Review the Home Alone Rental Datamart model on D2L. It describes the database you will be querying.

Write SQL queries in MySQL Workbench to answer the following questions using the HomeAloneDW database that is located at adams.uww.edu port 3306. Your user name and password are the same as in previous assignments.

After creating and running a SQL query that produces the correct answer for the given question, copy the query to the clipboard and paste it below the question. Then select all the rows in your result, right click, and choose **Copy Row (with names unquoted)**. Then paste the results below your query.

If you end up with a lot of rows you may have done something wrong.  Make sure you have connected all of the tables using their foreign keys. **NOTE: THIS IS ESPECIALLY TRUE FOR DATA MART QUERIES!**

**Assignment**: Mike Hillyer and Joan Stephens, the owners of the merged Home Alone business, would like the following questions answered so they can better understand their business.

Query 1. List each employee and the number of rentals and amount of rental revenue they were responsible for in July 2016.

SQL:

SELECT employeeId, fullName, COUNT(RentalFact.empDimId) AS numberOfRentals, SUM(totalFee) AS rentalRevenue

FROM EmployeeDim, RentalFact, TimeDim

WHERE EmployeeDim.empDimId = RentalFact.empDimId

AND RentalFact.rentalDateTimeDimId = TimeDim.timeDimId

AND monthName = 'July'

GROUP BY employeeId

Results:

# employeeId, fullName, numberOfRentals, rentalRevenue

1, Hillyer, Mike, 640, 2709.60

2, Stephens, Joan, 665, 2738.35

3, Winston, Jake, 683, 2803.17

4, Albertson, Terri, 644, 2707.56

Query 2. Analyze late fees by week and month. Show the average days late, the average late fees, and the total late fees. List the week by number in the year and the month by name. Round the average days to 1 decimal point and the fees to dollars and cents. List in order by week and month.

SQL:

SELECT week, monthName, ROUND(AVG(daysLate),1) AS averageDaysLate, CONCAT('$',ROUND(AVG(lateFee),2))

AS averageLateFee, CONCAT('$',ROUND(SUM(lateFee),2)) AS totalLateFees

FROM TimeDim, RentalFact

WHERE TimeDim.timeDimId = RentalFact.returnDateTimeDimId

AND lateFee > 0

GROUP BY week

Results:

# week, monthName, averageDaysLate, averageLateFee, totalLateFees

26, July, 1.5, $1.46, $54.00

27, July, 2.8, $2.82, $1206.00

28, July, 3.5, $3.50, $175.00

29, July, 1.4, $1.42, $118.00

30, July, 2.7, $2.68, $2331.00

31, July, 3.8, $3.75, $405.00

32, August, 1.6, $1.56, $176.00

33, August, 2.8, $2.77, $3588.00

34, August, 3.8, $3.78, $579.00

35, September, 1.5, $1.46, $209.00

36, September, 2.8, $2.77, $4853.00

37, September, 3.9, $3.92, $889.00

38, September, 1.6, $1.57, $202.00

39, October, 2.8, $2.76, $4664.00

40, October, 3.9, $3.87, $743.00

Query 3. Which comedies produced the most rental revenue in 2016? List the film titles, release year, total days rented and total rental revenue. Use the return date in your analysis. Only show films that had over 100 days of rentals. List with highest revenue film first.

SQL:

SELECT filmId, filmTitle, releaseYear, SUM(daysRented) AS totalDaysRented, SUM(totalFee) AS totalRentalRevenue

FROM RentalFact, FilmDim, CategoryDim, TimeDim

WHERE RentalFact.filmDimId = FilmDim.filmDimId

AND RentalFact.categoryDimId = CategoryDim.categoryDimId

AND RentalFact.returnDateTimeDimId = TimeDim.timeDimId

AND categoryName = 'Comedy'

AND year = 2016

GROUP BY filmId

HAVING SUM(daysRented) > 100

ORDER BY totalRentalRevenue DESC

Results:

