Unit 02 Problem Set Submission Form

Overview

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Instructions

Put your name and SU email at the top. Answer these questions all from the lab. When asked to include screenshots, please follow the screen shot guidelines from the first lab.

Remember as you complete the problem sets it is not only about getting it right / correct. We will discuss the answers in class so it's important to articulate anything you would like to contribute to the discussion in your answer:

- If you feel the question is vague, include any assumptions you've made.
- If you feel the answer requires interpretation or justification provide it.
- If you do not know the answer to the question, articulate what you tried and how you are stuck.

This how you receive credit for answering questions which might not be correct.

Questions

1. Does a table consist of data or metadata? Explain.

A table is consisted of both data and metadata. Data are stored in rows, while metadata defines the columns, how the data in tables are connected with one another.

2. Describe what happens when you attempt to insert 200 characters into a column with a data type of varchar (50)?

Since there is a fixed length column of 50 characters, all the characters from 51 to 200 will be cut of. So what will be presented in the table will be only the first 50 characters.

3. How do we enforce entity integrity over a table which uses a surrogate primary key?

To enforce entity integrity or uniquely identify each row, we can assign constrains. Use unique constraints: similar to primary keys. Since there can be only 1 primary key in one table, we use unique keys to the columns whose values are distinct. In our case email addresses can be unique key.

Check constrains: will restrict the values that can be entered in a column. It ensures that data will be on an accepted format.
Foreign key constrains: the column which is a foreign key should take only data from a column which is Primary or Unique constrain.

4. Provide a screenshot of your completed **customers** table include columns, indexes and foreign keys.

Table: customers

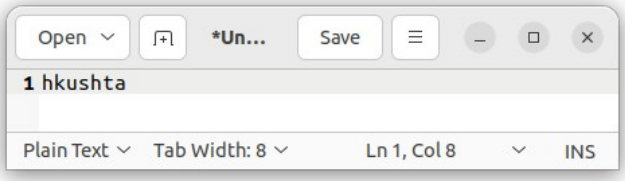
Foreign key has been created. 18:17:35 SQL command

Select data **Show structure** Alter table New item

Column	Type	Comment
customer_id	int *Auto Increment*	
customer_email	varchar(50)	
customer_min_price	money	
customer_max_price	money	
customer_city	varchar(50)	
customer_state	char(2)	

Indexes

PRIMARY	*customer_id*
UNIQUE	*customer_email*



Alter indexes

Foreign keys

Source	Target	ON DELETE	ON UPDATE	
customer_state	**moze**.state_lookup(*state_code*)			Alter

5. Implement the **contractors** table as defined in the overview section. Include columns, indexes (pk/unique) and foreign keys. Provide a screenshot of the table structure screen in Adminer and include the columns, indexes, and foreign keys sections.

Table: contractor

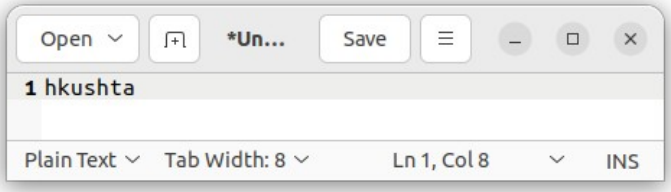
Foreign key has been created. 18:56:02 SQL command

Select data **Show structure** Alter table New item

Column	Type	Comment
contractor_id	int *Auto Increment*	
contractor_email	varchar(50)	
contractor_rate	money	
contractor_city	varchar(50)	
contractor_state	char(2)	

Indexes

PRIMARY	*contractor_id*
UNIQUE	*contractor_email*



Alter indexes

Foreign keys

Source	Target	ON DELETE	ON UPDATE	
contractor_state	**moze**.state_lookup(*state_code*)			Alter

Add foreign key

6. Implement the **jobs** table as defined in the overview section. Include columns, indexes (pk/unique) and foreign keys. Provide a screenshot of the table structure screen in Adminer and include the columns, indexes, and foreign keys sections.

