```
Maryams-MacBook-Pro:~ maryamtaherzadeh$ ssh 19529tm@npu1.npu.edu
Password:
Last login: Thu Sep 19 05:28:22 2019 from
c-107-3-142-7.hsd1.ca.comcast.net
[19529tm@npu1 ~]$ mysql -u CS457_19529-p
ERROR 1045 (28000): Access denied for user 'CS457_19529-p'@'localhost'
(using password: NO)
[19529tm@npu1 ~]$ mysql -u CS457_19529 -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 225
Server version: 10.4.7-MariaDB MariaDB Server

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

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

MariaDB [(none)]> use npudb1
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A


MariaDB [npudb1]> create table transaction
    -> (id integer primary key, type char(30), account_id integer,
amount float, date integer);
Query OK, 0 rows affected (0.229 sec)

MariaDB [npudb1]> insert into transaction values (978, 'DBT',
103,100.0,2004-01-22);
Query OK, 1 row affected (0.050 sec)

MariaDB [npudb1]> insert into transaction values (979,'CDT',
103,25.00,2004-02-05);
Query OK, 1 row affected (0.052 sec)

MariaDB [npudb1]> insert into transaction values (980,'DBT',
104,250.00,2004-03-09);
Query OK, 1 row affected (0.050 sec)

MariaDB [npudb1]> insert into transaction values (981,'DBT',
105,1000.00,2004-03-25);
Query OK, 1 row affected (0.069 sec)

MariaDB [npudb1]> INSERT INTO TRANSACTION VALUES (982,'DBT',
105,138.50,2004-04-02);
ERROR 1146 (42S02): Table 'npudb1.TRANSACTION' doesn't exist
MariaDB [npudb1]> INSERT INTO transaction VALUES (982,'DBT',
105,138.50,2004-04-02);
```

Query OK, 1 row affected (0.042 sec)

MariaDB [npudb1]> select*from transaction;
```
+-----+------+------------+--------+------+
| id  | type | account_id | amount | date |
+-----+------+------------+--------+------+
| 978 | DBT  |        103 |    100 | 1981 |
| 979 | CDT  |        103 |     25 | 1997 |
| 980 | DBT  |        104 |    250 | 1992 |
| 981 | DBT  |        105 |   1000 | 1976 |
| 982 | DBT  |        105 |  138.5 | 1998 |
+-----+------+------------+--------+------+
```
5 rows in set (0.001 sec)

MariaDB [npudb1]> select * from transaction where amount>25.80;
```
+-----+------+------------+--------+------+
| id  | type | account_id | amount | date |
+-----+------+------------+--------+------+
| 978 | DBT  |        103 |    100 | 1981 |
| 980 | DBT  |        104 |    250 | 1992 |
| 981 | DBT  |        105 |   1000 | 1976 |
| 982 | DBT  |        105 |  138.5 | 1998 |
+-----+------+------------+--------+------+
```
4 rows in set (0.001 sec)

MariaDB [npudb1]> select id,tyoe, account_id from transaction;
ERROR 1054 (42S22): Unknown column 'tyoe' in 'field list'
MariaDB [npudb1]> select id,type, account_id from transaction;
```
+-----+------+------------+
| id  | type | account_id |
+-----+------+------------+
| 978 | DBT  |        103 |
| 979 | CDT  |        103 |
| 980 | DBT  |        104 |
| 981 | DBT  |        105 |
| 982 | DBT  |        105 |
+-----+------+------------+
```
5 rows in set (0.000 sec)

MariaDB [npudb1]> select id, type, account_id, amount from transaction where date>1960;
```
+-----+------+------------+--------+
| id  | type | account_id | amount |
+-----+------+------------+--------+
| 978 | DBT  |        103 |    100 |
| 979 | CDT  |        103 |     25 |
| 980 | DBT  |        104 |    250 |
| 981 | DBT  |        105 |   1000 |
| 982 | DBT  |        105 |  138.5 |
```

```
+-----+------+------------+--------+
5 rows in set (0.000 sec)


ERROR 1050 (42S01): Table 'transaction1' already exists
MariaDB [npudb1]> select * from transaction1;
Empty set (0.001 sec)

MariaDB [npudb1]> insert into transaction1 values (546,
