

CIS240 – HW 5 and 6

Due Monday, December 2 @ 2:00 PM

For this assignment, you will use MySQL to design and populate a data warehouse and Tableau to create accompanying visualizations. Please upload a .pdf, .doc or .jpeg file with the requested screenshots and descriptions (neat organization is appreciated!).

The script file create_cc.sql creates a database which contains the 10 tables summarized below, with transactional data related to one year of operations of Blue Hill Country Club.

Membership data tables:

memberships -	one record per membership
members -	one record per person (multiple family members can be included on the same membership account)

Revenue data tables:

dining -	transaction records from dining room
golf -	transaction records from golf course
pool -	transaction records from pool
tennis -	transaction records from tennis courts
other -	transaction records from miscellaneous activities

Other data tables:

special -	A series of Boolean variables indicating whether the member attended one of 4 special functions in 2018.
promoone -	list of members who signed up for one of the club's promotional offers
promotwo -	list of members who signed up for the second of the club's promotional offers

**** note:** "promo1" and "promo2" are blind variables. In other words, no information is given as to the nature of the offer - this is left for you to discover.

1. (70 points) Design and create a data warehouse for the country club database. The decisions about which fields to include and how to aggregate the data are left to you. You do not need to include every single data point from the 10 tables given. Do your best and use your judgement as to what is interesting/useful.
Submit a screen shot of the first 25 rows of your data warehouse table(s) and the SQL code that you used to create it. Please copy and paste your SQL code into a text document.
2. (30 points) Create two SQL queries on your data warehouse.
Submit a screen shot (or other copy) of the query results (or the first 25 rows if it is longer) and a 1-3 sentence description of the question your code was addressing and/or what you found in the results.
3. (60 points) Create three visualizations in Tableau using your data warehouse.
Submit a screen shot (or other copy) of your visualizations and 2-4 sentences describing your output and what insights it offers into the operations of the organization.
4. (25 points) In particular, Blue Hill CC would like to use the data warehouse to investigate cross-selling and other marketing opportunities. Make two recommendations for potential marketing targets. Examples: “members who spend a lot of money on XXX are most likely to also spend money on XXX”, “members with more children are most likely to purchase XXX”.
Submit 4-3 sentences describing your recommendations and a query, table or graph to back up your conclusion.
5. (15 points) What can you learn from the data about the nature of Promo1 and Promo2?
Describe briefly and/or illustrate with a query or graph the impact on revenues that you feel Promo1 and Promo2 were targeting.

Grading Rubric: Your completed work will be evaluated using the rubric below. I encourage you to use your creativity and other business skills (communication, presentation, critical thinking) in addition to the data management concepts and the SQL and Tableau skills that we have covered in CIS240.

A	A-/B+	B/B-	C
The work submitted demonstrates both technical competence as well as critical and creative analytical skill. The answers are communicated and visualized clearly and effectively.	All required parts of the assignment are complete and technically correct (with possibly a few minors issues)	Some required parts of the assignment are missing and/or there are more significant errors	The project has large portions missing and/or major conceptual errors.