

Unit 03 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:

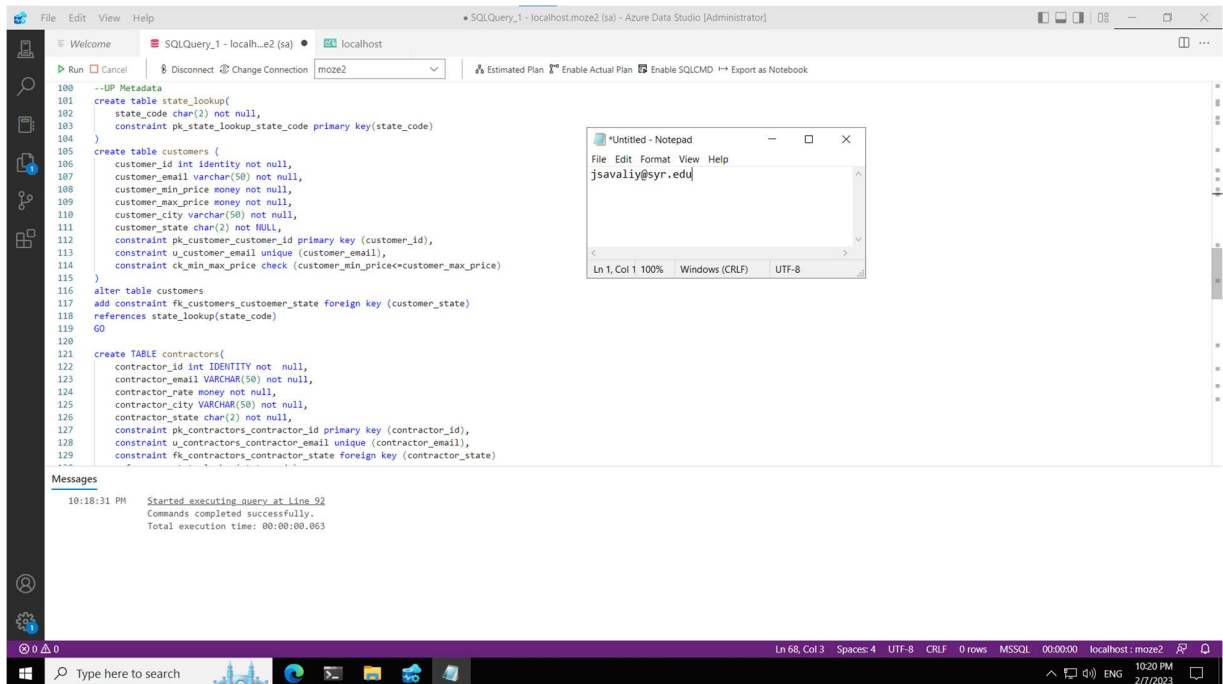
- If you feel the question is vague, include any assumptions you've made.
- If you feel the answer requires interpretation or justification provide it.
- If you do not know the answer to the question, articulate what you tried and how you are stuck.

