Homework #4 Help

Tourism Industry Problem

Background Information

Travel and tourism comprise one of the largest industries in the world. Across the globe, in 2024, it supported 357 million jobs and contributed $10.9 trillion to the world economy [1]. The travel and tourism industry brings in customers and helps associated businesses like accommodation services, food & beverages, recreational services, retail trade, and transportation to flourish.

Gathering data on revenue generated by tourism across different regions provides important insight into the economies of those regions. This data helps in understanding the growth of businesses dependant on tourism and their contribution to economy.

Problem Statement

In this assignment, students will create a database to store and analyze tourism-related employment and economic statistics from selected countries.

Instructions

WARNING: This is not the actual Homework for your section. You will not receive any credit for completing this project.

IMPORTANT: This assignment requires the Windows version of Microsoft 365. macOS users can access a ready-to-use version through Azure Virtual Desktop by following the instructions at https://cs101.wvu.edu/avd.

IMPORTANT: Complete the steps below in the order they are given. Completing the steps out of order may complicate the assignment or result in an incorrect result.

1. Create a new Microsoft Access database named **hwhelp4_tip_*lastname_firstname*.accdb**.
2. We would like to begin by making a table to store region names.
    a. Create a table named *Regions* to store the names of regions and their abbreviations. Designate the abbreviation as primary key.

b. Enter records for all regions below.

HINT: The *Regions* table will contain 7 records.

Region Abbreviation	Region Name
EAS	East Asia & Pacific
ECS	Europe & Central Asia
LCN	Latin America & Caribbean
MEA	Middle East & North Africa
NAC	North America
SAS	South Asia
SSF	Sub-Saharan Africa

3. We need to create a table to store information about income groups.
   a. Create a table named *IncomeGroups* to store the names of income groups and their abbreviations. Designate the group abbreviation as primary key.
   b. Enter records for the income groups below.

HINT: The *IncomeGroups* table will contain 4 records.

Income Group Abbreviation	Income Group Name
HIC	High income
LIC	Low income
LMC	Lower middle income
UMC	Upper middle income

4. To finish adding our dataset, we must store information about tourism revenue and employment.
   a. Create a table named *TourismStatistics* to store information on each country (listed below under Step 4b). Some requirements for this table appear below.

IMPORTANT: Completely define the *TourismStatistics* table before entering records.

   i. For the primary key, use an AutoNumber-type field to store an ID number.
   ii. Provide a field to store the country name.
   iii. Provide a field to store the region. Using a lookup field referencing the *Region* table, allow the user to select the region abbreviation and name (e.g., "EAS | East Asia & Pacific") from a dropdown list.

   Do not hide the key column. Store the value of the region abbreviation field. Enable data integrity, restricting deletes, on the relationship created by the Lookup Wizard.

iv. Provide a field to store the income group. Using a lookup field referencing the *IncomeGroups* table, allow the user to select the group abbreviation and name (e.g., "HIC | High income") from a dropdown list.

    Do not hide the key column. Store the value of the group abbreviation field. Enable data integrity, restricting deletes, on the relationship created by the Lookup Wizard.

v. Provide a field formatted as percentage with 1 decimal place to store the percentage of the population that works in the tourism industry. Use the *Double* field size.

vi. Provide a standard-type number field with no decimal places to store the country's population.

vii. Provide a currency field to the amount of economic revenue that comes from tourism.

viii. Provide a field to store the economic class. Using a lookup field, allow the user to select the class from a dropdown list. Permit the user to choose only from these values:

    - ◇ Advanced
    - ◇ Emerging

b. Enter the below data into your *Countries* table as appropriate. The below information is from 2022 [2]–[5].

HINT: The *Countries* table will contain 18 records.

Country Name	Region Name	Income Group	Percent of Population Employed in Tourism	Population	Tourism Revenue	Econ Class
Albania	Europe	Upper mid	3.1%	2,777,689	$718,851,828	Emerging
Belgium	Europe	High	3.0%	11,680,210	$20,360,979,899	Advanced
Canada	N. Am.	High	4.8%	38,935,934	$30,884,796,230	Advanced
France	Europe	High	2.6%	68,065,015	$99,548,358,690	Advanced
Greece	Europe	High	5.4%	10,436,882	$13,964,580,139	Advanced
Israel	Mid East	High	3.4%	9,557,500	$9,820,884,850	Advanced
Lithuania	Europe	High	1.7%	2,831,639	$1,541,435,294	Advanced
Mauritius	Sub-Saharan Africa	Upper mid	2.2%	1,262,523	$1,110,068,030	Emerging
New Zealand	East Asia	High	4.2%	5,117,100	$7,734,809,735	Advanced
Peru	Latin Am.	Upper mid	7.3%	33,475,438	$5,561,081,889	Emerging
Poland	Europe	High	3.0%	36,821,749	$15,998,973,026	Emerging
Portugal	Europe	High	6.2%	10,434,332	$22,093,286,056	Advanced
Saudi Arabia	Mid East	High	2.7%	32,175,224	$42,872,001,920	Emerging
South Africa	Sub-Saharan Africa	Upper mid	0.9%	62,378,410	$14,404,968,163	Emerging
Switzerland	Europe	High	1.5%	8,777,088	$16,073,073,183	Advanced
Tajikistan	Europe	Lower mid	0.5%	10,182,222	$361,045,799	Emerging
Tunisia	Mid East	Lower mid	2.7%	12,119,334	$1,397,906,721	Emerging
Uruguay	Latin Am.	High	3.4%	3,390,913	$4,009,745,500	Emerging

5. Create separate queries to provide the information requested below. Name each query after the step in which it appears (i.e., name the query in Step 5a as *Query5a*).