6000.00,70.00,3030.00);
Query OK, 1 row affected (0.034 sec)

MariaDB [npudb1]> insert into transaction2 values (670,
6700.00,10.00,3335);
Query OK, 1 row affected (0.045 sec)

MariaDB [npudb1]> insert into transaction1 values (678,
76700.00,150.00,3339);
Query OK, 1 row affected (0.058 sec)

MariaDB [npudb1]> select*from transaction1;
+-----+-----------+-----------+----------------+
| id  | max_amount | min_amount | average_amount |
+-----+-----------+-----------+----------------+
| 546 |      6000 |        70 |           3030 |
| 670 |      6700 |        10 |           3335 |
| 678 |     76700 |       150 |           3339 |
+-----+-----------+-----------+----------------+
3 rows in set (0.000 sec)

MariaDB [npudb1]> select*from transaction,transaction1 where
transaction.id=transaction1.id;
Empty set (0.000 sec)

MariaDB [npudb1]> insert into transaction1 values (978,
76700.00,150.00,3339);
Query OK, 1 row affected (0.052 sec)

MariaDB [npudb1]> insert into transaction1 values (979,
6000.00,70.00,3030.00);
Query OK, 1 row affected (0.040 sec)

MariaDB [npudb1]> insert into transaction1 values (980,
96000.00,70.00,45030.00);
Query OK, 1 row affected (0.041 sec)

MariaDB [npudb1]> select*from transaction,transaction1 where
transaction.id=tranMariaDB [npudb1]> select*from
transaction,transaction1 where transaction.id=tranMariaDB [npudb1]>
```

```
select*from transaction,transaction1 where
transaction.id=transaction1.id;
+-----+------+------------+--------+------+-----+------------+-----------+----------------+
| id  | type | account_id | amount | date | id  | max_amount | min_amount | average_amount |
+-----+------+------------+--------+------+-----+------------+-----------+----------------+
| 978 | DBT  |        103 |    100 | 1981 | 978 |      76700 |       150 |           3339 |
| 979 | CDT  |        103 |     25 | 1997 | 979 |       6000 |        70 |           3030 |
| 980 | DBT  |        104 |    250 | 1992 | 980 |      96000 |        70 |          45030 |
+-----+------+------------+--------+------+-----+------------+-----------+----------------+
3 rows in set (0.001 sec)

MariaDB [npudb1]> select id,type, amount,date from transaction order
by amount,account_id desc;
+-----+------+--------+------+
| id  | type | amount | date |
+-----+------+--------+------+
| 979 | CDT  |     25 | 1997 |
| 978 | DBT  |    100 | 1981 |
| 982 | DBT  |  138.5 | 1998 |
| 980 | DBT  |    250 | 1992 |
| 981 | DBT  |   1000 | 1976 |
+-----+------+--------+------+

MariaDB [npudb1]> select id,type,account_id from transaction order by
amount and date desc;
+-----+------+------------+
| id  | type | account_id |
+-----+------+------------+
| 978 | DBT  |        103 |
| 979 | CDT  |        103 |
| 980 | DBT  |        104 |
| 981 | DBT  |        105 |
| 982 | DBT  |        105 |
+-----+------+------------+
5 rows in set (0.001 sec)

MariaDB [npudb1]> select id,type,account_id, amount, date from
transaction order by amount and date desc;
+-----+------+------------+--------+------+
| id  | type | account_id | amount | date |
+-----+------+------------+--------+------+
| 978 | DBT  |        103 |    100 | 1981 |
```

```
| 979 | CDT  |            103 |       25 | 1997 |
| 980 | DBT  |            104 |      250 | 1992 |
| 981 | DBT  |            105 |     1000 | 1976 |
| 982 | DBT  |            105 |    138.5 | 1998 |
+-----+------+----------------+----------+------+
5 rows in set (0.001 sec)

MariaDB [npudb1]> select id, max_amount,min_amount, average_amount
from transaction1 where id=978 and average_amount<=3000 order by
min_amount;
