Unit 03 Problem Set Submission Form

Overview

Your Name	Hendi Kushta
Your SU Email	hkushta@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.

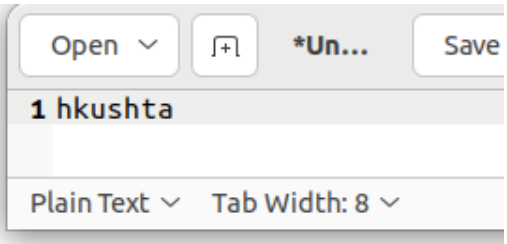
This how you receive credit for answering questions which might not be correct.

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.

```
CREATE TABLE contractors(
    contractor_id INT IDENTITY NOT NULL,
    contractor_email VARCHAR(50) NOT NULL,
    contractor_rate MONEY NOT NULL,
    contractor_city VARCHAR(50) NOT NULL,
    contractor_state CHAR(2) NOT NULL,
    CONSTRAINT pk_contractors_contractor_id PRIMARY KEY(contractor_id),
    CONSTRAINT u_contractors_contractor_email UNIQUE(contractor_email)
)
```



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

```
DROP TABLE IF EXISTS contractors
DROP TABLE IF EXISTS state_lookup
```

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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.

```
ALTER TABLE contractors
    ADD CONSTRAINT fk_contractor_contractor_state FOREIGN KEY(contractor_state)
        REFERENCES state_lookup(state_code)

GO
```

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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 walk through. Provide a screenshot of the code.

```
IF EXISTS(SELECT * FROM INFORMATION_SCHEMA.TABLE_CONSTRAINTS
    WHERE CONSTRAINT_NAME = 'fk_contractors_contractor_state')
    ALTER TABLE contractors DROP CONSTRAINT fk_contractors_contractor_state
```

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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.

```
INSERT INTO contractors(
    contractor_email,
    contractor_rate,
    contractor_city,
    contractor_state
)
VALUES
    ('otyme@dayrep.com', 50, 'Syracuse', 'NY'),
    ('meyezing@dayrep.com', 75, 'Syracuse', 'NY'),
    ('bitall@dayrep.com', 35, 'Rochester', 'NY'),
    ('sbeeches@dayrep.com', 85, 'Hartford', 'CT')

GO
```

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```
SELECT * FROM contractors
```

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	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

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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.

```
CREATE TABLE jobs(
    job_id INT IDENTITY NOT NULL,
    job_submitted_by INT NOT NULL,
    job_requested_date DATE NOT NULL,
    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,
    CONSTRAINT pk_jobs_job_id PRIMARY KEY(job_id),
    CONSTRAINT ck_valid_job_dates CHECK(job_requested_date <= job_estimated_date
        and job_estimated_date <= job_completed_date)
)
```

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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.

```
DROP TABLE IF EXISTS jobs
DROP TABLE IF EXISTS customers
DROP TABLE IF EXISTS contractors
DROP TABLE IF EXISTS state_lookup
```

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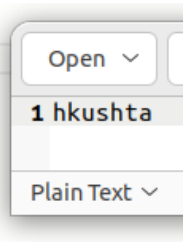
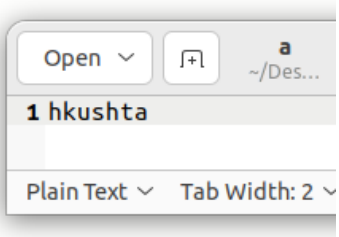
8. Add the two foreign key constraints to the **jobs table.** Add it to the appropriate section of the script and provide a screenshot of the SQL code.

```
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_job_contracted_by FOREIGN KEY(job_contracted_by)
        REFERENCES contractors(contractor_id)
```



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.