# filmId, filmTitle, releaseYear, totalDaysRented, totalRentalRevenue

1000, ZORRO ARK, 2016, 140, 214.69

444, HUSTLER PARTY, 2011, 143, 190.78

938, VELVET TERMINATOR, 2016, 116, 177.74

127, CAT CONEHEADS, 2009, 148, 176.71

159, CLOSER BANG, 2009, 139, 172.72

680, PINOCCHIO SIMON, 2013, 103, 133.80

814, SNATCH SLIPPER, 2014, 126, 127.78

502, KNOCK WARLOCK, 2012, 134, 116.76

857, STRICTLY SCARFACE, 2015, 108, 113.77

871, SWEDEN SHINING, 2015, 112, 105.83

443, HURRICANE AFFAIR, 2011, 126, 85.76

247, DOWNHILL ENOUGH, 2009, 130, 84.75

638, OPERATION OPERATION, 2013, 119, 84.74

555, MALLRATS UNITED, 2012, 138, 77.75

242, DOOM DANCING, 2009, 131, 73.79

99, BRINGING HYSTERICAL, 2008, 116, 71.80

317, FIREBALL PHILADELPHIA, 2011, 116, 60.79

672, PERFECT GROOVE, 2013, 109, 57.83

388, GUNFIGHT MOON, 2011, 120, 53.78

906, TRAMP OTHERS, 2016, 101, 47.80

119, CAPER MOTIONS, 2009, 110, 38.76

Query 4. How many NC-17 movies did each of our employees rent in August 2016?

SQL:

SELECT employeeId, fullName, COUNT(RentalFact.empDimId) AS numberOfRentals

FROM EmployeeDim, RentalFact, TimeDim, FilmDim

WHERE EmployeeDim.empDimId = RentalFact.empDimId

AND RentalFact.rentalDateTimeDimId = TimeDim.timeDimId

AND RentalFact.filmDimId = FilmDim.filmDimId

AND rating = 'NC-17'

AND monthName = 'August'

AND year = 2016

GROUP BY employeeId

Results:

# employeeId, fullName, numberOfRentals

1, Hillyer, Mike, 324

2, Stephens, Joan, 318

3, Winston, Jake, 300

4, Albertson, Terri, 265

Query 5. What was the average rental rate and average days rented for our North American customers by city and country (i.e., Mexico, Canada, USA). (HINT: do not show individual customers. This query result is a little long.) Round values to appropriate lengths.

SQL:

SELECT city, country, ROUND(AVG(rentalRate),2) AS averageRentalRate, ROUND(AVG(daysRented),0) AS averageDaysRented

FROM RentalFact, CustomerDim

WHERE RentalFact.custDimId = CustomerDim.custDimId

AND (country = 'United States' OR country = 'Mexico' OR country = 'Canada')

GROUP BY city, country

ORDER BY country ASC, city ASC

Results:

