

## MySQL Examples from Previous Student Projects 2012 – 2019

<http://w2.mat.ucsb.edu/forum/viewtopic.php?f=77&t=313&sid=6025443574c9b697f4234020e928dfe1>

-----  
<http://vislab.mat.ucsb.edu/2015/anastasiya/p1/index.html>

//Anastasiya – co-occurrence

```
SELECT
  FLOOR(t1.deweyClass) AS dewey1,
  FLOOR(t2.deweyClass) AS dewey2
FROM
  spl_2016.inraw AS t1,
  spl_2016.inraw AS t2
WHERE
  t1.cout = t2.cout AND t1.cin = t2.cin
  AND t1.itemNumber != t2.itemNumber
  AND t1.deweyClass != "
  AND t2.deweyClass != "
  AND YEAR(t1.cout) > 2017
```

-----  
<http://vislab.mat.ucsb.edu/2015/boyan/p1/index.html>

// Standard deviation

```
SELECT
  FLOOR(deweyClass / 100) * 100 AS DeweyDiv,
  AVG(TIMESTAMPDIFF(DAY, cout, cin)) AS TimeAvg,
  VARIANCE(TIMESTAMPDIFF(DAY, cout, cin)) AS TimeVar
FROM
  spl_2016.inraw
WHERE
  YEAR(cout) <= 2014
  AND YEAR(cout) >= 2006
  AND deweyClass <> "
  AND itemtype = 'acbk'
GROUP BY FLOOR(deweyClass / 100) * 100
```

-----  
<http://vislab.mat.ucsb.edu/2014/p1/Robert/index.html>

// retrieve from subject

```
SELECT DISTINCT
  subject.subject
FROM
  spl_2016.subject
WHERE
  subject.subject LIKE '% flute %'
  OR subject.subject LIKE '% clarinet %'
  OR subject.subject LIKE '% oboe %'
  OR subject.subject LIKE '%bassoon %'
  OR subject.subject LIKE '% trumpet %'
  OR subject.subject LIKE '% horn %'
  OR subject.subject LIKE '% tuba %'
  OR subject.subject LIKE '% trombone %'
  OR subject.subject LIKE '% violin%'
  OR subject.subject LIKE '% viola %'
  OR subject.subject LIKE '%cello %'
ORDER BY subject.subject;
```

//19w259 – Chantal – Mysql project – returns number of titles that have words like china or Chinese in them from the cooking section of the Dewey decimal  
// <http://w2.mat.ucsb.edu/forum/viewtopic.php?f=77&t=313#p2127>

```
SELECT
  COUNT(DISTINCT bibnumber)
FROM
  spl_2016.inraw
WHERE
  (title LIKE '%China%'
   OR title LIKE '%Chinese%')
  AND deweyClass >= 641
  AND deweyClass <= 642;
```

-----  
//19w259 0 Chantal Mysql – 69.284 sec  
// <http://vislab.mat.ucsb.edu/2019.html>

```
SELECT
  Bibnumber,
  itemtype,
  title,
  deweyClass,
  COUNT(bibnumber) AS Counts
FROM
  spl_2016.inraw
WHERE
  (title LIKE '%China%'
   OR title LIKE '%Chinese%')
  AND deweyClass >= 641
  AND deweyClass <= 642
GROUP BY bibnumber , itemtype , title , deweyClass
ORDER BY Counts DESC
```

-----  
//Jiaheng Tang – “novel “Fifty Shades of grey” and film adaptation – with removal of certain words, 54 secs  
// <http://vislab.mat.ucsb.edu/2019.html>

```
SELECT
  DATE_FORMAT(cout, '%Y-%m') AS years,
  bibNumber,
  itemType,
  title,
  COUNT(bibNumber) AS Counts
FROM
  spl_2016.inraw
WHERE
  title LIKE '%fifty shades%'
  AND title NOT LIKE '%chicken%'
  AND title NOT LIKE '%kale%'
  AND itemType = 'acbk'
GROUP BY bibNumber , itemType , title , DATE_FORMAT(cout, '%Y-%m')
ORDER BY DATE_FORMAT(cout, '%Y-%m')
```

