



Northeastern University

Within your solution file please provide the question number in comments before the solution.

Write SQL queries that answer the following questions. Make sure you compose a query that does not use literal values determined by perusing the tuples. Also, remember some queries may generate an empty result.

- 1.(10 points) For each character (found in the `lotr_character` table), count the number of encounters documented within the database. Note: a character's name may appear in two different fields in the encounter table. Each tuple in the result should contain the character's name and the count of encounters.
- 2.(10 points) Count the number of regions each character has visited (as documented in the database). Each tuple in the result should contain the character's name and the number of regions the character has been documented as visiting as specified in the database. Note: the character's home region should be included in the count.
- 3.(5 points) Count the number of regions whose majority species is 'hobbit'. The result should consist of a number.
- 4.(10 points) What region has been documented as having the most number of first encounters?
- 5.(10 points) What region has been visited by all characters?
- 6.(5 points) Make a separate table from the `lotr_first_encounters` table – where the records are for the first book. Name the new table `book1_encounters`.
- 7.(10 points) Which book (book name) does 'Frodo' encounter 'Faramir'? The result should contain the book id and its title.
- 8.(5 points) For each Middle Earth region (each region in the `lotr_region` table), create an aggregated field that contains a list of character names that have it as his homeland. The result set should contain the region name and the grouped character names. Do not duplicate names within the grouped list of character names.
- 9.(5 points) Which is the largest species (by size)?
- 10.(5 points) How many characters are "human"?
- 11.(5 points) Make a separate table from the first encounter table – where the tuples are the first encounters between one hobbit and one human. Name the table `HumanHobbitFirstEncounters`.
- 12.(5 points) List the names of the characters that have "gondor" listed as their homeland.
- 13.(5 points) How many characters have "hobbit" listed as their species?
- 14.(5 points) For each Middle Earth region, determine the number of characters from each homeland. The result set should contain the region name and the count of the number of characters. Make sure you do not count characters more than once.
- 15.(5 points) For each character determine the number of first encounters they have had according to the database. Rename the computed number of encounters as *encounters*. Make sure each character appears in the result. If a character has not had any encounters, the number of encounters should be equal to NULL or 0.