Database System Practicum

Modul 5 - Data Manipulation Language (DML)



By:

Luckyta Afia Susanto

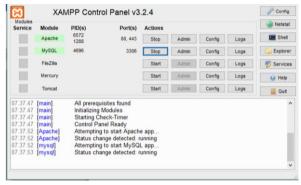
L200183103

FACULTY OF COMMUNICATION AND INFORMATICS MUHAMMADIYAH UNIVERSITY OF SURAKARTA

2020

PRACTICE

1. Menjalankankan XAMPP Control Panel lalu menjalankan server Apache dan MySQL



2. Login sebagai root ke MySQL di Command Propmpt

```
Microsoft Windows [Version 10.0.18363.720]
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C:\Users\Win10>cd\

C:\>cd C:\xampp\mysql\bin

C:\xampp\mysql\bin>mysql -u root
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 8
Server version: 10.4.11-MariaDB mariadb.org binary distribution

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

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

3. Memilih database perbankan

4. Nasabah

```
MariaDB [perbankan]> INSERT INTO nasabah (id_nasabah, nama_nasabah, alamat_nasabah) VALUES (1, 'Sutopo', 'Jl. Jendral Sudirman 12'),(2, 'Maryati', 'Jl. MT. Haryono 31'),(3, 'Suparman', 'Jl. Hasanudin 81'),(4, 'Kartika Padmasari', 'Jl. Manggis 15'),(5, 'Budi Eko Prayogo', 'Jl. Kantil 30'),(6, 'Satria Eko Prayogo', 'Jl. Slamet Riyadi 45'),(7, 'Indri Hapsari', 'Jl. Sutoyo 5'),(8, 'Sari Murti', 'Jl. Pangandaran 11'),(9, 'Canka Lokananta', 'Jl. Tidar 86'),(10, 'Budi Murtono', 'Jl. Merak 22');
Query OK, 10 rows affected (0.376 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

id_nasabah	nama_nasabah	alamat_nasabah	
1	Sutopo	Jl. Jendral Sudirman 12	
2	Maryati	Jl. MT. Haryono 31	
3	Suparman	Jl. Hasanudin 81	
4	Kartika Padmasari	Jl. Manggis 15	
5	Budi Eko Prayogo	Jl. Kantil 30	
6	Satria Eko Prayogo	Jl. Slamet Riyadi 45	
	Indri Hapsari	JL. Sutoyo 5	
8	Sari Murti	Jl. Pangandaran 11	
9	Canka Lokananta	Jl. Tidar 86	
10	Budi Murtono	Jl. Merak 22	

5. Cabang_bank

MariaDB [perbankan]> INSERT INTO cabang_bank (kode_cabang, nama_cabang, alamat_cabang) VALUES ('BRUS', 'Bank Rut Unit Surakarta', 'Jl. Slamet Riyadi 18'),('BRUM', 'Bank Rut Unit Magelang ', 'Jl. P. Tendean 63'), ('BRUB', 'Bank Rut Unit Boyolali', 'Jl. Ahmad Yani 45'),('BRUK', 'Bank Rut Unit Klaten', 'Jl. Suparman 23'),('BRUY', 'Bank Rut Unit Yogyakarta', 'Jl. Anggrek 21'),('BRUW', 'Bank Rut Unit Wonogiri', 'Jl. Untung Suropati 12');
Query OK, 6 rows affected (0.087 sec)
Records: 6 Duplicates: 0 Warnings: 0

code_cabang nama_cabang		alamat_cabang	
BRUB	Bank Rut Unit Boyolali	Jl. Ahmad Yani 45	
BRUK	Bank Rut Unit Klaten	J1. Suparman 23	
BRUM	Bank Rut Unit Magelang	Jl. P. Tendean 63	
BRUS	Bank Rut Unit Surakarta	Jl. Slamet Riyadi 18	
BRUW	Bank Rut Unit Wonogiri	J1.Untung Suropati 12	
BRUY	Bank Rut Unit Yogyakarta	J1. Anggrek 21	