Empty set (0.000 sec)

MariaDB [npudb1]> select id, max_amount,min_amount, average_amount
from transaction1 where id=978 and average_amount>3000 order by
min_amount;
+-----+------------+------------+----------------+
| id  | max_amount | min_amount | average_amount |
+-----+------------+------------+----------------+
| 978 |      76700 |        150 |           3339 |
+-----+------------+------------+----------------+
1 row in set (0.000 sec)

MariaDB [npudb1]> select min_amount ,max_amount,average_amount,id from
transaction1 group by id;
+------------+------------+----------------+-----+
| min_amount | max_amount | average_amount | id  |
+------------+------------+----------------+-----+
|         70 |       6000 |           3030 | 546 |
|         10 |       6700 |           3335 | 670 |
|        150 |      76700 |           3339 | 678 |
|        150 |      76700 |           3339 | 978 |
|         70 |       6000 |           3030 | 979 |
|         70 |      96000 |          45030 | 980 |
+------------+------------+----------------+-----+
6 rows in set (0.000 sec)

MariaDB [npudb1]> update transaction1 set
average_amount=average_amount+30;
Query OK, 6 rows affected (0.045 sec)
Rows matched: 6  Changed: 6  Warnings: 0

MariaDB [npudb1]> select*from transaction1;
+-----+------------+------------+----------------+
| id  | max_amount | min_amount | average_amount |
+-----+------------+------------+----------------+
| 546 |       6000 |         70 |           3060 |
| 670 |       6700 |         10 |           3365 |
| 678 |      76700 |        150 |           3369 |
| 978 |      76700 |        150 |           3369 |
```

```
| 979 |        6000 |          70 |           3060 |
| 980 |       96000 |          70 |          45060 |
+-----+-------------+-------------+----------------+
6 rows in set (0.000 sec)

MariaDB [npudb1]> update transaction1 set min_amount=670
    -> where id 979;
ERROR 1064 (42000): You have an error in your SQL syntax; check the
manual that corresponds to your MariaDB server version for the right
syntax to use near '979' at line 2
MariaDB [npudb1]> commit work;
Query OK, 0 rows affected (0.000 sec)

MariaDB [npudb1]> select*from transaction1;
+-----+-------------+-------------+----------------+
| id  | max_amount  | min_amount  | average_amount |
+-----+-------------+-------------+----------------+
| 546 |        6000 |          70 |           3060 |
| 670 |        6700 |          10 |           3365 |
| 678 |       76700 |         150 |           3369 |
| 978 |       76700 |         150 |           3369 |
| 979 |        6000 |          70 |           3060 |
| 980 |       96000 |          70 |          45060 |
+-----+-------------+-------------+----------------+
6 rows in set (0.000 sec)

MariaDB [npudb1]> insert into transaction values(978,'DBT',
8,-90.00,1990);
ERROR 1062 (23000): Duplicate entry '978' for key 'PRIMARY'
MariaDB [npudb1]> insert into transaction values(988,'DBT',
8,-90.00,1990);
Query OK, 1 row affected (0.068 sec)


MariaDB [npudb1]> SELECT MIN_AMOUNT, MAX_AMOUNT FROM transaction1;
+-------------+-------------+
| MIN_AMOUNT  | MAX_AMOUNT  |
+-------------+-------------+
|          70 |        6000 |
|          10 |        6700 |
|         150 |       76700 |
|         150 |       76700 |
|          70 |        6000 |
|          70 |       96000 |
+-------------+-------------+
6 rows in set (0.000 sec)

MariaDB [npudb1]> select distinct id, type, amount from transaction;
+-----+------+--------+
```

```
| id  | type | amount |
+-----+------+--------+
| 978 | DBT  |    100 |
| 979 | CDT  |     25 |