-----  
[http://vislab.mat.ucsb.edu/2018/p1/Christina\\_Last/index.html](http://vislab.mat.ucsb.edu/2018/p1/Christina_Last/index.html)  
// Christina Last, Floor/Dewey

```
SELECT
  COUNT(outraw.itemNumber) AS NumberOfTimes,
  FLOOR(deweyClass) * 100 AS Dewey,
  title
FROM
```

```
spl_2016.outraw
WHERE
deweyClass >= 910
AND deweyClass <= 919
GROUP BY itemNumber , deweyClass , title
HAVING (COUNT(itemNumber) > 1)
ORDER BY NumberOfTimes DESC
LIMIT 100
```

```
-----
// Wilson Mysql - media checkouts over time replace acbk by %bk, 62 sec
// http://vislab.mat.ucsb.edu/2019.html
```

```
SELECT
  YEAR(cout) AS year,
  COUNT(IF(itemType = 'acbk', 1, NULL)) AS 'books',
  COUNT(IF(itemType = 'acvhs', 1, NULL)) AS 'vhs',
  COUNT(IF(itemType = 'acdvd', 1, NULL)) AS 'dvd',
  COUNT(IF(itemType = 'accd', 1, NULL)) AS 'cd'
FROM
  spl_2016.outraw
WHERE
  YEAR(cout) >= 2005 AND YEAR(cout) < 2019
GROUP BY YEAR(cout)
ORDER BY YEAR(cout) DESC;
```

OR

```
SELECT
  YEAR(cout) AS year,
  COUNT(IF(itemType like '%bk', 1, NULL)) AS 'books',
  COUNT(IF(itemType like '%vhs', 1, NULL)) AS 'vhs',
  COUNT(IF(itemType like '%dvd', 1, NULL)) AS 'dvd',
  COUNT(IF(itemType like '%cd', 1, NULL)) AS 'cd',
  COUNT(IF(itemType like '%cas', 1, NULL)) AS 'audioTape',
  COUNT(IF(itemType like '%cdrom', 1, NULL)) AS 'cd-rom'
FROM
  spl_2016.outraw
WHERE
  YEAR(cout) >= 2005 AND YEAR(cout) < 2019
GROUP BY YEAR(cout)
ORDER BY YEAR(cout) DESC;
```

```
-----
//Anagha Uppa – also media 71 sec?
```

```
SELECT YEAR(cout), itemtype, count(id)
FROM spl_2016.outraw
WHERE YEAR(cout) < '2019'
GROUP BY YEAR(cout), itemtype
```

```
-----
//Sandy – which items have a consistent sustained level of popularity, 125 sec
```

```
SELECT
  itemNumber, AVG(`count`), VARIANCE(`count`)
FROM
  (SELECT
    itemNumber, MONTH(checkOut) AS month, COUNT(*) AS `count`
  FROM
    spl_2016.transactions
  WHERE
```

```
'2016-01-01' <= checkOut
  AND checkOut <= '2016-12-30'
GROUP BY itemNumber , month) AS checkout_counts
GROUP BY itemNumber
-
```

-----  
//Mielin popularity in language learning / average time people keep items  
[http://vislab.mat.ucsb.edu/2019/p1/Meilin\\_Shi/index.html](http://vislab.mat.ucsb.edu/2019/p1/Meilin_Shi/index.html)

```
SELECT
  YEAR(cout) AS years,
  COUNT(IF(deweyClass >= 420 AND deweyClass < 430,
    1,
    NULL)) AS 'English',
  COUNT(IF(deweyClass >= 430 AND deweyClass < 440,
    1,
    NULL)) AS 'German & related',
  COUNT(IF(deweyClass >= 440 AND deweyClass < 450,
    1,
    NULL)) AS 'French & related',
  COUNT(IF(deweyClass >= 450 AND deweyClass < 460,
    1,
    NULL)) AS 'Italian & related',
  COUNT(IF(deweyClass >= 460 AND deweyClass < 470,
    1,
    NULL)) AS 'Spanish & related',
  COUNT(IF(deweyClass >= 491.7
    AND deweyClass < 491.8,
    1,
    NULL)) AS 'Russian',
  COUNT(IF(deweyClass >= 492.7
    AND deweyClass < 492.8,
    1,
    NULL)) AS 'Arabic',
  COUNT(IF(deweyClass >= 495.1
    AND deweyClass < 495.2,
    1,
    NULL)) AS 'Chinese',
  COUNT(IF(deweyClass >= 495.6
    AND deweyClass < 495.7,
    1,
    NULL)) AS 'Japanese',
  COUNT(IF(deweyClass >= 495.7
    AND deweyClass < 495.8,
    1,
    NULL)) AS 'Korean'
FROM
  spl_2016.outraw
WHERE
  deweyClass >= 420 AND deweyClass < 495.8
  AND YEAR(cout) BETWEEN 2006 AND 2018
GROUP BY YEAR(cout)
ORDER BY YEAR(cout);
```

