Unit 03 Problem Set Submission Form

Overview

Your Name	Bhavya Shah
Your SU Email	bhshah@syr.edu

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.

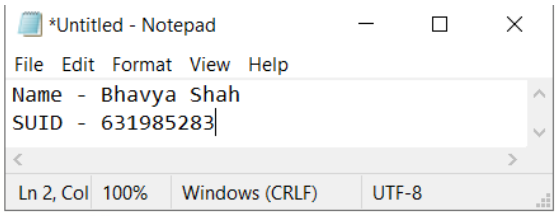
This how you receive credit for answering questions which might not be correct.

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.

```
53
54  CREATE table contractors(
55      contractor_id int IDENTITY not NULL,
56      contractor_email varchar(50) not NULL,
57      contractor_rate money not null,
58
59      contractor_city varchar(50) not null,
60      contractor_state char(2) not null,
61
62
63      CONSTRAINT pk_contractors_contractor_id PRImary key(contractor_id),
64      constraint u_contractors_email unique (contractor_email),
65  )
```

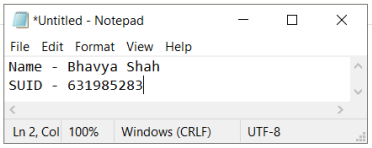


2. Add the reverse command to the --DOWN section of your SQL script, dropping the table. Provide a screenshot of the code.

```sql
--DOWN

if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
    where CONSTRAINT_NAME = 'fk_jobs_job_submitted_by')
    alter table jobs DROP CONSTRAINT fk_jobs_job_submitted_by


if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
    where CONSTRAINT_NAME = 'fk_jobs_contracted_by')
    alter table jobs DROP CONSTRAINT fk_jobs_contracted_by


if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
    where CONSTRAINT_NAME = 'fk_contractors_contractor_state')
    alter table contractors DROP CONSTRAINT fk_contractors_contractor_state


if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
    where CONSTRAINT_NAME = 'fk_customers_customer_state')
    alter table customers DROP CONSTRAINT fk_customers_customer_state
drop table if exists jobs
drop table if exists contractors
```

Results | Messages

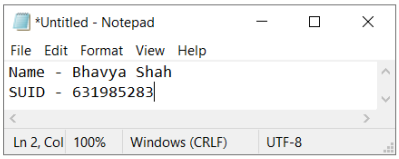
	state_code
1	CT
2	NJ
3	NY



	customer_id	customer_email	customer_max_price	customer_min_price	customer_city	customer_state
1	1	lkarforless@superito.com	100.00	50.00	Syracuse	NY
2	2	bdehatchett@dayree.com	50.00	25.00	Syracuse	NY
3	3	pmeaup@dayrep.com	150.00	100.00	Syracuse	NY
4	4	tanoot@gustr.com	75.00	25.00	Rochester	NY
5	5	sboat@gustr.com	100.00	50.00	New Heaven	CT

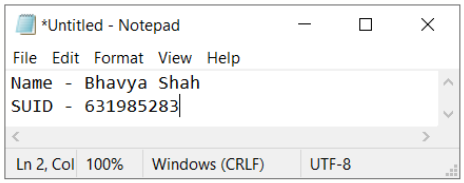
3. Alter the **contractors** table adding a foreign key over the **contractor_state** column, **fk_contractors_contractor_state.** Add it to the --UP Metadata portion of the script. Provide a screenshot of the SQL code.

```sql
    REFERENCES state_lookup(state_code)


alter table contractors
    add constraint fk_contractors_contractor_state foreign key(contractor_state)
    REFERENCES state_lookup(state_code)


alter table jobs
    add constraint fk_jobs_job_submitted_by foreign key(job_submitted_by)
    REFERENCES customers(customer_id)

alter table jobs
    add constraint fk_jobs_contracted_by foreign key(job_contracted_by)
    REFERENCES contractors(contractor_id)




GO
```