| 980 | DBT  |    250 |
| 981 | DBT  |   1000 |
| 982 | DBT  |  138.5 |
| 988 | DBT  |    -90 |
+-----+------+--------+
6 rows in set (0.000 sec)

MariaDB [npudb1]> select Id, type, amount, date from transaction where
id=980 order by amount desc;
+-----+------+--------+------+
| Id  | type | amount | date |
+-----+------+--------+------+
| 980 | DBT  |    250 | 1992 |
+-----+------+--------+------+
1 row in set (0.000 sec)

MariaDB [npudb1]> select Id, type, amount, date from transaction where
account_id=105 order by amount desc;
+-----+------+--------+------+
| Id  | type | amount | date |
+-----+------+--------+------+
| 981 | DBT  |   1000 | 1976 |
| 982 | DBT  |  138.5 | 1998 |
+-----+------+--------+------+
2 rows in set (0.000 sec)

MariaDB [npudb1]> select Id, type, amount, date from transaction where
account_id=105 order by amount;
+-----+------+--------+------+
| Id  | type | amount | date |
+-----+------+--------+------+
| 982 | DBT  |  138.5 | 1998 |
| 981 | DBT  |   1000 | 1976 |
+-----+------+--------+------+
2 rows in set (0.001 sec)

MariaDB [npudb1]> select Id, type, amount, date from transaction where
amount between 100 and 1000;
+-----+------+--------+------+
| Id  | type | amount | date |
+-----+------+--------+------+
| 978 | DBT  |    100 | 1981 |
| 980 | DBT  |    250 | 1992 |
| 981 | DBT  |   1000 | 1976 |
| 982 | DBT  |  138.5 | 1998 |
```

```
+-----+------+--------+------+
4 rows in set (0.000 sec)

MariaDB [npudb1]> select Id, type, amount, date from transaction where
amount between 100 and 250;
+-----+------+--------+------+
| Id  | type | amount | date |
+-----+------+--------+------+
| 978 | DBT  |    100 | 1981 |
| 980 | DBT  |    250 | 1992 |
| 982 | DBT  |  138.5 | 1998 |
+-----+------+--------+------+
3 rows in set (0.000 sec)

MariaDB [npudb1]> select Id, type, amount, date from transaction where
account_id=104
    -> group by amount;
+-----+------+--------+------+
| Id  | type | amount | date |
+-----+------+--------+------+
| 980 | DBT  |    250 | 1992 |
+-----+------+--------+------+
1 row in set (0.001 sec)

MariaDB [npudb1]> select Id, type, amount, date from transaction where
account_id=978 group by amount;
Empty set (0.000 sec)

MariaDB [npudb1]> select Id, type, amount, date from transaction where
account_id=105 group by id;
+-----+------+--------+------+
| Id  | type | amount | date |
+-----+------+--------+------+
| 981 | DBT  |   1000 | 1976 |
| 982 | DBT  |  138.5 | 1998 |
+-----+------+--------+------+
2 rows in set (0.000 sec)

MariaDB [npudb1]> select Id, type, amount, date, account_id from
transaction where account_id=105 group by id;
+-----+------+--------+------+------------+
| Id  | type | amount | date | account_id |
+-----+------+--------+------+------------+
| 981 | DBT  |   1000 | 1976 |        105 |
| 982 | DBT  |  138.5 | 1998 |        105 |
+-----+------+--------+------+------------+
2 rows in set (0.001 sec)

MariaDB [npudb1]> select sum (amount)
```

```
    -> from transaction where account_id=104 group by amount;
ERROR 1370 (42000): execute command denied to user
'CS457_19529'@'localhost' for routine 'npudb1.sum'
MariaDB [npudb1]> select sum (amount) from transaction where
account_id=104 group by date;
ERROR 1370 (42000): execute command denied to user
'CS457_19529'@'localhost' for routine 'npudb1.sum'
MariaDB [npudb1]> select min_amount from transaction1 where
account_id=546 group by id;
ERROR 1054 (42S22): Unknown column 'account_id' in 'where clause'
MariaDB [npudb1]> select count  min_amount from transaction1 where
id=970 group by id;
ERROR 1054 (42S22): Unknown column 'count' in 'field list'