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

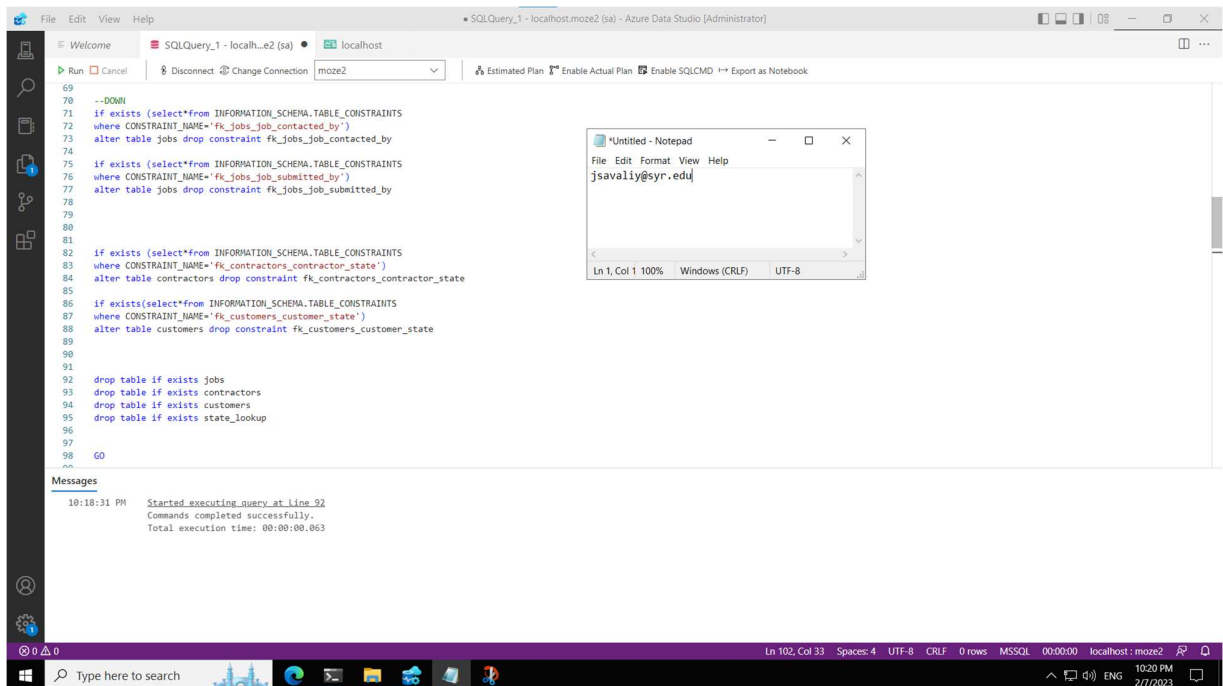
Questions

Answer these questions using the problem set submission template. You will need to consult the logical model in the overview section for details. For any screenshots provided, please follow the guidelines for submitting a screenshot.

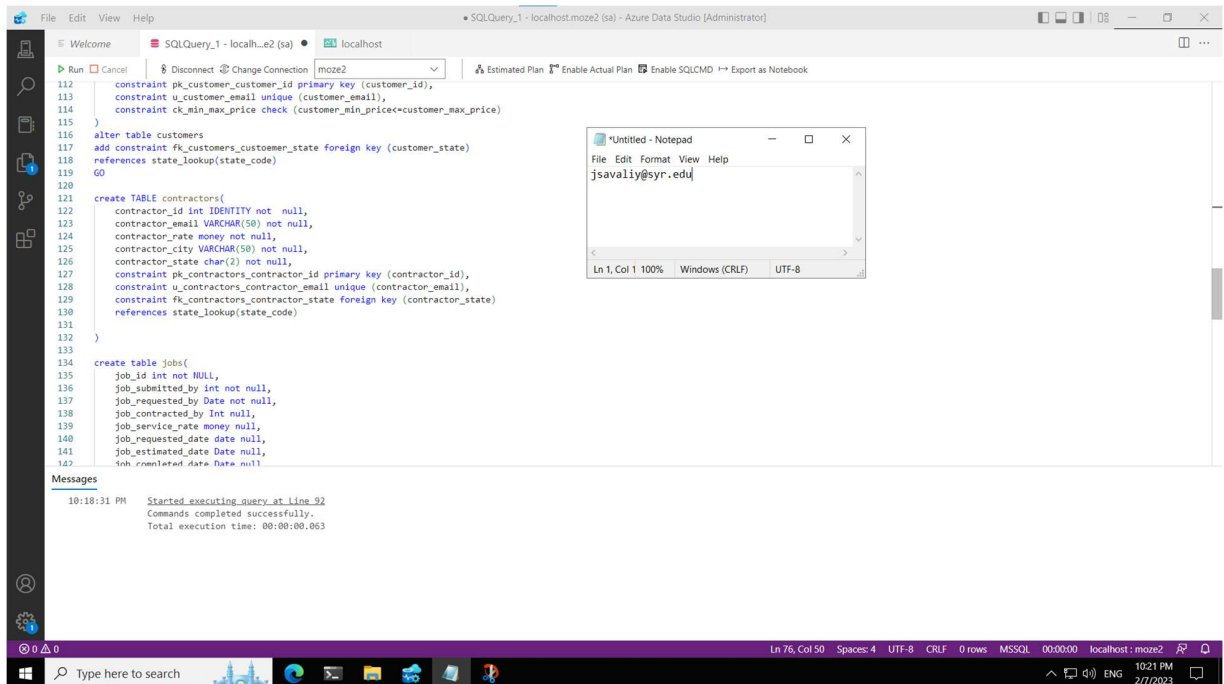
1. Add the **contractors** table as defined in the overview section to your SQL script at the bottom of your --UP Metadata section. Include columns, indexes (pk/unique) in the create table statement. Provide a screenshot of the SQL code.



