) affected	0.032 sec
43	14:01:22	DESC banktable	3 row(s) returned	0.015 sec / 0.000 sec

Loan Table Create and Desc Query

The screenshot shows the MySQL Workbench interface with the 'CREATE AND DESC LOANTAB...' query editor. The query contains the following SQL statements:

```
1 use bank;
2
3 create table loantable(loan_no varchar(50),branch_ID varchar(50),account_holder_ID varchar(50),loan_amount varchar(50),loan_type varchar(50));
4
5 DESC loantable;
6
```

The 'Result Grid' shows the table structure for 'loantable':

Field	Type	Null	Key	Default	Extra
loan_no	varchar(50)	YES			
branch_ID	varchar(50)	YES			
account_holder_ID	varchar(50)	YES			
loan_amount	varchar(50)	YES			
loan_type	varchar(50)	YES			

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
33	13:57:54	create table loantable(loan_no varchar(50),branch_ID varchar(50),account_holder_ID varchar(50),loan_amount varchar(50),loan_type varchar(50))	Error Code: 1050. Table 'loantable' already exists	0.000 sec
34	13:58:45	use bank	0 row(s) affected	0.000 sec
35	13:58:45	drop table loantable	0 row(s) affected	0.016 sec
36	13:59:11	use bank	0 row(s) affected	0.000 sec
37	13:59:11	create table loantable(loan_no varchar(50),branch_ID varchar(50),account_holder_ID varchar(50),loan_amount varchar(50),loan_type varchar(50))	0 row(s) affected	0.031 sec
38	13:59:11	DESC loantable	5 row(s) returned	0.016 sec / 0.000 sec

AccountHolder Table Create and Desc Query

The screenshot shows the MySQL Workbench interface with the 'CREATE AND DESC ACCOUNT...' query editor. The query contains the following SQL statements:

```
1 use bank;
2
3 create table AccountHolderTable(account_holder_id varchar(50),account_no int,account_holder_name varchar(50),city varchar(50),contact varchar(50),account_
4
5 Desc AccountHolderTable;
```

The 'Result Grid' tab is active, displaying the table structure for 'AccountHolderTable':

Field	Type	Null	Key	Default	Extra
account_holder_id	varchar(50)	YES			
account_no	int	YES			
account_holder_name	varchar(50)	YES			
city	varchar(50)	YES			
contact	varchar(50)	YES			
account_created_date	date	YES			
account_status	varchar(50)	YES			
account_type	varchar(50)	YES			
balance	varchar(50)	YES			

The 'Output' tab shows the execution results:

#	Time	Action	Message	Duration / Fetch
41	14:01:22	use bank	0 row(s) affected	0.000 sec
42	14:01:22	create table BankTable(Branch_id varchar(50),Branch_name varchar(50),Branch_city varchar(50))	0 row(s) affected	0.032 sec
43	14:01:22	DESC banktable	3 row(s) returned	0.015 sec / 0.000 sec
44	14:17:15	use bank	0 row(s) affected	0.000 sec
45	14:17:15	create table AccountHolderTable(account_holder_id varchar(50),account_no int,account_h...	0 row(s) affected	0.032 sec
46	14:17:15	Desc AccountHolderTable	9 row(s) returned	0.000 sec / 0.000 sec

Bank Table Insert Query

The screenshot shows the MySQL Workbench interface with the 'INSERT INTO BANKTABLE' query editor. The query contains the following SQL statements:

```
1 use bank;
2
3 insert into banktable values('IFDB 001','Ahmedabad City','Ahmedabad'),
4 ('IFDB 002','S G Highway','Ahmedabad'),
5 ('IFDB 003','Relief road','Ahmedabad'),
6 ('IFDB 004','Sabarmati','Ahmedabad'),
7 ('IFDB 005','Naroda','Ahmedabad'),
8 ('IFDB 010','Nanpura','Surat'),
9 ('IFDB 011','Athwa','Surat');
```

The 'Output' tab shows the execution results:

#	Time	Action	Message	Duration / Fetch
1	14:52:18	use bank	0 row(s) affected	0.000 sec
2	14:52:18	insert into banktable values(IFDB 001,Ahmedabad City,Ahmedabad), (IFDB 002,S G Highway,A...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to ...	0.000 sec
3	14:56:46	use bank	0 row(s) affected	0.000 sec
4	14:56:46	insert into banktable values(IFDB 001:'Ahmedabad City','Ahmedabad'), (IFDB 002:'S G Highw...	7 row(s) affected Records: 7 Duplicates: 0 Warnings: 0	0.031 sec

Bank Table Select Query

The screenshot shows the MySQL Workbench interface with a query window titled 'SHOW BANKTABLE'. The query is as follows:

```
1 use bank;
2
3 Select * from banktable;
4
5
```

The 'Result Grid' displays the following data:

Branch_id	Branch_name	Branch_city
IFDB 001	Ahmedabad City	Ahmedabad
IFDB 002	S G Highway	Ahmedabad
IFDB 003	Relief road	Ahmedabad
IFDB 004	Sabarmati	Ahmedabad
IFDB 005	Naroda	Ahmedabad
IFDB 010	Nanpura	Surat
IFDB 011	Athwa	Surat

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
1	14:52:18	use bank	0 row(s) affected	0.000 sec
2	14:52:18	insert into banktable values(IFDB 001,Ahmedabad City,Ahmedabad), (IFDB 002,S G Highway...	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds t...	0.000 sec
3	14:56:46	use bank	0 row(s) affected	0.000 sec
4	14:56:46	insert into banktable values(IFDB 001,'Ahmedabad City','Ahmedabad'), (IFDB 002,'S G Highw...	7 row(s) affected Records: 7 Duplicates: 0 Warnings: 0	0.031 sec
5	15:12:19	use bank	0 row(s) affected	0.000 sec
6	15:12:19	Select * from banktable LIMIT 0, 1000	7 row(s) returned	0.000 sec / 0.000 sec

Loan Table Insert Query

The screenshot shows the MySQL Workbench interface with a query window titled 'INSERT INTO LOANTABLE'. The query is as follows:

```
1 use bank;
2
3 insert into loantable values('Housing loan 001','IFDB 001','IFDB 4000200901','$7500000','Housing'),
4 ('Vehicle Loan 001','IFDB 002','IFDB 4000200390','$450000','Vehicle'),
5 ('Housing loan 002','IFDB 003','IFDB 5000200399','$10000000','Housing'),
6 ('Education loan 001','IFDB 004','IFDB 5000450002','$550000','Education'),
7 ('Vehicle Loan 002','IFDB 005','IFDB 1000009000','$700000','Vehicle'),
8 ('Housing loan 003','IFDB 010','IFDB 2200009220','$12500000','Housing'),
9 ('Vehicle loan 003','IFDB 011','IFDB 6790811100','$450000','Vehicle');
10
```

The 'Output' pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
13	15:37:38	use bank	0 row(s) affected	0.000 sec
14	15:37:38	delete from loantable	Error Code: 1175. You are using safe update mode and you tried to update a table without a ...	0.015 sec
15	15:38:07	use bank	0 row(s) affected	0.000 sec
16	15:38:07	delete from loantable	Error Code: 1175. You are using safe update mode and you tried to update a table without a ...	0.000 sec
17	15:40:26	use bank	0 row(s) affected	0.000 sec
18	15:40:26	insert into loantable values('Housing loan 001','IFDB 001','IFDB 4000200901','\$7500000','Ho...	7 row(s) affected Records: 7 Duplicates: 0 Warnings: 0	0.000 sec

Loan Table Select Query

The screenshot shows the MySQL Workbench interface with a query window titled "SHOW LOAN TABLE". The query contains two statements: `use bank;` and `select*from loantable;`. The "Result Grid" displays the data from the `loantable` table, showing columns: `loan_no`, `branch_ID`, `account_holder_ID`, `loan_amount`, and `loan_type`. The data includes various loan types such as Housing, Vehicle, Education, and Housing loan.