MariaDB [npudb1]> select count transaction from amount where
account_id=105
    -> group by id;
ERROR 1146 (42S02): Table 'npudb1.amount' doesn't exist
MariaDB [npudb1]> select count transaction from date  where
account_id=105 group by id;
ERROR 1146 (42S02): Table 'npudb1.date' doesn't exist
MariaDB [npudb1]> select account_id, type as CDT_DBT from transaction
where id>975 group by account_id;
+------------+---------+
| account_id | CDT_DBT |
+------------+---------+
|          8 | DBT     |
|        103 | DBT     |
|        104 | DBT     |
|        105 | DBT     |
+------------+---------+
4 rows in set (0.001 sec)

MariaDB [npudb1]> select account_id, type as CDT_DBT from transaction
where id>975 group by account_id having count (date)>1990;
ERROR 1370 (42000): execute command denied to user
'CS457_19529'@'localhost' for routine 'npudb1.count'
MariaDB [npudb1]> select account_id, type as CDT_DBT from transaction
where id>975 group by account_id having count (id)>90
    ->
    -> ;
ERROR 1370 (42000): execute command denied to user
'CS457_19529'@'localhost' for routine 'npudb1.count'
MariaDB [npudb1]> create table tempprary_customer(cust_id integer
primary key,first_name varchar2(20),last_name varchar2(20),
    -> );
ERROR 1064 (42000): You have an error in your SQL syntax; check the
manual that corresponds to your MariaDB server version for the right
syntax to use near 'varchar2(20),last_name varchar2(20),
)' at line 1
```

```
MariaDB [npudb1]> create table tempprary_customer(cust_id integer
primary key,first_name varchar2(20),last_name varchar2(20));
ERROR 1064 (42000): You have an error in your SQL syntax; check the
manual that corresponds to your MariaDB server version for the right
syntax to use near 'varchar2(20),last_name varchar2(20))' at line 1
MariaDB [npudb1]> create table tempprary_customer(cust_id integer
primary key,first_name varchar2(20),last_name varchar2(20));
ERROR 1064 (42000): You have an error in your SQL syntax; check the
manual that corresponds to your MariaDB server version for the right
syntax to use near 'varchar2(20),last_name varchar2(20))' at line 1
MariaDB [npudb1]> create table tempprary_customer(cust_id integer
primary key,first_name char(20),last_name char(20));
Query OK, 0 rows affected (0.245 sec)


MariaDB [npudb1]> select id,type,amount,date,account_id from
transaction where account_id like '%d';
Empty set (0.000 sec)

MariaDB [npudb1]> select*from transaction;
+-----+------+------------+--------+------+
| id  | type | account_id | amount | date |
+-----+------+------------+--------+------+
| 978 | DBT  |        103 |    100 | 1981 |
| 979 | CDT  |        103 |     25 | 1997 |
| 980 | DBT  |        104 |    250 | 1992 |
| 981 | DBT  |        105 |   1000 | 1976 |
| 982 | DBT  |        105 |  138.5 | 1998 |
| 988 | DBT  |          8 |    -90 | 1990 |
+-----+------+------------+--------+------+
6 rows in set (0.000 sec)

MariaDB [npudb1]> select id,type,amount,date,account_id from
transaction where account_id like 'a__%';
Empty set (0.002 sec)

MariaDB [npudb1]> select*from station;
+----+---------+-------+-------+--------+
| id | city    | state | lat_n | long_w |
+----+---------+-------+-------+--------+
| 13 | Phoenix | AZ    |    33 |    112 |
| 44 | Denver  | CO    |    40 |    105 |
+----+---------+-------+-------+--------+
2 rows in set (0.000 sec)

MariaDB [npudb1]> select id,city,state,lat_n, long_w from station
where city like '%ver%';
+----+---------+-------+-------+--------+
| id | city    | state | lat_n | long_w |
```

```
+----+--------+-------+-------+--------+