-----

```
SELECT
  class, years, AVG(TIMESTAMPDIFF(DAY, cout, cin)) AS AVG_TIME
FROM
  (SELECT
    SUBSTRING(deweyClass, 1, 5) AS class,
    YEAR(cout) AS years,
```

```

        cin,
        cout,
        TIMESTAMPDIFF(DAY, cout, cin)
FROM
    spl_2016.inraw
WHERE
    YEAR(cout) BETWEEN 2006 AND 2018
    AND TIMESTAMPDIFF(DAY, cout, cin) > 0
    AND (deweyClass >= 491.7
    AND deweyClass < 491.8
    OR deweyClass >= 492.7
    AND deweyClass < 492.8
    OR deweyClass >= 495.1
    AND deweyClass < 495.2
    OR deweyClass >= 495.6
    AND deweyClass < 495.7
    OR deweyClass >= 495.7
    AND deweyClass < 495.8)
GROUP BY years , class , cin , cout) AS aTable
GROUP BY class , years;

```

---

```

// nirvana popularity – very fast search
// http://vislab.mat.ucsb.edu/2018/p1/Adam\_Jahnke/index.html

```

```

SELECT
    bibNumber,
    title,
    SUM(CASE
        WHEN (YEAR(cout) = 2006 AND MONTH(cout) = 1) THEN 1
        ELSE 0
    END) AS '2006-1',
    SUM(CASE
        WHEN (YEAR(cout) = 2006 AND MONTH(cout) = 2) THEN 1
        ELSE 0
    END) AS '2006-2',
    SUM(CASE
        WHEN (YEAR(cout) = 2006 AND MONTH(cout) = 3) THEN 1
        ELSE 0
    END) AS '2006-3',
    SUM(CASE
        WHEN (YEAR(cout) = 2006 AND MONTH(cout) = 4) THEN 1
        ELSE 0
    END) AS '2006-4',
    SUM(CASE
        WHEN (YEAR(cout) = 2006 AND MONTH(cout) = 5) THEN 1
        ELSE 0
    END) AS '2006-5',
    SUM(CASE
        WHEN (YEAR(cout) = 2006 AND MONTH(cout) = 6) THEN 1
        ELSE 0
    END) AS '2006-6',
    SUM(CASE
        WHEN (YEAR(cout) = 2006 AND MONTH(cout) = 7) THEN 1
        ELSE 0
    END) AS '2006-7',
    SUM(CASE
        WHEN (YEAR(cout) = 2006 AND MONTH(cout) = 8) THEN 1
        ELSE 0
    END) AS '2006-8',
    SUM(CASE
        WHEN (YEAR(cout) = 2006 AND MONTH(cout) = 9) THEN 1

```

```

ELSE 0
END) AS '2006-9',
SUM(CASE
  WHEN (YEAR(cout) = 2006 AND MONTH(cout) = 10) THEN 1
  ELSE 0
END) AS '2006-10',
SUM(CASE
  WHEN (YEAR(cout) = 2006 AND MONTH(cout) = 11) THEN 1
  ELSE 0
END) AS '2006-11',
SUM(CASE
  WHEN (YEAR(cout) = 2006 AND MONTH(cout) = 12) THEN 1
  ELSE 0
END) AS '2006-12'
FROM
spl_2016.inraw
WHERE
bibNumber = '1254271'
OR bibNumber = '1318184'
OR bibNumber = '596977'
OR bibNumber = '1633444'
OR bibNumber = '2040694'
OR bibNumber = '1845161'
OR bibNumber = '1849805'
OR bibNumber = '1847206'
OR bibNumber = '1839774'
AND (itemType LIKE '%CD%')
GROUP BY bibNumber , title , itemType

```

-----  
// AVG checkout time, data format,  
// [http://vislab.mat.ucsb.edu/2019/p2/Sarah\\_Wells/index.html](http://vislab.mat.ucsb.edu/2019/p2/Sarah_Wells/index.html)

```

SELECT
LEFT(deweyClass, 3) AS deweyC,
DATE_FORMAT(cout, '%Y-%m') AS yearmonth,
itemType,
COUNT(*) AS count,
AVG(TIMESTAMPDIFF(DAY, cout, cin)) AS avgcouttime
FROM
inraw
WHERE
deweyClass LIKE '5%'
AND (itemType LIKE '%bk'
OR itemType LIKE '%dvd'
OR itemType LIKE '%vhs')
AND YEAR(cout) > 2005
GROUP BY deweyC , yearmonth , itemType;