6. Rekening

MariaDB [perbankan]> INSERT INTO rekening (no_rekening, kode_cabangFK, pin, saldo) VALUES (10 1, 'BRUS', 1111, 500000),(102, 'BRUS', 2222, 350000),(103, 'BRUS', 3333, 750000),(104, 'BRUM', 4444, 900000),(105, 'BRUM', 5555, 2000000),(106, 'BRUS', 6666, 3000000),(107, 'BRUS', 7777, 10000000),(108, 'BRUB', 0000, 50000000),(109, 'BRUB', 9999, 0),(110, 'BRUY', 1234, 550000),(11 1, 'BRUK', 4321, 150000),(112, 'BRUK', 0123, 300000),(113, 'BRUY', 8888, 255000);
Query OK, 13 rows affected (0.075 sec)
Records: 13 Duplicates: 0 Warnings: 0

```
MariaDB [perbankan]> SELECT*FROM rekening;
 no_rekening
                kode_cabangFK | pin
                                         saldo
                                          500000
                BRUS
                                 1111
         102
                BRUS
                                          350000
                                 2222
                BRUS
                                          750000
         104
                BRUM
                                 4444
                                          900000
                BRUM
                                         2000000
                                         3000000
1000000
         106
                BRUS
          107
                BRUS
                                         5000000
                BRUB
                BRUB
                                 9999
         110
                BRUY
                                 1234
                                          550000
                                          150000
                BRUK
                BRUK
                                          300000
          113
                BRUY
                                 8888
                                          255000
.3 rows in set (0.001 sec)
```

7. Nasabah_has_rekening

```
MariaDB [perbankan]> describe nasabah_has_rekening;
 Field
                 Туре
                           Null |
                                         Default | Extra |
 id nasabahFK
                 int(11)
                           NO
                                   PRI
                                         NULL
 no_rekeningFK
                 int(11)
                                   PRI
                           NO
                                         NULL
rows in set (0.143 sec)
```

MariaDB [perbankan]> INSERT INTO nasabah_has_rekening (id_nasabahFK, no_rekeningFK) VALUES (1, 104),(2, 103),(3, 105),(3, 106),(4, 101),(4, 107),(5, 102),(5, 107),(6, 109),(7, 109),(8, 1 11),(9, 110),(10, 113),(8, 112),(10, 108);
Query OK, 15 rows affected (0.088 sec)
Records: 15 Duplicates: 0 Warnings: 0

8. Transaksi

```
08 [perbankan]> INSERT INTO transaksi (no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUE
i, 3, 'debit', '2009-11-10', 50000),(2, 103, 2, 'debit', '2009-11-10', 40000),(3, 101, 4, 'kredit', '2009-11-12', 20000),
3, 'debit', '2009-11-13', 50000),(5, 107, 5, 'kredit', '2009-11-13', 30000),(6, 104, 1, 'kredit', '2009-11-15', 200000),
9, 'kredit', '2009-11-15', 150000),(8, 102, 5, 'debit', '2009-11-16', 20000),(9, 105, 3, 'kredit', '2009-11-18', 50000),
4, 'debit', '2009-11-19', 100000),(11, 103, 2, 'debit', '2009-11-19', 100000),(12, 104, 1, 'debit', '2009-11-19', 50000),
77, 4, 'kredit', '2009-11-20', 200000),(14, 105, 3, 'debit', '2009-11-21', 40000),(15, 104, 1, 'kredit', '2009-11-22', 16,
101, 4, 'kredit', '2009-11-20', 20000),(17, 103, 2, 'debit', '2009-11-21', 50000),(18, 102, 5, 'debit', '2009-11-25',
109, 108, 10, 'debit', '2009-11-26', 100000),(20, 106, 3, 'kredit', '2009-11-27', 50000),(11, 103, 2, 'kredit', '2009-11-26'),
109, (22, 105, 3, 'kredit', '2009-11-28', 100000),(23, 102, 5, 'debit', '2009-11-30', 20000),(24, 104, 1, 'debit', '2009-12-60),(25, 103, 2, 'debit', '2009-12-2', 40000),(26, 101, 4, 'debit', '2009-12-4', 50000),(27, 103, 2, 'kredit', '2009-12-6'),
109),(28, 102, 5, 'kredit', '2009-12-5', 200000),(29, 109, 7, 'debit', '2009-12-5', 100000),(30, 110, 9, 'debit', '2009-12-6'),
109),(28, 102, 5, 'kredit', '2009-12-5', 200000),(29, 109, 7, 'debit', '2009-12-5', 100000),(30, 110, 9, 'debit', '2009-12-6'),
109),(28, 102, 5, 'kredit', '2009-12-5', 200000),(29, 109, 7, 'debit', '2009-12-5', 100000),(30, 110, 9, 'debit', '2009-12-6'),
109),(28, 102, 5, 'kredit', '2009-12-5', 200000),(28, 101, 9, 'debit', '2009-12-6'),
109),(28, 102, 5, 'kredit', '2009-12-5', 200000),(29, 109, 7, 'debit', '2009-12-5', 100000),(30, 110, 9, 'debit', '2009-12-6'),
109),(28, 102, 5, 'kredit', '2009-12-5', 200000),(29, 109, 7, 'debit', '2009-12-5', 100000),(30, 110, 9, 'debit', '2009-12-6'),
109),(28, 102, 5, 'kredit', '2009-12-5', 200000),(29, 109, 7, 'debit', '2009-12-5', 100000),(30,
   0);
OK, 30 rows affected (0.042 sec)
s: 30 Duplicates: 0 Warnings: 0.
```