| 44 | Denver | CO    |    40 |    105 |
+----+--------+-------+-------+--------+
1 row in set (0.000 sec)

MariaDB [npudb1]> select id,city,state,lat_n, long_w from station
where city like '%x';
+----+---------+-------+-------+--------+
| id | city    | state | lat_n | long_w |
+----+---------+-------+-------+--------+
| 13 | Phoenix | AZ    |    33 |    112 |
+----+---------+-------+-------+--------+
1 row in set (0.000 sec)

MariaDB [npudb1]> select id,type,amount,date,account_id from
transaction where type like '%T';
+-----+------+--------+------+------------+
| id  | type | amount | date | account_id |
+-----+------+--------+------+------------+
| 978 | DBT  |    100 | 1981 |        103 |
| 979 | CDT  |     25 | 1997 |        103 |
| 980 | DBT  |    250 | 1992 |        104 |
| 981 | DBT  |   1000 | 1976 |        105 |
| 982 | DBT  |  138.5 | 1998 |        105 |
| 988 | DBT  |    -90 | 1990 |          8 |
+-----+------+--------+------+------------+
6 rows in set (0.001 sec)

MariaDB [npudb1]> select id,type,amount,date,account_id from
transaction where date>1982 order by account_id;
+-----+------+--------+------+------------+
| id  | type | amount | date | account_id |
+-----+------+--------+------+------------+
| 988 | DBT  |    -90 | 1990 |          8 |
| 979 | CDT  |     25 | 1997 |        103 |
| 980 | DBT  |    250 | 1992 |        104 |
| 982 | DBT  |  138.5 | 1998 |        105 |
+-----+------+--------+------+------------+
4 rows in set (0.001 sec)

MariaDB [npudb1]> select sum transaction
    -> ;
ERROR 1054 (42S22): Unknown column 'sum' in 'field list'
MariaDB [npudb1]> select account_id from transaction where id=979
group by account_id;
+------------+
| account_id |
+------------+
|        103 |
```

```
+------------+
1 row in set (0.000 sec)

MariaDB [npudb1]> select sum account_id from transaction where id=979
group by account_id;
ERROR 1054 (42S22): Unknown column 'sum' in 'field list'
MariaDB [npudb1]> select count account_id from transaction where
id=980;
ERROR 1054 (42S22): Unknown column 'count' in 'field list'
MariaDB [npudb1]> create table temp_customer(cust_id integer primary
key, first_name char(20),last_name char(20)
    -> );
Query OK, 0 rows affected (0.251 sec)

MariaDB [npudb1]> select *from temp_customer;
Empty set (0.001 sec)

MariaDB [npudb1]> create index idex_accountnum on
transaction(account_id);
Query OK, 0 rows affected (0.414 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [npudb1]> create index idex_accountnum2 on
transaction(account_id);
Query OK, 0 rows affected, 1 warning (0.342 sec)
Records: 0  Duplicates: 0  Warnings: 1


Query OK, 0 rows affected (0.330 sec)
Records: 0  Duplicates: 0  Warnings: 0



exists
MariaDB [npudb1]> desc transaction;
+-------------+----------+------+-----+---------+-------+
| Field       | Type     | Null | Key | Default | Extra |
+-------------+----------+------+-----+---------+-------+
| txn_id      | int(11)  | NO   | PRI | NULL    |       |
| txn_type_cd | char(3)  | YES  |     | NULL    |       |
| account_id  | int(11)  | YES  | MUL | NULL    |       |
| ammount     | float    | YES  |     | NULL    |       |
| date        | char(10) | YES  | UNI | NULL    |       |
+-------------+----------+------+-----+---------+-------+
5 rows in set (0.001 sec)

MariaDB [npudb1]> create database account_id;
ERROR 1044 (42000): Access denied for user 'CS457_19529'@'localhost'
to database 'account_id'
MariaDB [npudb1]> commit;
Query OK, 0 rows affected (0.000 sec)
```

```
MariaDB [npudb1]> rollback;
Query OK, 0 rows affected (0.000 sec)

MariaDB [npudb1]>
```