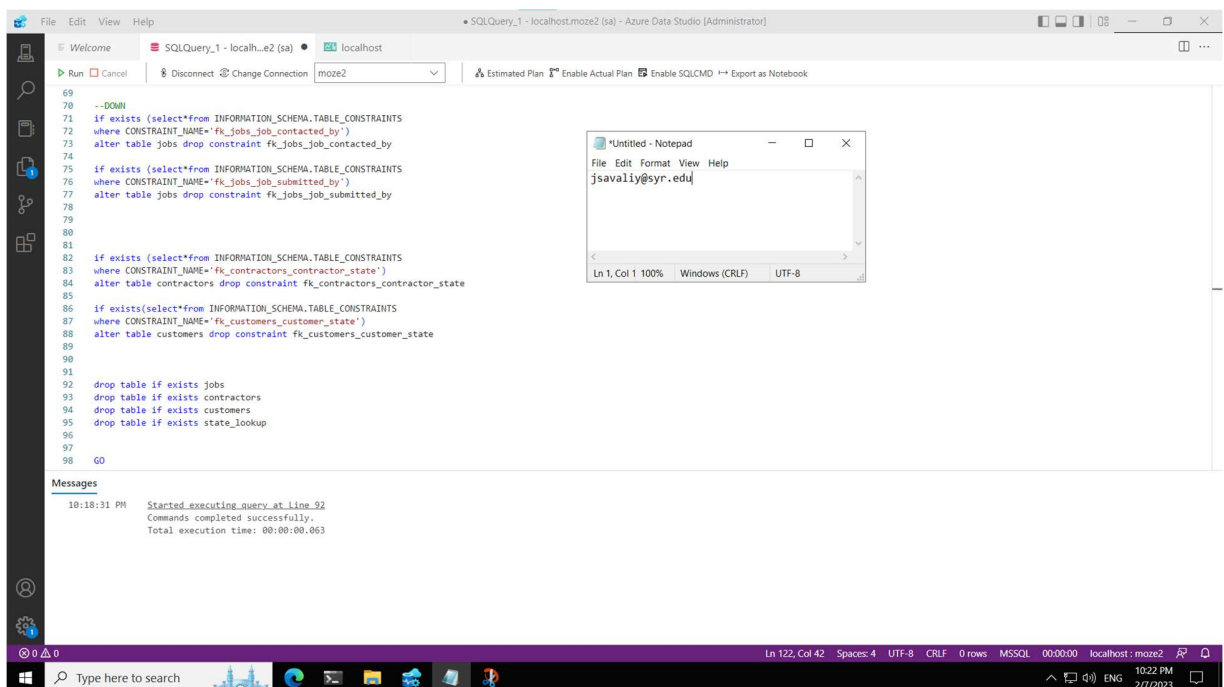
2. Add the reverse command to the --DOWN section of your SQL script, dropping the table. Provide a screenshot of the code.



3. Alter the **contractors** table adding a foreign key over the **contractor_state** column, **fk_contractors_contractor_state**. Add it to the --UP Metadata portion of the script. Provide a screenshot of the SQL code.



4. Add the reverse command to the DOWN section of your SQL script, dropping the foreign key. It should be a soft delete as with the other foreign key in the walkthrough. Provide a screenshot of the code.



5. At the bottom of the --UP Data section, insert the following contractor data.

contractor_email	contractor_rate	contractor_city	contractor_state
otyme@dayrep.com	50.0000	Syracuse	NY
meyezing@dayrep.com	75.0000	Syracuse	NY
bitall@dayrep.com	35.0000	Rochester	NY
sbeeches@dayrep.com	85.0000	Hartford	CT

Add a select statement to the --Verify section. Provide evidence your script works to this point by including a screenshot of the table outputs.

The screenshot shows a SQL Server Enterprise Manager window with a script execution window open. The script contains the following SQL code:

```

GO
167 ('pneup@dayrep.com',100,150,'syracuse','NY'),
168 ('tanott@gustr.com',25,75,'Rochester','NY'),
169 ('sboote@gustr.com',50,100,'New Have','CT')
170
171 GO
172 insert into contractors
173 (contractor_email, contractor_rate,contractor_city,contractor_state)
174 VALUES
175 ('otyme@dayrep.com',50.0000,'syracuse','NY'),
176 ('meyezing@dayrep.com',75.0000,'syracuse','NY'),
177 ('bitall@dayrep.com',35.0000,'Rochester','NY'),
178 ('sbeeches@dayrep.com',85.0000,'Hartford','CT')
179
180 GO
181 insert into jobs(job_id, job_submitted_by,job_requested_by,job_contracted_by,job_service_rate,job_estimated_date,job_completed_date)
182 VALUES
183 (1,1,'2020-05-01',null,null,null,null),
184 (2,2,'2020-05-01',1,50.0000,'2020-05-02',null),
185 (3,5,'2020-05-01',4,85.0000,'2020-05-03','2020-05-03')
186
187 GO
188 --Verify
189 select*from state_lookup
190 select*from customers
191 select*from contractors
192 select*from jobs
193
194
195
196