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.

```
13  --DOWN
14
15  if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
16      where CONSTRAINT_NAME = 'fk_jobs_job_submitted_by')
17      alter table jobs DROP CONSTRAINT fk_jobs_job_submitted_by
18
19
20  if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
21      where CONSTRAINT_NAME = 'fk_jobs_contracted_by')
22      alter table jobs DROP CONSTRAINT fk_jobs_contracted_by
23
24
25  if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
26      where CONSTRAINT_NAME = 'fk_contractors_contractor_state')
27      alter table contractors DROP CONSTRAINT fk_contractors_contractor_state
28
29
30  if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
31      where CONSTRAINT_NAME = 'fk_customers_customer_state')
32      alter table customers DROP CONSTRAINT fk_customers_customer_state
33  drop table if exists jobs
```



Results Messages

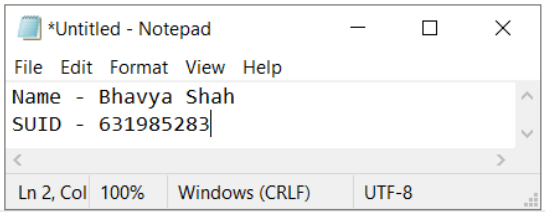
state_code

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.

```
127
128
129  INSERT into contractors
130      (contractor_email, contractor_rate, contractor_city, contractor_state )
131      VALUES
132      ('oyeme@dayrep.com',50.000,'Syracuse','NY'),
133      ('meyezing@dayrep.com',25,'Syracuse','NY'),
134      ('bitall@day.com',25,'Rochester','NY'),
135      ('sbeeches@dayrep.com',50,'Hartford','CT')
136
137  INSERT into jobs
138      (job_submitted_by ,    job_requested_date  )
139      values
140      (1,'2020-05-01')
141
142  INSERT into jobs
143      (job_submitted_by ,    job_requested_date ,job_contracted_by,    job_service_rate  ,    job_estimated_date )
144      values
145      (2,'2020-05-01',1,50.00,'2020-05-02')
146
147  INSERT into jobs
148      (job_submitted_by ,    job_requested_date ,job_contracted_by,    job_service_rate  ,    job_estimated_date, job_completed_date )
149      values
150      (5,'2020-05-01',4,85.00,'2020-05-03','2020-05-03')
151
152
153  -- Verify
154
155  select * from state_lookup
156  select * from  customers
157  select * from contractors
158  select * from jobs
```



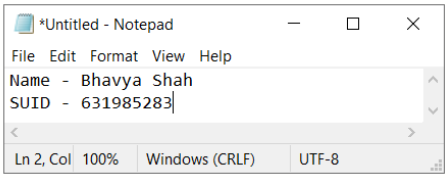
Results Messages

5	5	sboat@gustr.com	100.00	50.00	New Heaven	CT

	contractor_id	contractor_email	contractor_rate	contractor_city	contractor_state
1	1	oyeme@dayrep.com	50.00	Syracuse	NY
2	2	meyezing@dayrep.com	25.00	Syracuse	NY
3	3	bitall@day.com	25.00	Rochester	NY
4	4	sbeeches@dayrep.com	50.00	Hartford	CT

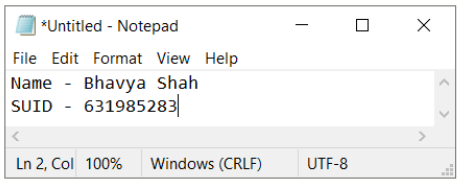
6. Create the **jobs table** with pk and check constraints. Add it to the appropriate section of the script and provide a screenshot of the SQL code.

```
73
74  CREATE table jobs(
75      job_id int IDENTITY not NULL,
76      job_submitted_by int  not NULL,
77      job_requested_date Date   not NULL,
78      job_contracted_by int   NULL,
79      job_service_rate  money   NULL,
80      job_estimated_date date NULL,
81      job_completed_date date null,
82       job_customer_rating int null,
83
84
85      CONSTRAINT pk_jobs_job_id PRImary key(job_id),
86      constraint ck_valid_job_dates check (job_requested_date<=job_estimated_date and job_estimated_date <= job_completed_date),
87
88
89
90
91  )
```