# city, country, averageRentalRate, averageDaysRented

Gatineau, Canada, 3.17, 5

Halifax, Canada, 2.75, 5

Oshawa, Canada, 3.08, 5

Richmond Hill, Canada, 3.20, 5

Vancouver, Canada, 2.86, 6

Acua, Mexico, 3.22, 5

Allende, Mexico, 3.07, 5

Atlixco, Mexico, 3.11, 4

Carmen, Mexico, 3.17, 5

Celaya, Mexico, 3.14, 5

Coacalco de Berriozbal, Mexico, 3.26, 5

Coatzacoalcos, Mexico, 3.40, 5

Cuauhtmoc, Mexico, 3.27, 5

Cuautla, Mexico, 2.67, 5

Cuernavaca, Mexico, 3.40, 4

El Fuerte, Mexico, 2.75, 5

Guadalajara, Mexico, 3.34, 4

Hidalgo, Mexico, 2.67, 5

Huejutla de Reyes, Mexico, 2.91, 5

Huixquilucan, Mexico, 3.32, 5

Jos Azueta, Mexico, 2.55, 5

Jurez, Mexico, 2.91, 4

La Paz, Mexico, 3.17, 5

Matamoros, Mexico, 2.21, 4

Mexicali, Mexico, 2.83, 6

Monclova, Mexico, 2.76, 5

Nezahualcyotl, Mexico, 2.26, 5

Pachuca de Soto, Mexico, 2.88, 5

Salamanca, Mexico, 3.05, 5

San Felipe del Progreso, Mexico, 2.92, 5

San Juan Bautista Tuxtepec, Mexico, 3.07, 5

Torren, Mexico, 2.69, 5

Uruapan, Mexico, 3.41, 5

Valle de Santiago, Mexico, 2.41, 4

Zapopan, Mexico, 2.87, 5

Akron, United States, 2.93, 6

Arlington, United States, 3.15, 5

Augusta-Richmond County, United States, 3.21, 5

Aurora, United States, 3.15, 5

Bellevue, United States, 2.59, 6

Brockton, United States, 2.91, 6

Cape Coral, United States, 3.08, 6

Citrus Heights, United States, 2.85, 5

Clarksville, United States, 2.99, 5

Compton, United States, 2.68, 5

Dallas, United States, 2.92, 5

Dayton, United States, 3.07, 5

El Monte, United States, 2.80, 4

Fontana, United States, 2.99, 5

Garden Grove, United States, 2.76, 5

Garland, United States, 2.40, 5

Grand Prairie, United States, 2.89, 5

Greensboro, United States, 2.80, 5

Joliet, United States, 3.20, 6

Kansas City, United States, 3.15, 5

Lancaster, United States, 3.19, 5

Laredo, United States, 1.99, 5

Lincoln, United States, 2.99, 6

Manchester, United States, 3.07, 4

Memphis, United States, 3.34, 6

Peoria, United States, 2.52, 5

Roanoke, United States, 2.64, 6

Rockford, United States, 2.92, 5

Saint Louis, United States, 2.64, 5

Salinas, United States, 3.12, 5

San Bernardino, United States, 3.06, 6

Sterling Heights, United States, 3.40, 5

Sunnyvale, United States, 2.80, 5

Tallahassee, United States, 2.59, 5

Warren, United States, 3.13, 5

Query 6.

What was the number of rentals and total rental revenue by day of the week for customers from Brazil in July of 2016? Report by day name in weekly day order.

SQL:

SELECT dayName, week, COUNT(rentalDateTimeDimId) AS numberOfRentals, SUM(totalFee) AS totalRentalRevenue

FROM RentalFact, CustomerDim, TimeDim

WHERE RentalFact.custDimId = CustomerDim.custDimId

AND RentalFact.rentalDateTimeDimId = TimeDim.timeDimId

AND country = 'Brazil'

AND monthName = 'July'

AND year = 2016

GROUP BY date

Results:

# dayName, week, numberOfRentals, totalRentalRevenue

Friday, 26, 5, 18.95

Saturday, 26, 8, 41.92

Saturday, 28, 1, 4.99

Sunday, 29, 15, 57.85

Monday, 29, 14, 50.86

Tuesday, 29, 19, 64.81

Wednesday, 29, 21, 91.79

Thursday, 29, 15, 57.85

Friday, 29, 14, 70.86

Saturday, 29, 14, 55.86

Query 7. Analyze G rated movie success by release year. List years in order with the number of rentals and the total value of the rentals.

SQL:

SELECT releaseyear, COUNT(rentalDateTimeDimId) AS numberOfRentals, SUM(totalFee) AS totalValue

FROM RentalFact, FilmDim

WHERE RentalFact.filmDimId = FilmDim.filmDimId

AND rating = 'G'

GROUP BY releaseYear

ORDER BY releaseYear

Results:

# releaseyear, numberOfRentals, totalValue

2007, 211, 773.95

2008, 246, 979.55

2009, 486, 2147.18

2010, 238, 927.64

2011, 390, 1486.15

2012, 179, 723.25

2013, 371, 1404.36

2014, 268, 1224.33

2015, 168, 777.35

2016, 216, 1115.84

Query 8. Analyze country rentals of Science Fiction movies. For each country list the average days rented, average days late, average late fee and average total fee. Round days to 1 decimal digit and money to dollars and cents. Only list countries with average days rented above 7.

