

Unit 02 Problem Set Submission Form

Overview

Your Name	Bhavya Shah
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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.

Ans - The table consists of both. The column headers are metadata and the information under it are data.

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

Ans – The table would not store 200 characters into a column, it will store only the first 50 characters.

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

Ans – We enforce entity integrity over a table which uses a surrogate primary key by introducing a candidate key.

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

Database Provisioner x New query x Table: customers - mssql - Adminer x +

localhost:5003/?mssql=mssql&username=sa&db=moze&ns=dbo&table=customers

Language: English

MS SQL (beta) » mssql » moze » dbo » Table: customers

Adminer 4.8.1

DB: moze
Schema: dbo

SQL command Import
Create table

select customers
select state_lookup

Table: customers

Foreign key has been created. 05:56:46 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

	Index
PRIMARY	customer_id
UNIQUE	customer_email

Alter indexes

Foreign keys

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

Add foreign key

Triggers

Add trigger

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.

Database Provisioner x New query x Table: contractor - mssql - Adminer x +

localhost:5003/?mssql=mssql&username=sa&db=moze&ns=dbo&table=contractor

Language: English

MS SQL (beta) » mssql » moze » dbo » Table: contractor

Adminer 4.8.1

DB: moze
Schema: dbo

SQL command Import
Create table

select contractor
select customers
select state_lookup

Table: contractor

Foreign key has been created. 06:09:09 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

	Index
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

Triggers

Add trigger

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.

The screenshot shows the Adminer 4.8.1 interface for a Microsoft SQL Server database. The left sidebar contains navigation links for 'SQL command', 'Import', 'Create table', and a list of tables: 'contractor', 'customers', 'jobs', and 'state_lookup'. The main panel displays the 'Table: jobs' structure, which includes columns: 'job_id' (int Auto Increment), 'job_submitted_by' (int), 'job_requested_by' (date), 'job_contracted_by' (int NULL), 'job_service_rate' (money NULL), 'job_estimated_date' (date NULL), 'job_completed_date' (date NULL), and 'job_customer_rating' (int NULL). Below the table structure, the 'Indexes' section shows a primary index on 'job_id'. The 'Foreign keys' section lists two foreign keys: 'job_contracted_by' pointing to 'moze.contractor(contractor_id)' and 'job_submitted_by' pointing to 'moze.customers(customer_id)'. A green notification bar at the top of the main panel states 'Foreign key has been created. 06:20:50 SQL command'. A Notepad window in the foreground shows the text 'Bhavya Shah' and 'SUID - 631985283'.

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

The screenshot shows the Adminer 4.8.1 interface for a Microsoft SQL Server database. The left sidebar contains navigation links for 'SQL command', 'Import', 'Create table', and a list of tables: 'contractor', 'customers', 'jobs', and 'state_lookup'. The main panel displays the 'Select: contractor' screen. A green notification bar at the top of the main panel states 'Item 6 has been inserted. 06:34:47 SQL command'. Below the notification bar, the 'Select data' section shows a table with three rows of data. The table has columns: 'contractor_id', 'contractor_email', 'contractor_rate', 'contractor_city', and 'contractor_state'. The rows are: 1, jack01@gmail.com, 100, Syracuse, NY; 5, john22@outlook.com, 150, Buffalo, NY; 6, jason@gmail.com, 200, Newark, NJ. A Notepad window in the foreground shows the text 'Bhavya Shah' and 'SUID - 631985283'.

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

Ans – No, because email is a unique entity.

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

Ans – No, we cannot because we have not inserted MA as a state option in the state_lookup under state_code. So it would not be valid.

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?

Ans – I learned to create tables and assign constraints as primary and foreign keys. Connecting multiple tables via foreign key.

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

Ans- The challenge was to validate the dates in the jobs table.

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

Ans – I was almost prepared for this assignment, Professor Fudge's videos explained in details about using adminer and how to use it.

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.