loan_no	branch_ID	account_holder_ID	loan_amount	loan_type
Housing loan 001	IFDB 001	IFDB 4000200901	\$7500000	Housing
Vehicle Loan 001	IFDB 002	IFDB 4000200390	\$4500000	Vehicle
Housing loan 002	IFDB 003	IFDB 5000200399	\$10000000	Housing
Education loan 001	IFDB 004	IFDB 5000450002	\$5500000	Education
vehicle Loan 002	IFDB 005	IFDB 1000009000	\$7000000	Vehicle
Housing loan 003	IFDB 010	IFDB 2200009220	\$12500000	Housing
vehicle loan 003	IFDB 011	IFDB 6790811100	\$4500000	Vehicle

The "Output" pane shows the execution results, including a message: "Error Code: 1175. You are using safe update mode and you tried to update a table without a ...".

Account Holder Table Insert Query

The screenshot shows the MySQL Workbench interface with a query window titled "INSERT INTO ACCOUNTHOLD.". The query contains two statements: `use bank;` and `insert into accountholdertable values('IFDB 4000200901','7890','Nirav Mehta','Ahmedabad','9879539082','2020-04-01','Active','Savings','$629640'), ('IFDB 4000200390','5674','Arpan Shah','Ahmedabad','6500089022','2022-05-01','Active','Savings','$2709600'), ('IFDB 5000200399','4823','J B Patel','Ahmedabad','8533448978','2021-08-01','Inactive','Savings','$770400'), ('IFDB 5000450002','2545','Vishal Makwana','Ahmedabad','9825290991','2019-09-10','Active','Savings','$567360'), ('IFDB 1000009000','1009','Jagdish Gajjar','Ahmedabad','7433229089','2021-01-01','Active','Current','$549120'), ('IFDB 2200009220','7256','Neel Mehta','Surat','9924477891','2022-02-09','Active','Current','$621360'), ('IFDB 6790811100','1036','Himal Shah','Surat','9902218902','2001-10-09','Inactive','Savings','$626400'));`

The "Output" pane shows the execution results, including a message: "Error Code: 1292. Incorrect date value: '01-04-2020' for column 'account_created_date' at row ...".

Account Holder Table Select Query

The screenshot shows MySQL Workbench with a query window titled 'SHOW ACCOUNTHOLDERTAB...'. The query is:

```
1 use BANK;
2
3 select * from accountholdertable;
```

The result grid displays the following data:

account_holder_id	account_no	account_holder_name	city	contact	account_created_date	account_status	account_type	balance
IFDB 4000200901	7890	Nirav Mehta	Ahmedabad	9879539082	2020-04-01	Active	Savings	\$629640
IFDB 4000200390	5674	Arpan Shah	Ahmedabad	6500089022	2022-05-01	Active	Savings	\$2709600
IFDB 5000200399	4823	J B Patel	Ahmedabad	8533448978	2021-08-01	Inactive	Savings	\$770400
IFDB 5000450002	2545	Vishal Makwana	Ahmedabad	9825290991	2019-09-10	Active	Savings	\$567360
IFDB 1000009000	1009	Jagdish Gajjar	Ahmedabad	7433229089	2021-01-01	Active	Current	\$549120
IFDB 2200009220	7256	Neel Mehta	Surat	9924477891	2022-02-09	Active	Current	\$621360
IFDB 6790811100	1036	Himal Shah	Surat	9902218902	2001-10-09	Inactive	Savings	\$626400

The bottom panel shows the 'Action Output' for the query, indicating that 7 rows were returned.

Ques 1: Consider an example where there's an account holder table where we are doing an intra bank transfer i.e. a person holding account A is trying to transfer \$100 to account B

The screenshot shows MySQL Workbench with a query window titled 'BANK TRANSACTION ASSESS...'. The query is:

```
1 use bank;
2
3
4 START TRANSACTION;
5
6 -- Step 1: Deduct the amount from the sender's account
7 UPDATE accountholdertable SET balance = '629640' - '100' WHERE account_no = '7890';
8
9 -- Step 2: Add the amount to the receiver's account
10 UPDATE accountholdertable SET balance = '2709600' + '100' WHERE account_no = '5674';
11
12 COMMIT;
```

The bottom panel shows the 'Action Output' for the transaction, indicating that the transaction was successful and 7 rows were returned.

