* How many links were added afer 2013-10-14?

SELECT COUNT(\*) from links where created>'2013-10-14';

+----------+

| COUNT(\*) |

+----------+

| 11 |

+----------+

1 row in set (0.00 sec)

* How many links that were added before 2013-10-14 have fewer than 40 hits?

SELECT COUNT(\*) from links where created>'2013-10-14' and hit\_count<40;

+----------+

| COUNT(\*) |

+----------+

| 2 |

+----------+

1 row in set (0.00 sec)

* Insert your own URL with a date before 2013-10-14 with greater than 40 hits.

INSERT INTO links (long\_url, short\_url, hit\_count, created) VALUES ('http://mit.edu', 'mit', '555', '2013-01-01');

SELECT \* from links where created<'2013-10-14';

+---------------------------------------------------------------------------------+-------------+-----------+------------+

| long\_url | short\_url | hit\_count | created |

+---------------------------------------------------------------------------------+-------------+-----------+------------+

| eviephan.com | eevee | 51 | 2013-09-01 |

| http://be.ucsd.edu | ucsdBE | 9001 | 2009-11-23 |

| http://blogspot.com | 04789 | 34 | 2013-09-29 |

| http://carinaboo.com/ | cgboo | 186 | 2013-09-30 |

| http://ebay.com | b0f7e | 21 | 2013-09-23 |

| http://facebook.com | fbk | 100 | 2010-10-10 |

| http://google.co.in | f1ab0 | 143 | 2013-09-11 |

| http://google.de | 5f379 | 43 | 2013-09-09 |

| http://hao123.com | 9e898 | 178 | 2013-09-09 |

| http://herotime.co | ht | 1718 | 2012-06-24 |

| http://linkedin.com | d4234 | 158 | 2013-10-06 |

| http://live.com | d2c05 | 46 | 2013-09-23 |

| http://meliora.cc | molly | 10 | 2010-10-10 |

| http://mit.edu | mit | 555 | 2013-01-01 |

| http://people.ischool.berkeley.edu/~jackar/webarch2013/ | jackar | 80 | 0000-00-00 |

| http://people.ischool.berkeley.edu/~jlo/webarch2013/ | jlo\_webarch | 191 | 2013-10-08 |

| http://people.ischool.berkeley.edu/~parvizu/webarch2013/ | pablo | 400 | 2013-09-10 |

| http://people.ischool.berkeley.edu/~robyn/webarch2013/ | robyn | 20 | 2013-09-30 |

| http://people.ischool.berkeley.edu/~siddharth/server/shorts | srturl | 132 | 2013-10-13 |

| http://sophiebarness.com | 12345 | 62 | 2012-10-31 |

| http://sox.ytmnd.com/ | Deb-GoSox | 190 | 1918-09-11 |

| http://taobao.com | dd29a | 159 | 2013-10-04 |

| http://vk.com | 4cb96 | 7 | 2013-09-23 |

| http://wordpress.com | 8686e | 96 | 2013-09-27 |

| http://www.dailycal.org | sandr | 120 | 2013-10-10 |

| http://www.facebook.com | adfer | 105 | 2012-10-22 |

| http://www.feministing.com | fem | 159 | 2013-10-13 |

| http://www.google.com | qwelmw | 73 | 2012-10-19 |

| http://www.gq.com/news-politics/big-issues/201311/drone-uav-pilot-assassination | drones | 73 | 2013-10-13 |

| http://www.marketwatch.com/ | marwtch | 101 | 2010-10-10 |

| http://www.sfgate.com | sfnews | 82 | 2013-10-01 |

| http://www.testURL.com | test | 182 | 2013-10-13 |

| http://www.tutorialspoint.com/mysql/index.htm | 1cx0xys | 88 | 2013-10-01 |

| http://www.twitter.com | eovle | 150 | 2013-10-01 |

| http://www.youtube.com | youtu | 159 | 2012-11-19 |

| http://yahoo.co.jp | 8b26f | 142 | 2013-10-06 |

| http://yahoo.com | e773f | 25 | 2013-10-01 |

| http://yandex.ru | e9af1 | 94 | 2013-09-04 |

| people.ischool.berkeley.edu/~kikiliu/webarch2013/ | kikiliu | 189 | 2011-11-22 |

+---------------------------------------------------------------------------------+-------------+-----------+------------+

39 rows in set (0.00 sec)

* Is it possible that someone querying the database at the same time could see your insert partially complete (eg. only see some fields filled in)? What database property is this related to?

No it’s not possible.

All the relational database transactions are ACID in nature. By that there cannot be any partial transaction and it has to be complete. The property it follows is called ATOM, where the transaction will be of type all or none.

* Increment the hit\_count for only your new row. What is the new count?

mysql> UPDATE links SET hit\_count=hit\_count+1 where short\_url='mit';

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \* from links where short\_url='mit';

+----------------+-----------+-----------+------------+

| long\_url | short\_url | hit\_count | created |

+----------------+-----------+-----------+------------+

| http://mit.edu | mit | 556 | 2013-01-01 |

+----------------+-----------+-----------+------------+

1 row in set (0.00 sec)