_transaksi	id_nasabahFK	no_rekeningFK	jenis_transaksi	tanggal	jumlah
1		105	debit	2009-11-10 00:00:00	50000
		103	debit	2009-11-10 00:00:00	40000
		101	kredit	2009-11-12 00:00:00	20000
4		106	debit	2009-11-13 00:00:00	50000
		107	kredit	2009-11-13 00:00:00	30000
		104	kredit	2009-11-15 00:00:00	200000
		110	kredit	2009-11-15 00:00:00	150000
8		102	debit	2009-11-16 00:00:00	20000
		105	kredit	2009-11-18 00:00:00	50000
10		107	debit	2009-11-19 00:00:00	100000
		103	debit	2009-11-19 00:00:00	100000
12		104	debit	2009-11-19 00:00:00	50000
		107	kredit	2009-11-20 00:00:00	200000
14		105	debit	2009-11-21 00:00:00	40000
		104	kredit	2009-11-22 00:00:00	100000
		101	kredit	2009-11-22 00:00:00	20000
17		103	debit	2009-11-22 00:00:00	50000
18		102	debit	2009-11-25 00:00:00	50000
		108	debit	2009-11-26 00:00:00	100000
20		106	kredit	2009-11-27 00:00:00	50000
		103	kredit	2009-11-28 00:00:00	200000
		105	kredit	2009-11-28 00:00:00	100000
		102	debit	2009-11-30 00:00:00	20000
		104	debit	2009-12-01 00:00:00	50000
		103	debit	2009-12-02 00:00:00	40000
			debit	2009-12-04 00:00:00	50000
		103	kredit	2009-12-05 00:00:00	100000
28			kredit	2009-12-05 00:00:00	200000
		109	debit	2009-12-05 00:00:00	100000
30		110	debit	2009-12-06 00:00:00	20000

9. Melakukan update

a. Nasabah dengan nama "Indri Hapsari" pindah alamat ke "Jalan Slamet Riyadi

```
aDB [perbankan]> UPDATE nasabah SET alamat_nasabah='Jalan Slamet Riyadi No.34' WHERE nama_nasabah
ri Hapsari';
uery OK, 1 row affected (0.120 sec)
ows matched: 1 Changed: 1 Warnings: 0
```

Cek:

```
id nasabah | nama nasabah
                                                                    alamat nasabah
                         Sutopo
Manyati
Suparman
Kartika Padmasari
Budi Eko Prayogo
Satria Eko Prayogo
                                                                     Jl. Manggis 15
Jl. Kantil 30
Jl. Slamet Riyadi 45
```

```
b. Cabang dengan kode "BRUW" pindah ke alamat "Jalan A. Yani No.23" MariaDB [perbankan]> UPDATE cabang_bank SET alamat_cabang='Jalan A. Yani No.23' WHERE
        Query OK, 1 row affected (0.108 sec)
Rows matched: 1 Changed: 1 Warnings: 0
```

Cek:

10. Melakukan penghapusan

a. Nasabah dengan id "7" menutup rekeningnya

b. Cabang dengan nama_cabang "Bank Rut Unit Magelang" menutup kantornya

```
MariaDB [perbankan]> DELETE FROM cabang_bank WHERE nama_cabang = 'Bank Rut Unit Magelang';
Query OK, 1 row affected (0.087 sec)

MariaDB [perbankan]> SELECT*FROM cabang_bank;

| kode_cabang | nama_cabang | alamat_cabang |

| BRUB | Bank Rut Unit Boyolali | Jl. Ahmad Vani 45 |
| BRUK | Bank Rut Unit Klaten | Jl. Suparman 23 |
| BRUS | Bank Rut Unit Surakarta | Jl. Slamet Riyadi 18 |
| BRUW | Bank Rut Unit Wonogiri | Jalan A. Yani No.23 |
| BRUY | Bank Rut Unit Yogyakarta | Jl. Anggrek 21 |

5 rows in set (0.001 sec)
```

ASSIGNMENT

#Table Master

1. Nasabah

```
MariaDB [perbankan]> INSERT INTO nasabah (id_nasabah, nama_nasabah, alamat_nasabah) VALUES (11, 'Azie', 'Jl. Apel 01'),(12, 'Mela', 'Jl. Naga 02'),(13, 'Sari', 'Jl. Duren 03'),(14, 'Hafshah', 'Jl. Manggis 04'),(15, 'Fitri', 'Jl. Duku 05'),(16, 'Afifah', 'Jl. Sukowati 06'),(17, 'Aulia', 'Jl. Pattimura 07'),(18, 'Septin', 'Jl. Cut Nya Din 08'),(19, 'Cahya', 'Jl. Mawar 09'),(20, 'Wahyu', 'Jl. Hassanudin 10');
Query OK, 10 rows affected (1.261 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

```
iaDB [perbankan]> SELECT*FROM nasabah;
                                                                      Jl. Jendral Sudirman 12
                                                                      J1. Jendral Sudirman 12
J1. MI. Haryono 31
J1. Hasanudin 81
J1. Manggis 15
J1. Kantil 30
J1. Slamet Riyadi 45
Jalan Slamet Riyadi No.34
J1. Pangandaran 11
J1. Tidar 86
                        Maryati
Suparman
Kartika Padmasari
                        Budi Eko Prayogo
Satria Eko Prayogo
                        Sari Murti
                       Canka Lokananta
Budi Murtono
                                                                      Jl. Merak 22
Jl. Apel 01
Jl. Naga 02
Jl. Duren 03
                        Mela
                        Sari
Hafshah
                                                                             Manggis 04
Duku 05
                        Fitri
Afifah
                                                                              Sukowati 06
                                                                      Jl. Pattimura 07
Jl. Cut Nya Din 08
Jl. Mawar 09
Jl. Hassanudin 10
                        Septin
Cahya
         in set (0.113 sec)
```

2. Cabang_bank

MariaDB [perbankan]> INSERT INTO cabang_bank (kode_cabang, nama_cabang, alamat_cabang) VALUES ('BRUA', 'Bank Rut Unit Ambon', 'Jl. Raya Sukowati 99'),('BRUC', 'Bank Rut Unit Ciamis', 'Jl. pegangsaan 34'),('BRUD', 'Bank Rut Depok', 'Jl. Kenanga 45'),('BRUD', 'Bank Rut Tasikmalaya', 'Jl. Kenanga 45'),('BRUP', 'Bank Rut Pekalongan', 'Jl. Soekarno 7'),('BRUL', 'Bank Rut Lubuklinggau', 'Jl. Ir.Juanda 22'),('BRUJ', 'Bank Rut Jay apura', 'Jl. Tulip 39'),('BRUG', 'Bank Rut Gorontalo', 'Jl. Kasih Ibu 34'),('BRUR', 'Bank Rut Makassar', 'Jl. Sutopo 55'),('BRUG', 'Bank Rut Cilegon', 'Jl. Jendral Sudirman');
Query OK, 10 rows affected (0.150 sec)
Records: 10 Duplicates: 0 Warnings: 0