HINT: Run your queries to test them. Make sure that they display all and only the records that you would expect to appear.

a. Create a query to display tourism statistics for each country. List the region name, country name, income group name, and tourism revenue.

   Sort by region name and then by country name, both in ascending order.

   HINT: This query will show 18 records and 4 fields.

b. We wish to compare tourism employment across countries. Create a query listing the country name, percentage of population employed in tourism, population, and tourism revenue. Also, include a field to calculate the number of people employment in tourism.

   You can calculate the number of people employed in tourism using the formula:

   $$[Countries.Population] \times [Countries.TourismEmploymentPctg]$$

   Format the calculated field as a standard-type number with no decimal places. Sort by the calculated field in descending order.

   HINT: This query will show 18 records and 5 fields.

c. Create a query to display information on tourism revenue in advanced economy countries. List the country name, tourism revenue, and population.

   Only display countries located in the Advanced economic class. Do not show the economic class in the results.

   HINT: This query will show 9 records and 3 fields.

d. We wish to summarize tourism employment and tourism revenue for each income group. Create a query listing, for each income group name, the sum of tourism revenue, and average of the percentage of the population employed in tourism.

   Format the sum as currency. Format the average as a percentage with 1 decimal places.

   HINT: This query will show 3 records and 3 fields.

e. Create a query to display the number of countries in each region. List, for each region name, the count of its countries.

   Your results must include all regions, even if they have no countries.

   Format the count of countries as a standard-type number with no decimal places.

   HINT: This query will show 7 records and 2 fields.

6. Using the Form Wizard, create a form with subform. The main form should display the full region name. The subform must display a datasheet with all *Countries* table fields.

   Name the main form *RegionData* and the subform *RegionDataSubform.*

7. Using the Report Wizard, create a report to show the results of the *Query5a* query. Display all fields from the query.

   View by region and sort by country name in ascending order. Use a stepped layout and landscape page orientation. Name the report *RegionSummary.*

   Ensure the full widths of all columns are visible on the report.

8. We need to create a new table to store analysis questions responses.

   a. Create a table named *AnalysisQuestions* with the fields below. Use appropriate field types and designate a good primary key.

Table: *AnalysisQuestions*	
Field Name	**Description**
QuestionStep	Question being answered.
Response	Response to the analysis question prompt.

9. In the *AnalysisQuestions* table, answer three of the five analysis questions below. Respond to one question per record. List the **QuestionStep** as the step whose question you are answering (i.e., list `9a` for the question in Step 9a).

   a. Revenue from foreign tourists is a major contributor to many countries' economies. What are some major factors impacting the number of foreign travelers visiting a country? Name at least two factors.

   b. Does there appear to be any relationship between if a country was an emerging or advanced economy and the percentage of its workforce involved in tourism? Does tourism have an impact on an economy's status?

   c. Between 2008 and 2012, the percentage of tourism revenue in the United States from foreigners increased relative to the share from domestic travelers. What are some possible reasons for this phenomenon?

d. Tunisia and Tajikistan are both emerging economies with similar populations, but the tourism revenue in Tunisia is nearly quadruple that of Tajikistan. Why might this be the case?

10. Run the Compact and Repair Database utility on your database. Ignore any errors you receive when running the utility.

Grading Rubric

This is a practice assignment and is worth no points. A comparable Homework would be worth 60 points and graded using this rubric, with partial credit awarded as appropriate:

Steps 2a-b	5 points total	Step 6	4 points
Steps 3a-b	5 points total	Step 7	4 points
Step 4a	6 points	Step 8a	3 points
Step 4b	4 points	Steps 9a-e (pick 3 of 5)	3 points each
Steps 5a-e	4 points each		

The analysis questions in Steps 9a-e can be evaluated using this rubric:

Standard	Meets Requirements (1.5 points)	Does Not Meet Requirements (0 points)
Answer is reasonable.	Answer addresses the question prompt and is factually correct or a reasonable interpretation of available data.	Answer does not address the question prompt, is factually incorrect, or is an unreasonable interpretation of available data.
Answer is supported.	Logical rationale is provided to support the given answer.	Logical rationale is not provided to support the given answer.

References

[1] "Travel & Tourism Economic Impact Research (EIR)," *World Travel & Tourism Council*. Available: *https://wttc.org/research/economic-impact*. Accessed: Aug. 01, 2025.
[2] "GDP (current US$)," World Bank, 2025. Available: *https://data.worldbank.org/indicator/NY.GDP.MKTP.CD*.
[3] "Groups and Aggregates Information," *International Monetary Fund*, Apr. 2023. Available: *https://www.imf.org/en/Publications/WEO/weo-database/2023/April/groups-and-aggregates*.
[4] "Employed Persons: SDG Indicator 8.9.2," UN Tourism, Apr. 2025. Available: *http://www.unwto.org/tourism-statistics/tourism-data-employment*.
[5] "Tourism GDP: SDG Indicator 8.9.1," UN Tourism, Apr. 2025. Available: *http://www.unwto.org/tourism-statistics/tourism-data-macroeconomic-indicators*.