```
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_job_contracted_by')
    ALTER TABLE jobs DROP CONSTRAINT fk_jobs_job_contracted_by
```

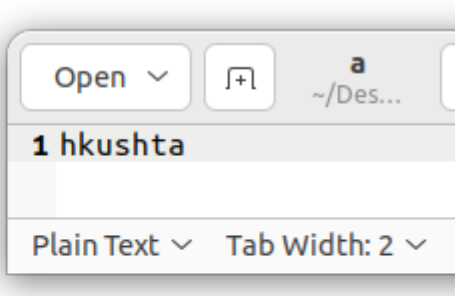


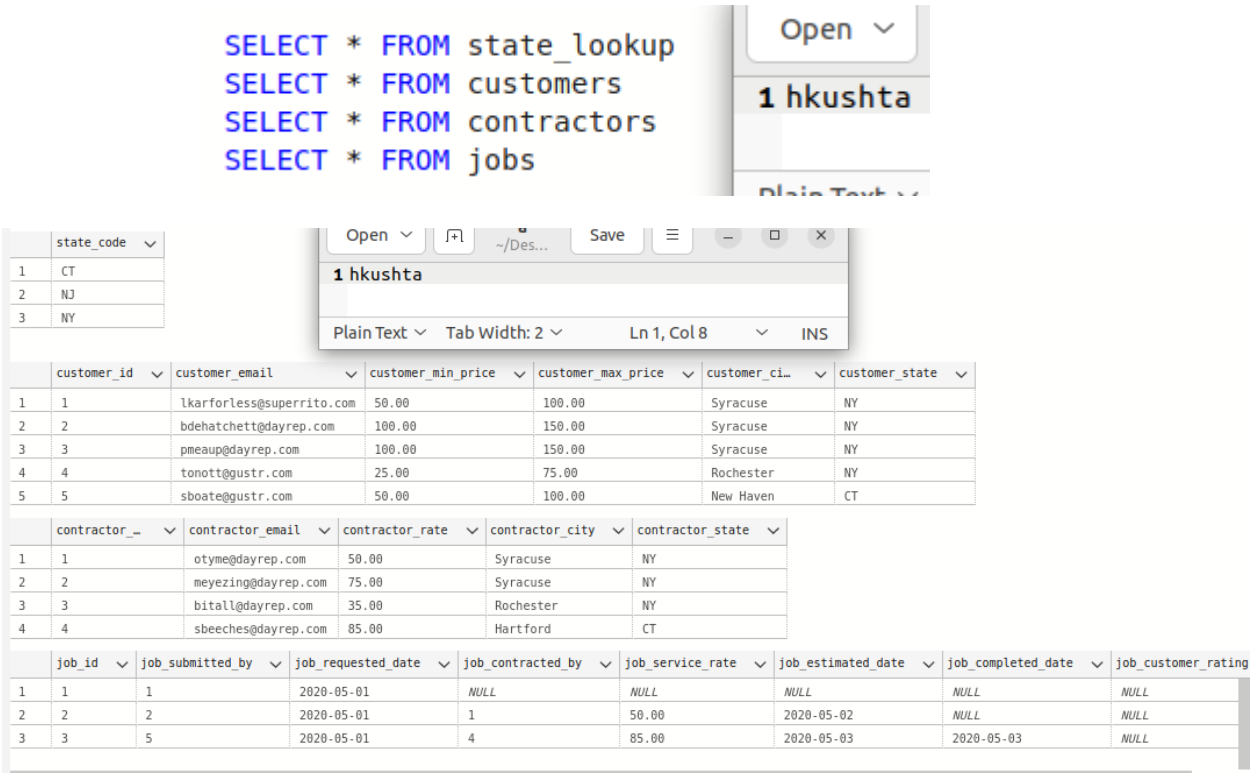
10. Write SQL code to insert the following jobs to the **jobs table**.

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,
    job_contracted_by,
    job_service_rate,
    job_estimated_date,
    job_completed_date
)
VALUES
    (1, '2020-05-01', NULL, NULL, NULL, NULL),
    (2, '2020-05-01', 1, 50, '2020-05-02', NULL),
    (5, '2020-05-01', 4, 85, '2020-05-03', '2020-05-03')
```





	state_code
1	CT
2	NJ
3	NY

	customer_id	customer_email	customer_min_price	customer_max_price	customer_ci…	customer_state
1	1	lkarforless@superrito.com	50.00	100.00	Syracuse	NY
2	2	bdehatchett@dayrep.com	100.00	150.00	Syracuse	NY
3	3	pmeaup@dayrep.com	100.00	150.00	Syracuse	NY
4	4	tonott@gustr.com	25.00	75.00	Rochester	NY
5	5	sboate@gustr.com	50.00	100.00	New Haven	CT

	contractor_…	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

	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?
   How to organize the work into 4 different sections (DOWN, UP Metadata, UP Data and VERIFY.

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.

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.