```
MariaDB [perbankan]> SELECT*FROM cabang bank;
 kode_cabang | nama_cabang
                                              alamat cabang
                Bank Rut Unit Ambon
                                              Jl. Raya Sukowati 99
Jl. Ahmad Yani 45
 BRUA
                Bank Rut Unit Boyolali
 BRUB
                Bank Rut Unit Ciamis
                                              Jl. pegangsaan 34
 BRUC
                                              Jl. Kemayoran 90
Jl. Kasih Ibu 34
                Bank Rut Depok
 BRUD
 BRUG
                Bank Rut Gorontalo
 BRUJ
                Bank Rut Jayapura
                                              Jl. Tulip 39
                                              Jl. Suparman 23
                Bank Rut Unit Klaten
 BRUK
                Bank Rut Lubuklinggau
                                              Jl. Ir.Juanda 22
 BRUI
 BRUO
                Bank Rut Cilegon
                                              Jl. Jendral Sudirman
                                              Jl. Soekarno 7
 BRUP
                Bank Rut Pekalongan
                Bank Rut Makassar
                                              Jl. Sutopo 55
 BRUR
 BRUS
                Bank Rut Unit Surakarta
                                              Jl. Slamet Riyadi 18
                                              Jl. Kenanga 45
Jalan A. Yani No.23
 BRUT
                Bank Rut Tasikmalaya
                Bank Rut Unit Wonogiri
 BRUW
 BRUY
                Bank Rut Unit Yogyakarta
                                              Jl. Anggrek 21
15 rows in set (0.001 sec)
```

3. Rekening

```
MariaDB [perbankan]> INSERT INTO rekening (no_rekening, kode_cabangFK, pin, saldo) VALUES (114, 'BRUO', 999 9, 50000),(115, 'BRUR', 1122, 50000),(116, 'BRUG', 2211, 100000),(117, 'BRUJ', 2143, 150000),(118, 'BRUL', 6767, 1000000),(119, 'BRUP', 9090, 100000),(120, 'BRUT', 5656, 350000),(121, 'BRUD', 3434, 50000),(122, 'BRUC', 8787, 150000),(123, 'BRUA', 6543, 200000);
Query OK, 10 rows affected (0.208 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

MariaDB [perbar	nkan]> SELECT*FR	OM reke	ning;
no_rekening	kode_cabangFK	pin	saldo
101	BRUS	1111	500000
102	BRUS	2222	350000
103	BRUS	3333	750000
104	BRUM	4444	900000
105	BRUM	5555	2000000
106	BRUS	6666	3000000
107	BRUS	7777	1000000
108	BRUB	0	5000000
109	BRUB	9999	0
110	BRUY	1234	550000
111	BRUK	4321	150000
112	BRUK	123	300000
113	BRUY	8888	255000
114	BRUO	9999	50000
115	BRUR	1122	50000
116	BRUG	2211	100000
117	BRUJ	2143	150000
118	BRUL	6767	1000000
119	BRUP	9090	100000
120	BRUT	5656	350000
121	BRUD	3434	50000
122	BRUC	8787	150000
123	BRUA	6543	200000
23 rows in set	(0.071 sec)	+	++

4. Nasabah_has_rekening

```
MariaDB [perbankan]> INSERT INTO nasabah_has_rekening (id_nasabahFK, no_rekeningFK) VALUES (11, 114), (12, 115), (13, 116), (14, 117), (15, 118), (16, 119), (17, 120),(18, 121), (19, 122), (20, 123); Query OK, 10 rows affected (0.118 sec)
Records: 10 Duplicates: 0 Warnings: 0
```

