

IQ1

```
mysql> SELECT SESSION_USER();
+-----+
| SESSION_USER() |
+-----+
| lfessby@localhost |
+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM IQ1_CustomersWithBalance;
+-----+-----+-----+-----+-----+
| ContNo | Name | address | SumPayments | Balance |
+-----+-----+-----+-----+-----+
| 2420 | Kalie Gratton | 07245 Dottie Junction Canyon TX 79015 | 100.00 | 102.8000000000 |
+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

IQ2

```
mysql> SELECT SESSION_USER();
+-----+
| SESSION_USER() |
+-----+
| gcreighton@localhost |
+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM IQ2_MyReadings;
+-----+-----+-----+
| ReadDate | Meter_Number | address |
+-----+-----+-----+
| 2019-04-15 | 27 | 36 Laurel Center Canyon TX 79015 |
| 2019-05-15 | 27 | 36 Laurel Center Canyon TX 79015 |
| 2019-06-15 | 27 | 36 Laurel Center Canyon TX 79015 |
| 2019-07-15 | 27 | 36 Laurel Center Canyon TX 79015 |
| 2019-11-23 | 16 | 656 Weeping Birch Avenue Canyon TX 79016 |
+-----+-----+-----+
5 rows in set (0.00 sec)

mysql>
```

IQ3

```
mysql> SELECT SESSION_USER();
+-----+
| SESSION_USER() |
+-----+
| lfessby@localhost |
+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM IQ3_AllReadingsBillsAndPayments;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| ContNo | Name | address | PreviousReadDate | PreviousReading | CurrentReadDate | CurrentReading | BillNo | BillDate | BillTotal | PaymentAmount | Payment_date | Balance |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 2420 | Kalie Gratton | 07245 Dottie Junction Canyon TX 79015 | 2018-09-21 | 1350.00000 | 2018-10-21 | 1870.00000 | 1007 | 2018-10-21 | 202.8000000000 | 100.00 | 2018-10-22 | 102.8000000000 |
| 2420 | Kalie Gratton | 07245 Dottie Junction Canyon TX 79015 | 2018-10-21 | 1870.00000 | 2018-11-21 | NULL | NULL | NULL | NULL | NULL | NULL | NULL |
| 2795 | Roxi Falvey | 22599 Holmberg Point Canyon TX 79016 | 2017-11-04 | 341.00000 | 2018-01-05 | 612.00000 | 1005 | 2018-01-05 | 102.9800000000 | 102.56 | 2017-12-06 | 0.0000000000 |
| 2795 | Roxi Falvey | 22599 Holmberg Point Canyon TX 79016 | 2018-01-05 | 612.00000 | 2018-02-05 | 890.00000 | 1006 | 2018-02-05 | 105.6400000000 | 105.64 | 2018-01-08 | 0.0000000000 |
| 3592 | Kalie Gratton | 36 Laurel Center Canyon TX 79015 | 2019-04-15 | 211.00000 | 2019-05-15 | 411.00000 | 1001 | 2019-05-15 | 98.0000000000 | 98.00 | 2019-05-20 | 0.0000000000 |
| 3592 | Kalie Gratton | 36 Laurel Center Canyon TX 79015 | 2019-05-15 | 411.00000 | 2019-06-15 | 670.00000 | 1003 | 2019-06-15 | 126.9100000000 | 126.91 | 2019-06-28 | 0.0000000000 |
| 3592 | Kalie Gratton | 36 Laurel Center Canyon TX 79015 | 2019-06-15 | 670.00000 | 2019-07-15 | 839.00000 | 1004 | 2019-07-15 | 78.4800000000 | 78.48 | 2019-07-16 | 0.0000000000 |
| 3592 | Kalie Gratton | 36 Laurel Center Canyon TX 79015 | 2019-07-15 | 839.00000 | 2019-08-15 | NULL | NULL | NULL | NULL | NULL | NULL | NULL |
| 3595 | Bat Scamel | 656 Weeping Birch Avenue Canyon TX 79016 | 2018-08-19 | 269.00000 | 2018-09-19 | 400.00000 | 2005 | 2018-09-19 | 34.0600000000 | NULL | NULL | NULL |
| 4283 | Ruperta Horsewood | 656 Weeping Birch Avenue Canyon TX 79016 | 2019-10-23 | 400.00000 | 2019-11-23 | 730.00000 | 2007 | 2019-11-23 | 135.3000000000 | 100.00 | 2019-11-25 | 0.0000000000 |
| 4283 | Ruperta Horsewood | 656 Weeping Birch Avenue Canyon TX 79016 | 2019-10-23 | 400.00000 | 2019-11-23 | 730.00000 | 2007 | 2019-11-23 | 135.3000000000 | 35.30 | 2019-12-10 | 0.0000000000 |
| 4283 | Ruperta Horsewood | 656 Weeping Birch Avenue Canyon TX 79016 | 2019-11-23 | 730.00000 | 2019-12-23 | NULL | NULL | NULL | NULL | NULL | NULL | NULL |
| 5885 | Johnath Dun | 2768 Clarendon Trail Canyon TX 79015 | 2020-05-06 | 3851.00000 | 2020-06-06 | 4060.00000 | 1002 | 2020-06-06 | 71.0600000000 | 71.06 | 2020-06-07 | 0.0000000000 |
| 5885 | Johnath Dun | 2768 Clarendon Trail Canyon TX 79015 | 2020-06-06 | 4060.00000 | 2020-07-06 | NULL | NULL | NULL | NULL | NULL | NULL | NULL |
14 rows in set (0.00 sec)
```

IQ4-8