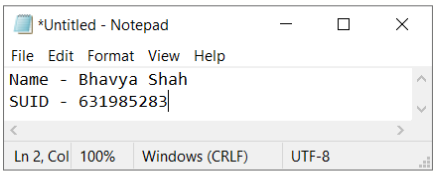
7. Add the drop table statement for the **jobs table**, add it to the appropriate section of the script and provide a screenshot of the SQL code.

```
22      alter table jobs DROP CONSTRAINT fk_jobs_contracted_by
23
24
25  if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
26      where CONSTRAINT_NAME = 'fk_contractors_contractor_state')
27      alter table contractors DROP CONSTRAINT fk_contractors_contractor_state
28
29
30  if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
31      where CONSTRAINT_NAME = 'fk_customers_customer_state')
32      alter table customers DROP CONSTRAINT fk_customers_customer_state
33  drop table if exists jobs
34  drop table if exists contractors
35  drop table if exists customers
36
37  drop table if exists state_lookup
38
39
40  GO
41
42  --UP Metadata
43  create  table state_lookup (
```



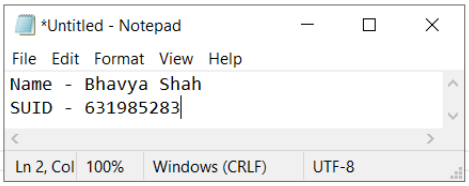
8. Add the two foreign key constraints to the **jobs table.** Add it to the appropriate section of the script and provide a screenshot of the SQL code.

```
99      REFERENCES state_lookup(state_code)
100
101
102
103 alter table contractors
104     add constraint fk_contractors_contractor_state foreign key(contractor_state)
105     REFERENCES state_lookup(state_code)
106
107
108 alter table jobs
109     add constraint fk_jobs_job_submitted_by foreign key(job_submitted_by)
110     REFERENCES customers(customer_id)
111
112 alter table jobs
113     add constraint fk_jobs_contracted_by foreign key(job_contracted_by)
114     REFERENCES contractors(contractor_id)
115
116
117
118
119
```



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.

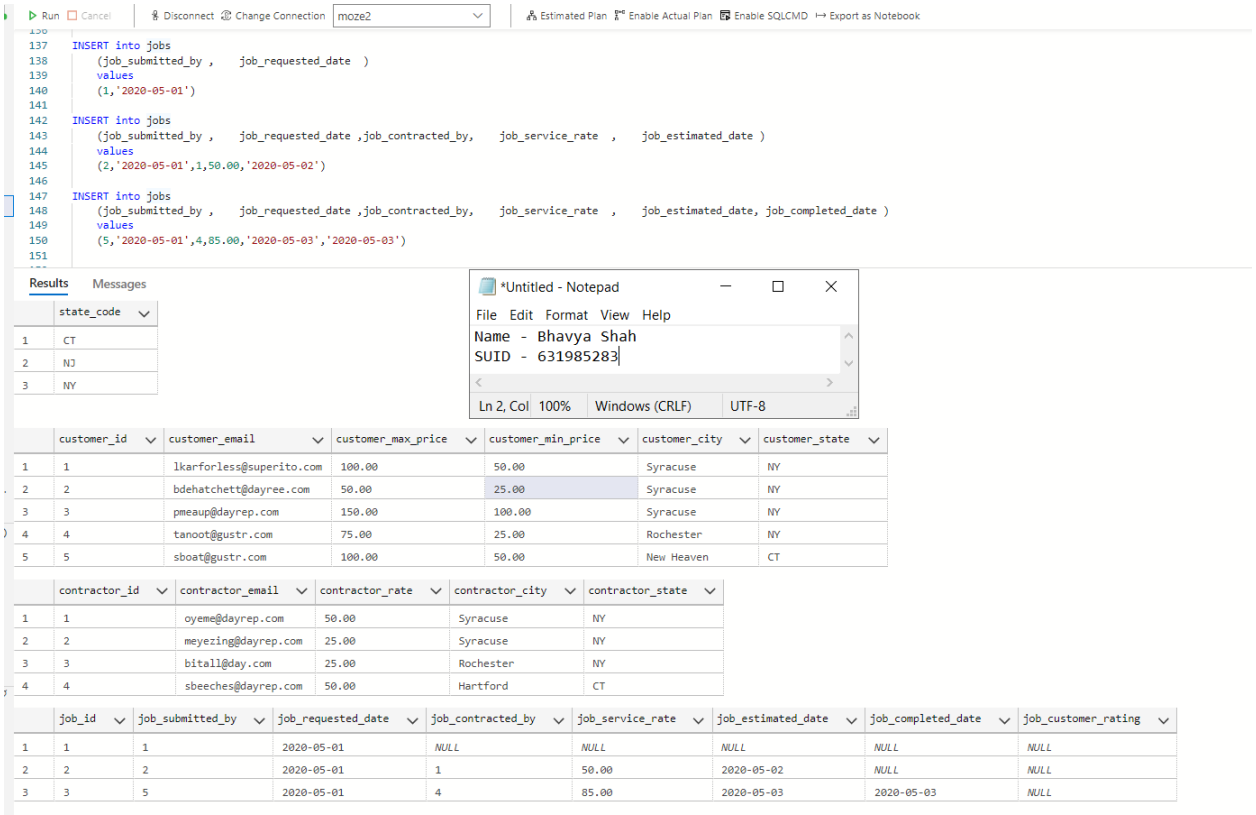
```
8   GO
9
10  --DOWN
11
12  if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
13      where CONSTRAINT_NAME = 'fk_jobs_job_submitted_by')
14      alter table jobs DROP CONSTRAINT fk_jobs_job_submitted_by
15
16  if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
17      where CONSTRAINT_NAME = 'fk_jobs_contracted_by')
18      alter table jobs DROP CONSTRAINT fk_jobs_contracted_by
19
20  if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
21      where CONSTRAINT_NAME = 'fk_contractors_contractor_state')
22      alter table contractors DROP CONSTRAINT fk_contractors_contractor_state
23
24  if exists(select * from INFORMATION_SCHEMA.TABLE_CONSTRAINTS
25      where CONSTRAINT_NAME = 'fk_customers_customer_state')
26      alter table customers DROP CONSTRAINT fk_customers_customer_state
27  drop table if exists jobs
28  drop table if exists contractors
```