```

-----  
//most popular items  
// [http://vislab.mat.ucsb.edu/2019/p2/Jiaheng\\_Tang/index.html](http://vislab.mat.ucsb.edu/2019/p2/Jiaheng_Tang/index.html)

```

SELECT
COUNT(itemNumber) AS Counts,
title,
itemNumber,
cout,
itemType,
deweyClass
FROM
spl_2016.inraw
WHERE
YEAR(cout) BETWEEN 2016 AND 2018

```

```
GROUP BY itemNumber , title , cout , itemType , deweyClass
ORDER BY Counts DESC
LIMIT 1000
```

```
-----
// titles
//http://vislab.mat.ucsb.edu/2012/p1/anis/index.html
```

```
SELECT
  YEAR(cout) AS year, COUNT(*)
FROM
  spl_2016.outraw
WHERE
  YEAR(cout) > 2004
  AND (title LIKE '%the catcher in the rye%'
  OR title LIKE '%Holden Caulfield%')
GROUP BY year
ORDER BY year;
```

```
-----
//error in this code
//http://vislab.mat.ucsb.edu/2013/p4/Yeu/index.html
```

```
SELECT
DATE_FORMAT(o, '%Y-%m-%d'),
SUM(CASE
  WHEN title = 'Mansfield Park' THEN 1
  ELSE 0
END) AS 'Mansfield Park',
SUM(CASE
  WHEN title = 'Sense and Sensibility' THEN 1
  ELSE 0
END) AS 'Sense and Sensibility',
SUM(CASE
  WHEN title = 'Pride and Prejudice' THEN 1
  ELSE 0
END) AS 'Pride and Prejudice',
SUM(CASE
  WHEN title = 'Emma' THEN 1
  ELSE 0
END) AS emma,
SUM(CASE
  WHEN title = 'Becoming Jane' THEN 1
  ELSE 0
END) AS Jane
FROM
  spl_2016.outraw
WHERE
  cout > '2006-01-01'
  cout < '2011-01-01'
GROUP BY YEAR(o), MONTH(o)
ORDER BY YEAR(o), MONTH(o);
```

```
-----
// http://vislab.mat.ucsb.edu/2013/p5/Scott/index.html
// this works fast
```

```
SELECT
  COUNT(*) AS count,
  SUM(CASE
    WHEN (title = 'lord of the rings return of the king') THEN 1
    ELSE 0
```

```

END) AS lotrotk,
SUM(CASE
  WHEN (title = 'hobbit or There and back again') THEN 1
  ELSE 0
END) AS hobbit,
SUM(CASE
  WHEN (title = 'game of thrones') THEN 1
  ELSE 0
END) AS got,
SUM(CASE
  WHEN (title = 'name of the wind the kingkiller chronicle day 01') THEN 1
  ELSE 0
END) AS notw,
SUM(CASE
  WHEN (title = 'american gods') THEN 1
  ELSE 0
END) AS ag,
YEAR(cout) AS years,
MONTH(cout) AS months
FROM
  spl_2016.outraw
WHERE
  (spl_2016.outraw.title = 'lord of the rings return of the king'
  OR spl_2016.outraw.title = 'hobbit or There and back again'
  OR spl_2016.outraw.title = 'game of thrones'
  OR spl_2016.outraw.title = 'name of the wind the kingkiller chronicle day 01'
  OR spl_2016.outraw.title = 'american gods')
  AND YEAR(cout) >= 2006
GROUP BY YEAR(cout) , MONTH(cout) ASC
LIMIT 100

```

```

-----
// gets hourly checkouts of dewey classes by
// http://vislab.mat.ucsb.edu/2014/p1/Grant/index.html

```

```

SELECT
  SUBSTRING(deweyClass, 1, 3) AS ddc,
  HOUR(cout) AS hr,
  COUNT(*) AS count_hr
FROM
  spl_2016.outraw
WHERE
  deweyClass <> "
GROUP BY ddc , hr
ORDER BY ddc , hr
hgfdLIMIT 100;

```

```

-----
// co-occurrence
// http://vislab.mat.ucsb.edu/2015/anastasiya/p1/index.html