```
mysql> SELECT SESSION_USER();
+-----+
| SESSION_USER() |
+-----+
| rastill@localhost |
+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM IQ4_NumReadingsByGCreighton_MayToDec2019;
+-----+
| COUNT(*) |
+-----+
| 4 |
+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM IQ5_BillsByReaders;
+-----+-----+-----+
| BillNo | PreviouslyReadBy | CurrentlyReadBy |
+-----+-----+-----+
| 1002 | Lancelot Tschiersch | Bernita Munson |
| 1004 | Genvieve Creighton | Genvieve Creighton |
| 1005 | Cherye Buey | Gaspar McCaskill |
+-----+-----+-----+
3 rows in set (0.00 sec)

mysql> SELECT * FROM IQ6_HighestConsumer_MayToDec_2019;
+-----+-----+
| Name | consumption |
+-----+-----+
| Kalie Gratton | 619.00000 |
+-----+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM IQ7_AvgConsumption_MayToDec_2019;
+-----+
| consumption |
+-----+
| 237.250000000 |
+-----+
1 row in set (0.00 sec)

mysql> SELECT * FROM IQ8_AboveAverageConsumersMayToDec2019;
+-----+-----+
| Name | consumption |
+-----+-----+
| Kalie Gratton | 619.00000 |
| Ruperta Horwood | 330.00000 |
+-----+-----+
2 rows in set (0.00 sec)
```

```
+-----+
| SESSION_USER() |
+-----+
| lfessby@localhost |
+-----+
1 row in set (0.00 sec)

mysql> INSERT INTO Customer(CustID, Name) VALUES(1111,'John Doe');
Query OK, 1 row affected (0.01 sec)
```

UQ2 (I was logged in as the manager, I forgot to display the session user)

```
mysql> UPDATE Reading
  -> SET EmpNo = (SELECT EmpNo FROM Employee WHERE Name = 'Genvieve Creighton' LIMIT 1),
  -> ReadDate = (SELECT ActivationDate FROM Contract WHERE Meter_Number = 34)
  -> WHERE RReadingId = 15;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE Reading
  -> SET EmpNo = (SELECT EmpNo FROM Employee WHERE Name = 'Genvieve Creighton' LIMIT 1),
  -> ReadDate = (SELECT ActivationDate FROM Contract WHERE Meter_Number = 40)
  -> WHERE ReadingId = 1;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> SELECT * FROM Reading r JOIN Contract cont ON (r.ContNo = cont.ContNo) WHERE ReadingValue IS NULL AND cont.Meter_Number IN (34,40);
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| ReadingId | ContNo | ReadDate | ReadingValue | EmpNo | NextReadDate | ContNo | CustID | Meter_Number | ActivationDate | BillRate | DeactivatedDate |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 15 | 3891 | 2019-12-13 | NULL | 216 | NULL | 3891 | 856 | 34 | 2019-12-13 | 0.29000 | NULL |
| 1 | 2419 | 2018-09-03 | NULL | 216 | NULL | 2419 | 856 | 40 | 2018-09-03 | 0.49000 | NULL |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

UQ3

```
mysql> SELECT SESSION_USER();
+-----+
| SESSION_USER() |
+-----+
| gcreighton@localhost |
+-----+
1 row in set (0.00 sec)

mysql> UPDATE Reading
  -> SET ReadingValue = 1001.00,
  -> NextReadDate = '2018-10-03'
  -> WHERE ReadingId = 1;
Query OK, 0 rows affected (0.00 sec)
Rows matched: 1 Changed: 0 Warnings: 0

mysql> UPDATE Reading
  -> SET ReadingValue = 1000.00,
  -> NextReadDate = '2020-01-13'
  -> WHERE ReadingId = 15;
Query OK, 0 rows affected (0.00 sec)
Rows matched: 1 Changed: 0 Warnings: 0

mysql> SELECT * FROM iq2_myreadings
  -> ;
+-----+-----+-----+
| ReadDate | Meter_Number | address |
+-----+-----+-----+
| 2018-09-03 | 40 | 502 Meadow Valley Park Canyon TX 79015 |
| 2019-04-15 | 27 | 36 Laurel Center Canyon TX 79015 |
| 2019-05-15 | 27 | 36 Laurel Center Canyon TX 79015 |
| 2019-06-15 | 27 | 36 Laurel Center Canyon TX 79015 |
| 2019-07-15 | 27 | 36 Laurel Center Canyon TX 79015 |
| 2019-12-13 | 34 | 1 Stuart Point Canyon TX 79015 |
| 2019-11-23 | 16 | 656 Weeping Birch Avenue Canyon TX 79016 |
+-----+-----+-----+
7 rows in set (0.00 sec)
```

UQ4

A bill can't be created for those two customers. Their assigned read date is their contract activation dates. This means that the meter read is for their beginning read only. We would need another reading in the future to get true consumption. The way I designed my database was to truly act as separate entries for each "read" with the "NextReadDate" acting as the "glue" that holds everything together.