```

The results grid shows the following data:

contractor_id	contractor_email	contractor_rate	contractor_city	contractor_state
1	otyme@dayrep.com	50.00	syracuse	NY
2	meyezing@dayrep.com	75.00	syracuse	NY
3	bitall@dayrep.com	35.00	Rochester	NY
4	sbeeches@dayrep.com	85.00	Hartford	CT

6. Create the **jobs** table with pk and check constraints. Add it to the appropriate section of the script and provide a screenshot of the SQL code.

```

127 constraint pk_contractors_contractor_id primary key (contractor_id),
128 constraint u_contractors_contractor_email unique (contractor_email),
129 --constraint fk_contractors_contractor_state foreign key (contractor_state)
130 --references state_lookup(state_code)
131
132 )
133
134 create table jobs(
135     job_id int not null,
136     job_submitted_by int not null,
137     job_requested_by Date not null,
138     job_contracted_by int null,
139     job_service_rate money null,
140     job_requested_date date null,
141     job_estimated_date Date null,
142     job_completed_date Date null,
143     job_customer_rating int null,
144     constraint pk_jobs_job_id primary key (job_id),
145     constraint ck_valid_job_dates check ( job_requested_date <= job_estimated_date and job_estimated_date <= job_completed_date)
146 )
147
148 alter table jobs
149 add constraint fk_jobs_job_submitted_by foreign key (job_submitted_by)
150 references customers(customer_id)
151
152 alter table jobs
153 add constraint fk_jobs_job_contracted_by foreign key (job_contracted_by)
154 references contractors(contract_id)
155
156

```

	contractor_id	contractor_email	contractor_rate	contractor_city	contractor_state
1	1	otyme@dayrep.com	50.00	syracuse	NY
2	2	meyezing@dayrep.com	75.00	syracuse	NY
3	3	bitall@dayrep.com	35.00	Rochester	NY
4	4	sbeeches@dayrep.com	85.00	Hartford	CT

7. Add the drop table statement for the **jobs** table, add it to the appropriate section of the script and provide a screenshot of the SQL code.

```

65 GO
66
67 use moze2
68 GO
69
70 --DOWN
71 if exists (select*from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
72 where CONSTRAINT_NAME='fk_jobs_job_contracted_by')
73 alter table jobs drop constraint fk_jobs_job_contracted_by
74
75 if exists (select*from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
76 where CONSTRAINT_NAME='fk_jobs_job_submitted_by')
77 alter table jobs drop constraint fk_jobs_job_submitted_by
78
79
80
81
82 if exists (select*from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
83 where CONSTRAINT_NAME='fk_contractors_contractor_state')
84 alter table contractors drop constraint fk_contractors_contractor_state
85
86 if exists (select*from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
87 where CONSTRAINT_NAME='fk_customers_customer_state')
88 alter table customers drop constraint fk_customers_customer_state
89
90
91
92 drop table if exists jobs
93 drop table if exists contractors
94 drop table if exists customers
95

```

	contractor_id	contractor_email	contractor_rate	contractor_city	contractor_state
1	1	otyme@dayrep.com	50.00	syracuse	NY
2	2	meyezing@dayrep.com	75.00	syracuse	NY
3	3	bitall@dayrep.com	35.00	Rochester	NY
4	4	sbeeches@dayrep.com	85.00	Hartford	CT

8. Add the two foreign key constraints to the **jobs** table. Add it to the appropriate section of the script and provide a screenshot of the SQL code.

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'SQLQuery_1 - localh...e2 (sa)' connection. The right pane shows the SQL script for creating the 'jobs' table and its constraints. The script includes the following code:

```

124 contractor_rate money not null,
125 contractor_city VARCHAR(50) not null,
126 contractor_state char(2) not null,
127 constraint pk_contractors_contractor_id primary key (contractor_id),
128 constraint u_contractors_contractor_email unique (contractor_email),
129 --constraint fk_contractors_contractor_state foreign key (contractor_state)
130 --references state_lookup(state_code)
131 )
132
133
134 create table jobs(
135 job_id int not null,
136 job_submitted_by int not null,
137 job_requested_by Date not null,
138 job_contracted_by int null,
139 job_service_rate money null,
140 job_requested_date date null,
141 job_estimated_date date null,
142 job_completed_date date null,
143 job_customer_rating int null,
144 constraint pk_jobs_job_id primary key (job_id),
145 constraint ck_valid_job_dates check ( job_requested_date <= job_estimated_date and job_estimated_date <= job_completed_date)
146 )
147
148 alter table jobs
149 add constraint fk_jobs_job_submitted_by foreign key (job_submitted_by)
150 references customers(customer_id)
151
152 alter table jobs
153 add constraint fk_jobs_job_contracted_by foreign key (job_contracted_by)
154 references contractors(contractor_id)
155
156