After Transaction Query

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL script:

```
1 use BANK;  
2  
3 select * from accountholdertable;  
4
```

The result grid displays the data from the `accountholdertable`:

account_holder_id	account_no	account_holder_name	city	contact	account_created_date	account_status	account_type	balance
IFDB 4000200901	7890	Nirav Mehta	Ahmedabad	9879539082	2020-04-01	Active	Savings	629540
IFDB 4000200390	5674	Arpan Shah	Ahmedabad	6500089022	2022-05-01	Active	Savings	2709700
IFDB 5000200399	4823	J B Patel	Ahmedabad	8533448978	2021-08-01	Inactive	Savings	770400
IFDB 5000450002	2545	Vishal Makwana	Ahmedabad	9825290991	2019-09-10	Active	Savings	567360
IFDB 1000009000	1009	Jagdish Gajjar	Ahmedabad	7433229089	2021-01-01	Active	Current	549120
IFDB 2200009220	7256	Neel Mehta	Surat	9924477891	2022-02-09	Active	Current	621360
IFDB 6790811100	1036	Himal Shah	Surat	9902218902	2001-10-09	Inactive	Savings	626400

The output pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
25	20:09:11	START TRANSACTION	0 row(s) affected	0.016 sec
26	20:09:11	UPDATE accountholdertable SET balance = '629540' - '100' WHERE account_no = '7890'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.000 sec
27	20:09:11	UPDATE accountholdertable SET balance = '2709600' + '100' WHERE account_no = '5674'	1 row(s) affected Rows matched: 1 Changed: 1 Warnings: 0	0.000 sec
28	20:09:11	COMMIT	0 row(s) affected	0.000 sec
29	20:10:02	use BANK	0 row(s) affected	0.000 sec
30	20:10:02	select * from accountholdertable LIMIT 0, 1000	7 row(s) returned	0.000 sec / 0.000 sec

Ques 2:fetch the details of the account holder who are related from the same city

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL script:

```
1 use bank;  
2  
3 SELECT *  
4 FROM accountholdertable  
5 WHERE city = 'ahmedabad';
```

The result grid displays the data from the `accountholdertable`:

account_holder_id	account_no	account_holder_name	city	contact	account_created_date	account_status	account_type	balance
IFDB 4000200901	7890	Nirav Mehta	Ahmedabad	9879539082	2020-04-01	Active	Savings	629540
IFDB 4000200390	5674	Arpan Shah	Ahmedabad	6500089022	2022-05-01	Active	Savings	2709700
IFDB 5000200399	4823	J B Patel	Ahmedabad	8533448978	2021-08-01	Inactive	Savings	770400
IFDB 5000450002	2545	Vishal Makwana	Ahmedabad	9825290991	2019-09-10	Active	Savings	567360
IFDB 1000009000	1009	Jagdish Gajjar	Ahmedabad	7433229089	2021-01-01	Active	Current	549120

The output pane shows the execution log:

#	Time	Action	Message	Duration / Fetch
1	21:05:10	use bank	0 row(s) affected	0.000 sec
2	21:05:10	SELECT * FROM accountholdertable WHERE city = 'ahmedabad' LIMIT 0, 1000	Error Code: 1146. Table 'bank.accountholdertable' doesn't exist	0.000 sec
3	21:05:34	use bank	0 row(s) affected	0.000 sec
4	21:05:34	SELECT * FROM accountholdertable WHERE city = 'ahmedabad' LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec

Ques 3: Write a query to fetch account number and account holder name, whose accounts were created after 15th of any month