#Table Transaksi

1. Transaksi

MariaDB [perbankan]> INSERT INTO transaksi (no_transaksi, no_rekeningFK, id_nasabahFK, jenis_transaksi, tanggal, jumlah) VALUES (31, 114, 11, 'debit', '2009-12-7', 100000),(32, 104, 1, 'debit', '2009-12-8', 50000),(33, 107, 4, 'kredit', '2009-12-9', 200000), (34, 105, 3, 'debit', '2009-12-9', 40000),(35, 114, 11, 'kredit', '2009-12-10', 100000),(36, 101, 4, 'kredit', '2009-12-11', 2000 0),(37, 123, 20, 'debit', '2009-12-12', 50000),(38, 102, 5, 'debit', '2009-12-13', 50000),(39, 108, 10, 'debit', '2009-12-14', 10 0000),(40, 106, 3, 'kredit', '2009-12-15', 50000),(41, 123, 20, 'kredit', '2009-12-16', 20000),(42, 105, 3, 'kredit', '2009-12-17', 100000),(43, 102, 5, 'debit', '2009-12-18', 20000),(44, 114, 11, 'debit', '2009-12-19', 50000),(45, 123, 20, 'debit', '2009-12-21', 50000),(47, 123, 20, 'kredit', '2009-12-22', 100000),(48, 102, 5, 'kredit', '2009-12-23', 200000),(49, 120, 17, 'debit', '2009-12-24', 100000),(50, 122, 19, 'debit', '2009-12-25', 20000);

Records: 20 Duplicates: 0 Warnings: 0

o_transaksi	id_nasabahFK	no_rekeningFK	jenis_transaksi	tanggal	jumlah
1	3	105	debit	+ 2009-11-10 00:00:00	50000
2	2	103	debit	2009-11-10 00:00:00	40000
3	4	101	kredit	2009-11-12 00:00:00	20000
4	3	106	debit	2009-11-13 00:00:00	50000
5	5	107	kredit	2009-11-13 00:00:00	30000
6	1	104	kredit	2009-11-15 00:00:00	200000
7	9	110	kredit	2009-11-15 00:00:00	150000
8	5	102	debit	2009-11-16 00:00:00	20006
9	3	105	kredit	2009-11-18 00:00:00	50000
10	4	107	debit	2009-11-19 00:00:00	100006
11	2	103	debit	2009-11-19 00:00:00	100000
12	1	104	debit	2009-11-19 00:00:00	50000
13	4	107	kredit	2009-11-20 00:00:00	200000
14	3	105	debit	2009-11-21 00:00:00	40000
15	1	104	kredit	2009-11-22 00:00:00	100000
16	4	101	kredit	2009-11-22 00:00:00	20006
17	2	103	debit	2009-11-22 00:00:00	50000
18	5	102	debit	2009-11-25 00:00:00	50000
19	10	108	debit	2009-11-26 00:00:00	100006
20	3	106	kredit	2009-11-27 00:00:00	50000
21	2	103	kredit	2009-11-28 00:00:00	200006
22	3	105	kredit	2009-11-28 00:00:00	100006
23	5	102	debit	2009-11-30 00:00:00	20006
24	1	104	debit	2009-12-01 00:00:00	50006
25	2	103	debit	2009-12-02 00:00:00	40000
26	4	101	debit	2009-12-04 00:00:00	50000
27	2	103	kredit	2009-12-05 00:00:00	100000
28	5	102	kredit	2009-12-05 00:00:00	200006
29	7	109	debit	2009-12-05 00:00:00	100000
30	9	110	debit	2009-12-06 00:00:00	20000
31	11	114	debit	2009-12-07 00:00:00	100000
32	1	104	debit	2009-12-08 00:00:00	50000
33	4	107	kredit	2009-12-09 00:00:00	20000
34	3	105	debit	2009-12-09 00:00:00	4000
35	11	114	kredit	2009-12-10 00:00:00	10000
36	4	101	kredit	2009-12-11 00:00:00	2000
37	20	123	debit	2009-12-12 00:00:00	5000
38	5	102	debit	2009-12-13 00:00:00	
39	10	108	debit	2009-12-14 00:00:00	10000
40	3	106	kredit	2009-12-15 00:00:00	5000
41	20	123	kredit	2009-12-16 00:00:00	20000
42	3	105	kredit	2009-12-17 00:00:00	10000
43	5	102	debit	2009-12-18 00:00:00	2000
44	11	114	debit	2009-12-19 00:00:00	5000
45	20	123	debit	2009-12-20 00:00:00	4000
46	4	101	debit	2009-12-21 00:00:00	5000
47	20	123	kredit	2009-12-22 00:00:00	10000
48	5	102	kredit	2009-12-23 00:00:00	20000
49	17	120	debit	2009-12-24 00:00:00	10000
50	19	122	debit	2009-12-25 00:00:00	2000