```

```

SELECT
  FLOOR(t1.deweyClass) AS dewey1,
  FLOOR(t2.deweyClass) AS dewey2
FROM
  spl_2016.inraw AS t1,
  spl_2016.inraw AS t2
WHERE
  t1.cout = t2.cout AND t1.cin = t2.cin
  AND t1.itemNumber != t2.itemNumber
  AND t1.deweyClass != "
  AND t2.deweyClass != "

```



AND YEAR(t1.cout) > 2018;

-----  
  
//what is the total for the media categories for 2015  
// a variation on Rodger's <http://vislab.mat.ucsb.edu/2015/rodger/p1/index.html>  
Looking at 1970 datestamp

```
SELECT
  HOUR(cout) AS Hour,
  SUM(CASE
    WHEN itemtype LIKE '%cdrom' THEN 1
    ELSE 0
  END) AS CD_ROM,
  SUM(CASE
    WHEN itemtype LIKE '%vhs' THEN 1
    ELSE 0
  END) AS Video_VHS,
  SUM(CASE
    WHEN itemtype LIKE '%bk' THEN 1
    ELSE 0
  END) AS Book,
  SUM(CASE
    WHEN itemtype LIKE '%cd' THEN 1
    ELSE 0
  END) AS CD,
  SUM(CASE
    WHEN itemtype LIKE '%mus' THEN 1
    ELSE 0
  END) AS Music_Score,
  SUM(CASE
    WHEN itemtype LIKE '%dvd' THEN 1
    ELSE 0
  END) AS DVD,
  SUM(CASE
    WHEN itemtype LIKE '%disk' THEN 1
    ELSE 0
  END) AS Diskette,
  SUM(CASE
    WHEN itemtype LIKE '%kit' THEN 1
    ELSE 0
  END) AS Kit,
  SUM(CASE
    WHEN itemtype LIKE '%vid' THEN 1
    ELSE 0
  END) AS Video,
  SUM(CASE
    WHEN itemtype LIKE '%cas' THEN 1
    ELSE 0
  END) AS Audio_Tape,
  SUM(CASE
    WHEN itemtype = 'aceq' OR itemtype = 'ucunkn' THEN 1
    ELSE 0
  END) AS Uncataloged
FROM
  spl_2016.inraw
WHERE
  year(cout) = '2015'
GROUP BY HOUR(cout)
```

ORDER BY HOUR(cout)

-----  
//average lending time with select within select  
// <http://vislab.mat.ucsb.edu/2015/donghao/p1/index.html>

```
SELECT
  class,
  GROUP_CONCAT(CAST(year AS CHAR(40)) ORDER BY year) AS years,
  GROUP_CONCAT(CAST(average_lending_time AS CHAR(40)) ORDER BY year) AS average_lending_times,
  GROUP_CONCAT(CAST(count AS CHAR(40)) ORDER BY year) AS counts
FROM (
  SELECT
    SUBSTRING(deweyClass, 1, 2) AS class,
    YEAR(cout) AS year,
    COUNT(*) AS count,
    AVG(TIMESTAMPDIFF(DAY, cout, cin)) AS average_lending_time
  FROM
    spl2.inraw
  WHERE
    cout >= "2006" AND cout < "2014"
    AND itemtype LIKE "%bk"
    AND deweyClass != ""
  GROUP BY
    class, year
) AS innerTable
GROUP BY
  class
ORDER BY
  class ASC;
```

-----  
// <http://w2.mat.ucsb.edu/forum/viewtopic.php?f=77&t=313#p2126>  
// Carly Larsson 109 sec – Identify genre of non-Dewey through subject keywords

```
SELECT DISTINCT
  typeNumBib.itemNumber,
  typeNumBib.bibNumber,
  title.title,
  subject.subject
FROM
  (SELECT
    itemType.itemType, itemToBib.itemNumber, itemToBib.bibNumber
  FROM
    itemType
  JOIN itemToBib ON itemType.itemNumber = itemToBib.itemNumber
  WHERE
    itemType.itemType IN ('acbk', 'arbk', 'bcbk', 'drbk', 'jcbk', 'jrbk')
  ) AS typeNumBib
  JOIN
  deweyClass ON deweyClass.bibNumber = typeNumBib.bibNumber
  AND deweyClass.deweyClass = "
  JOIN title ON typeNumBib.bibNumber = title.bibNumber
  JOIN subject ON typeNumBib.bibNumber = subject.bibNumber;
```