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 use bank;
2
3 SELECT account_no, account_holder_name
4 FROM accountholdertable
5 WHERE DAY(account_created_date) > 15;
```

The Results window displays the following data:

account_no	account_holder_name
7990	Nirav Mehta
5674	Arpan Shah
4823	J B Patel
1009	Jagdish Gajjar

The Output window shows the execution log with the following entries:

#	Time	Action	Message	Duration / Fetch
5	21:44:29	use bank	0 row(s) affected	0.000 sec
6	21:44:29	SELECT account_no, account_holder_name FROM accountholdertable WHERE DAY(account_created_date) > 15	4 row(s) returned	0.000 sec / 0.000 sec
7	21:44:49	use bank	0 row(s) affected	0.000 sec
8	21:44:49	SELECT account_no, account_holder_name FROM accountholdertable WHERE DAY(account_created_date) > 15	7 row(s) returned	0.015 sec / 0.000 sec
9	22:05:37	use bank	0 row(s) affected	0.000 sec
10	22:05:37	SELECT account_no, account_holder_name FROM accountholdertable WHERE DAY(account_created_date) > 15	4 row(s) returned	0.000 sec / 0.000 sec

Ques 4: Write a query to display the city name and count the branches in that city. Give the count of branches an alias name of Count_Branch.

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 use bank;
2
3 SELECT Branch_city, COUNT(*) AS Count_Branch
4 FROM banktable
5 GROUP BY Branch_city;
```

The Results window displays the following data:

Branch_city	Count_Branch
Ahmedabad	5
Surat	2

The Output window shows the execution log with the following entries:

#	Time	Action	Message	Duration / Fetch
9	22:05:37	use bank	0 row(s) affected	0.000 sec
10	22:05:37	SELECT account_no, account_holder_name FROM accountholdertable WHERE DAY(account_created_date) > 15	4 row(s) returned	0.000 sec / 0.000 sec
11	22:28:31	use bank	0 row(s) affected	0.000 sec
12	22:28:31	SELECT city, COUNT(*) AS Count_Branch FROM banktable GROUP BY city LIMIT 0, 1000	Error Code: 1054. Unknown column 'city' in 'field list'	0.015 sec
13	22:29:47	use bank	0 row(s) affected	0.000 sec
14	22:29:47	SELECT Branch_city, COUNT(*) AS Count_Branch FROM banktable GROUP BY Branch_city	2 row(s) returned	0.015 sec / 0.000 sec

Ques 5: Write a query to display the account holder's id, account holder's name, branch id, and loan amount for people who have taken loans. (NOTE : use sql join concept to solve the query)

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 use bank;
2
3
4 SELECT accountholdertable.account_holder_id,accountholdertable.account_holder_name,loantable.branch_id, loantable.loan_amount
5 FROM accountholdertable
6 JOIN loantable ON accountholdertable.account_holder_id= loantable.account_holder_id;
7
```

The Results tab displays the following data:

account_holder_id	account_holder_name	branch_id	loan_amount
IFDB 4000200901	Nirav Mehta	IFDB 001	\$7500000
IFDB 4000200390	Arpan Shah	IFDB 002	\$4500000
IFDB 5000200399	J B Patel	IFDB 003	\$10000000
IFDB 5000450002	Vishal Makwana	IFDB 004	\$5500000
IFDB 1000009000	Jagdish Gajjar	IFDB 005	\$7000000
IFDB 2200009220	Neel Mehta	IFDB 010	\$12500000
IFDB 6790811100	Himal Shah	IFDB 011	\$4500000

The Output tab shows the execution log:

#	Time	Action	Message	Duration / Fetch
8	12:59:46	use BANK	0 row(s) affected	0.000 sec
9	12:59:46	select * from accountholdertable LIMIT 0, 1000	7 row(s) returned	0.000 sec / 0.000 sec
10	13:00:33	use bank	0 row(s) affected	0.000 sec
11	13:00:33	SELECT accountholdertable.account_holder_id,accountholdertable account_holder_name,J...	Error Code: 1054. Unknown column 'accountholdertable account_holder_id' in 'field list'	0.000 sec
12	13:01:03	use bank	0 row(s) affected	0.000 sec
13	13:01:03	SELECT accountholdertable.account_holder_id,accountholdertable account_holder_name,J...	7 row(s) returned	0.000 sec / 0.000 sec