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.



```
INSERT into jobs
    (job_submitted_by ,    job_requested_date  )
    values
    (1,'2020-05-01')

INSERT into jobs
    (job_submitted_by ,    job_requested_date ,job_contracted_by,    job_service_rate  ,    job_estimated_date )
    values
    (2,'2020-05-01',1,50.00,'2020-05-02')

INSERT into jobs
    (job_submitted_by ,    job_requested_date ,job_contracted_by,    job_service_rate  ,    job_estimated_date, job_completed_date )
    values
    (5,'2020-05-01',4,85.00,'2020-05-03','2020-05-03')
```

Results | Messages

	state_code
1	CT
2	NJ
3	NY

*Untitled - Notepad

File Edit Format View Help

Name - Bhavya Shah
SUID - 631985283

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	customer_id	customer_email	customer_max_price	customer_min_price	customer_city	customer_state
1	1	lkarforless@superito.com	100.00	50.00	Syracuse	NY
2	2	bdehatchett@dayree.com	50.00	25.00	Syracuse	NY
3	3	pmeaup@dayrep.com	150.00	100.00	Syracuse	NY
4	4	tanoot@gustr.com	75.00	25.00	Rochester	NY
5	5	sboat@gustr.com	100.00	50.00	New Heaven	CT

	contractor_id	contractor_email	contractor_rate	contractor_city	contractor_state
1	1	oyeme@dayrep.com	50.00	Syracuse	NY
2	2	meyezing@dayrep.com	25.00	Syracuse	NY
3	3	bitall@day.com	25.00	Rochester	NY
4	4	sbeeches@dayrep.com	50.00	Hartford	CT

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

1. What are the key things you learned through the process of completing this assignment?
   Ans – DDL and DML commands

2. What were the challenges or roadblocks (if any) you encountered on the way to completing it?
   Ans – learning different SQL queries and how to execute them.

3. Were you prepared for this assignment? What can you do to be better prepared?
   Ans – I could practice more queries to be better prepared.

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.