Table: jobs

Foreign key has been created. 19:06:15 SQL command

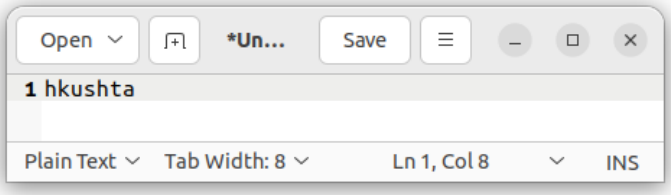
Select data **Show structure** Alter table New item

Column	Type	Comment
job_id	int *Auto Increment*	
job_submitted_by	int	
job_requested_date	date	
job_contracted_by	int *NULL*	
job_service_rate	money *NULL*	
job_estimated_date	date *NULL*	
job_completed_date	date *NULL*	
job_customer_rating	int *NULL*	

Indexes

PRIMARY	*job_id*

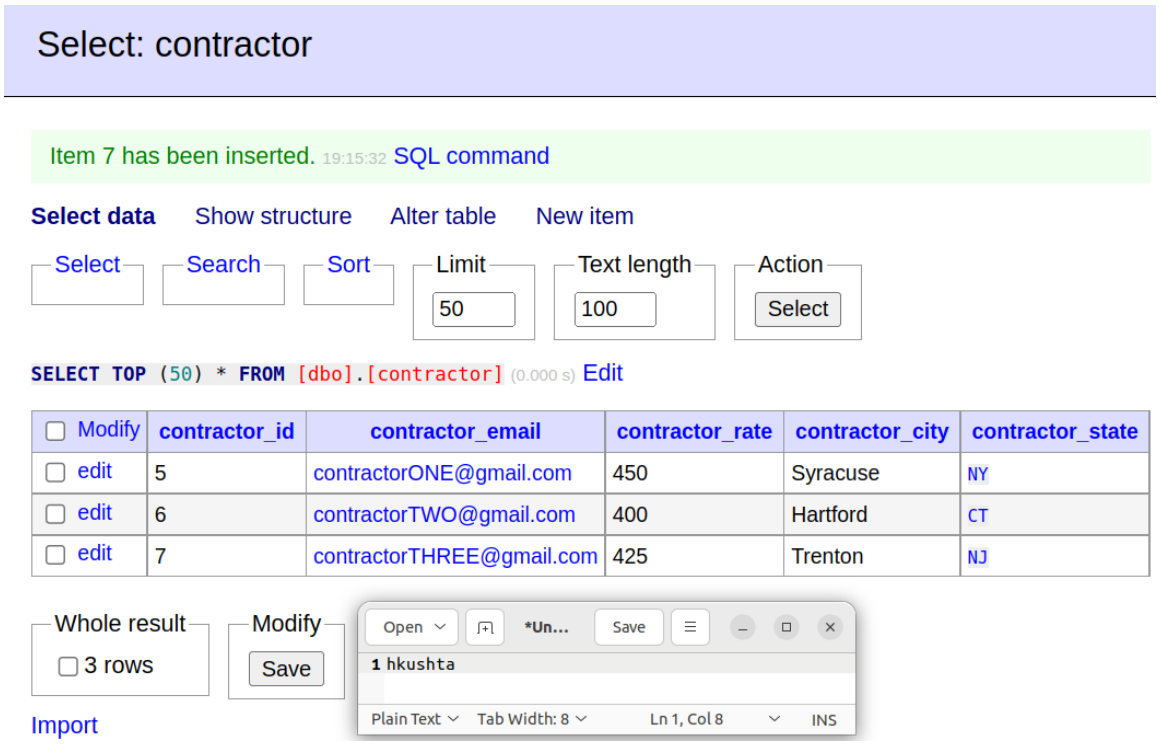
Alter indexes



Foreign keys

Source	Target	ON DELETE	ON UPDATE	
job_contracted_by	**moze**.contractor(*contractor_id*)			Alter
job_submitted_by	**moze**.customers(*customer_id*)			Alter

7. Add 3 contractors to the **contractors** table and provide a screenshot of the Select data screen as evidence they were added.



8. Can you add two contractors with the same email address? Explain.

No, we can not enter two contractors with the same email address, because email address is a unique key. It does not allow to insert duplicate value.

9. Can you add a contractor from the state of MA? Explain.

No, we cannot enter a contractor from the state of MA, because column contractor_state is a foreign key which gets values from column state_code from which is a primary key in table state_lookup. The values that this column can take are CT, NJ, NY and PA.

Reflection

Use this section to reflect on your learning. To achieve the highest grade on the assignment you must be as descriptive and personal as possible with your reflection.

1. What are the key things you learned through the process of completing this assignment?

   How to create tables and constrains using Adminer and add data to the tables.

2. What were the challenges or roadblocks (if any) you encountered on the way to completing it?

3. Were you prepared for this assignment? What can you do to be better prepared?

   Yes, I was prepared for the assignment.

4. Now that you have completed the assignment rate your comfort level with this week's material. This should be an honest assessment: (choose one)

   4 ==> I understand this material and can explain it to others.
   3 ==> I understand this material.
   2 ==> I somewhat understand the material but sometimes need guidance from others.
   1 ==> I understand very little of this material and need extra help.