```

The 'Results' pane shows the following data:

contractor_id	contractor_email	contractor_rate	contractor_city	contractor_state
1	otyme@dayrep.com	50.00	syracuse	NY
2	mezezing@dayrep.com	75.00	syracuse	NY
3	bitall@dayrep.com	35.00	Rochester	NY
4	sbeeches@dayreo.com	85.00	Hartford	CT

9. Add code to softly remove the foreign key constraints from the **jobs** table. (should be two separate checks for drops). Add it to the appropriate section of the script and provide a screenshot of the SQL code.

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the 'SQLQuery_1 - localh...e2 (sa)' connection. The right pane shows the SQL script for removing the foreign key constraints from the 'jobs' table. The script includes the following code:

```

67 use moze2
68 GO
69
70 --DOWN
71 if exists (select*from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
72 where CONSTRAINT_NAME='fk_jobs_job_contracted_by')
73 alter table jobs drop constraint fk_jobs_job_contracted_by
74
75 if exists (select*from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
76 where CONSTRAINT_NAME='fk_jobs_job_submitted_by')
77 alter table jobs drop constraint fk_jobs_job_submitted_by
78
79
80
81
82 if exists (select*from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
83 where CONSTRAINT_NAME='fk_contractors_contractor_state')
84 alter table contractors drop constraint fk_contractors_contractor_state
85
86 if exists (select*from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
87 where CONSTRAINT_NAME='fk_customers_customer_state')
88 alter table customers drop constraint fk_customers_customer_state
89
90
91
92 drop table if exists jobs
93 drop table if exists contractors
94 drop table if exists customers
95 drop table if exists state_lookup
96

```

The 'Results' pane shows the following data:

contractor_id	contractor_email	contractor_rate	contractor_city	contractor_state
1	otyme@dayrep.com	50.00	syracuse	NY
2	mezezing@dayrep.com	75.00	syracuse	NY
3	bitall@dayrep.com	35.00	Rochester	NY
4	sbeeches@dayreo.com	85.00	Hartford	CT

10. Write SQL code to insert the following jobs to the **jobs** table.

job_submitted_by	job_requested_date	job_contracted_by	job_service_rate	job_estimated_date	job_completed_date
1	2020-05-01	NULL	NULL	NULL	NULL
2	2020-05-01	1	50.0000	2020-05-02	NULL
5	2020-05-01	4	85.0000	2020-05-03	2020-05-03

Provide evidence the entire script works by including a screenshot off all 4 tables with data in them.

The screenshot shows the SQL Studio interface with the following data:

state_code

state_code
1
2
3

customer

customer_id	customer_email	customer_min_price	customer_max_price	customer_city	customer_state
1	lkarforless@superrito.com	50.00	100.00	syracuse	NY
2	bdehatchett@dayrep.com	25.00	50.00	syracuse	NY
3	pneaup@dayrep.com	100.00	150.00	syracuse	NY
4	tanott@gustr.com	25.00	75.00	Rochester	NY
5	sboat@gustr.com	50.00	100.00	New Have	CT

contractor

contractor_id	contractor_email	contractor_rate	contractor_city	contractor_state
1	otyme@dayrep.com	50.00	syracuse	NY
2	mezezing@dayrep.com	75.00	syracuse	NY
3	bitall@dayrep.com	35.00	Rochester	NY
4	sbeeches@dayreo.com	85.00	Hartford	CT

jobs

job_id	job_submitted_by	job_requested_by	job_contracted_by	job_service_rate	job_requested_date	job_estimated_date	job_completed_date	job_customer_rating
1	1	2020-05-01	NULL	NULL	NULL	NULL	NULL	NULL
2	2	2020-05-01	1	50.00	2020-05-02	NULL	NULL	NULL
3	5	2020-05-01	4	85.00	2020-05-03	2020-05-03	NULL	NULL

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.

- What are the key things you learned through the process of completing this assignment?
➔ **I learned about data base integrity and all the constraints like primary key constraint , foreign key constraint etc.**
- What were the challenges or roadblocks (if any) you encountered on the way to completing it?
➔ **At times, I needed clarification, so I watched the videos again and went through the tutorial.**
- Were you prepared for this assignment? What can you do to be better prepared?
➔ **Yes, I should have watched the video again as some of the concepts are a little unclear.**
- 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.