SQL:

SELECT country, ROUND(AVG(daysRented),0) AS averageDaysRented, ROUND(AVG(daysLate),0) AS averageDaysLate,

CONCAT('$',ROUND(AVG(lateFee),2)) AS averageLateFee, CONCAT('$',ROUND(AVG(totalFee),2)) AS averageTotalFee

FROM RentalFact, FilmDim, CustomerDim, CategoryDim

WHERE RentalFact.filmDimId = FilmDim.filmDimId

AND RentalFact.custDimId = CustomerDim.custDimId

AND RentalFact.categoryDimId = CategoryDim.categoryDimId

AND categoryName = 'Sci-Fi'

GROUP BY country

HAVING AVG(daysRented) > 7

Results:

# country, averageDaysRented, averageDaysLate, averageLateFee, averageTotalFee

Angola, 7, 2, $2.33, $5.99

Estonia, 8, 4, $3.50, $5.49

Ethiopia, 8, 5, $5.00, $5.99

French Guiana, 8, 4, $4.00, $6.99

Gambia, 8, 3, $2.50, $7.49

Holy See (Vatican City State), 8, 3, $3.00, $6.99

Morocco, 9, 3, $3.00, $5.99

Tonga, 9, 3, $3.00, $3.99

Vietnam, 7, 2, $2.20, $4.79

Query 9. Show the number of rentals per employee, on Wednesdays in August of 2016, for PG or PG-13 movies that were either Action or Comedies, to customers who live in the United States. Show the employee’s name, the number, and the total number of rental days and the total rental fees.

SQL:

SELECT fullName, COUNT(rentalDateTimeDimId) AS numberOfRentals, SUM(daysRented) AS totalRentalDays, SUM(totalFee) AS totalRentalFees

FROM RentalFact, EmployeeDim, CustomerDim, TimeDim, FilmDim, CategoryDim

WHERE RentalFact.empDimId = EmployeeDim.empDimId

AND RentalFact.custDimId = CustomerDim.custDimId

AND RentalFact.rentalDateTimeDimId = TimeDim.timeDimId

AND RentalFact.filmDimId = FilmDim.filmDimId

AND RentalFact.categoryDimId = CategoryDim.categoryDimId

AND CustomerDim.country = 'United States'

AND dayName = 'Wednesday'

AND monthName = 'August'

AND year = 2016

AND (rating = 'PG' OR rating = 'PG-13')

AND (categoryName = 'Action' OR categoryName = 'Comedy')

GROUP BY employeeId

Results:

# fullName, numberOfRentals, totalRentalDays, totalRentalFees

Hillyer, Mike, 1, 7, 1.99

Winston, Jake, 2, 9, 3.98

Albertson, Terri, 2, 15, 11.98

Query 10. Create your own question and query to help your new owners. Trivial queries will only get partial credit. Write the question below and include the query results.

Question:

Find the average days rented, total revenue, and average days late of films in the Action category that are rented by United States customers during the months June and July. List by film title, average days rented, total rental revenue, and average days late that are greater than 0.

SQL:

SELECT filmTitle, ROUND(AVG(daysRented),0) AS averageDaysRented, SUM(totalFee) AS totalRentalRevenue, ROUND(AVG(daysLate),0) AS averageDaysLate

FROM RentalFact, CustomerDim, CategoryDim, TimeDim, FilmDim

WHERE RentalFact.custDimId = CustomerDim.custDimId

AND RentalFact.categoryDimId = CategoryDim.categoryDimId

AND RentalFact.rentalDateTimeDimId = TimeDim.timeDimId

AND RentalFact.filmDimId = FilmDim.filmDimId

AND country = 'United States'

AND categoryName = 'Action'

AND (monthName = 'June' OR monthName = 'July')

GROUP BY filmId

HAVING AVG(daysLate) > 0

Results:

# filmTitle, averageDaysRented, totalRentalRevenue, averageDaysLate

CAMPUS REMEMBER, 7, 4.99, 2

CASUALTIES ENCINO, 9, 10.99, 6

CELEBRITY HORN, 8, 1.99, 1

DANCES NONE, 5, 2.99, 2

EASY GLADIATOR, 6, 5.99, 1

EXCITEMENT EVE, 8, 5.99, 5

FOOL MOCKINGBIRD, 6, 7.99, 3

HANDICAP BOONDOCK, 7, 6.98, 3

MOCKINGBIRD HOLLYWOOD, 7, 3.99, 3

PARK CITIZEN, 5, 6.99, 2

PRIMARY GLASS, 9, 2.99, 2