**Appendix**

<u>Schema</u>

1.  **Print/display records from your database/tables.**



2.  **Query for data/results with various parameters/filters**

### 3. Create a new record

Data Analyst-Entry level. | Flexon Technologies Inc. | Pleasanton, CA ⌃

**COMPANY: Flexon Technologies Inc. | LEVEL: Entry level | TYPE: Full-time**

[Full link](#)

Enter notes for job 4

| Apply for this job and reach out to recruiter! | |
|---|---|
| | Press Enter to apply |

Save job 4

Pressing the "Save job x" button executes MySQL query to create new saved_job record containing the notes inputted by the user.

### 4. Delete/update records

# LinkedIn Database Solutions

## Here are your saved jobs

Data Analyst-Entry level. | Flexon Technologies Inc. ⌃

**Notes:**

Apply for this job and reach out to recruiter!

Enter new note for this saved job - Data Analyst-Entry level. (Job #4)

| Just applied! Follow-up in a week. | |
|---|---|
| | Press Enter to apply |

Save note (Job #4)

Remove saved job (#4)

Within the saved jobs tab, users have the option to "update" their saved job by adding a new note or remove ("delete") the saved job if it is no longer relevant to them.

5. **Make use of transactions - commit**

Whenever a button to create, modify, or remove a saved job is pressed, a changed is committed to the database. I could (and plan to) improve on this requirement here by utilizing rollback features.

6. **One query must perform an aggregation/group-by clause**

# LinkedIn Database Solutions
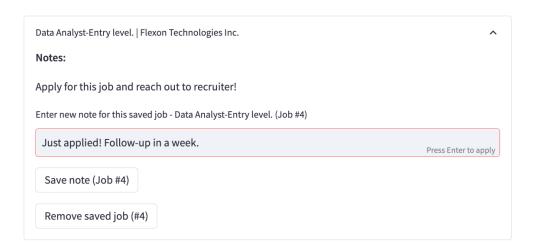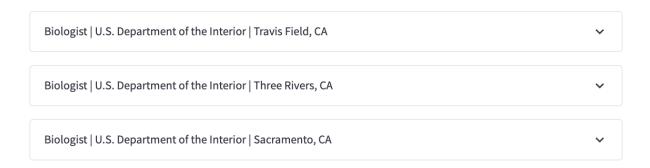
## Here are the jobs that meet the filters

### SQL QUERY

```
SELECT * FROM jobs
WHERE (job_title LIKE '%Biologist%')
ORDER BY job_title
```

Download filtered job results

### RESULTS

Biologist | U.S. Department of the Interior | Travis Field, CA ⌄

Biologist | U.S. Department of the Interior | Three Rivers, CA ⌄

Biologist | U.S. Department of the Interior | Sacramento, CA ⌄

For the jobs and connections search features, the user has the option to sort information by a few different parameters. The query creator function within my Python program then creates and executes the appropriate aggregation.

7. **One query must contain a sub-query**

# LinkedIn Database Solutions

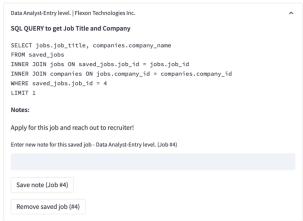## Here are the jobs that meet the filters

### SQL QUERY

```
SELECT * FROM jobs
WHERE (company_id = (SELECT company_id FROM companies WHERE company_name = 'Lionsgat
ORDER BY job_title
```

Download filtered job results

### RESULTS

| Administrative Assistant \| Lionsgate \| Santa Monica, CA | ⌄ |

| Assistant, TV Post Production \| Lionsgate \| Santa Monica, CA | ⌄ |

To pull company information for jobs/connections results, it is necessary to access the companies table within the database. Rather than using a join, I instead implemented a sub-query (dependent on user input) to extract company_id from company name.

8. **Two queries must involve joins across at least 3 tables - do it for saved jobs**

### Here are your saved jobs

Data Analyst-Entry level. | Flexon Technologies Inc.

**SQL QUERY to get Job Title and Company**

```
SELECT jobs.job_title, companies.company_name
FROM saved_jobs
INNER JOIN jobs ON saved_jobs.job_id = jobs.job_id
INNER JOIN companies ON jobs.company_id = companies.company_id
WHERE saved_jobs.job_id = 4
LIMIT 1
```

**Notes:**

Apply for this job and reach out to recruiter!

Enter new note for this saved job - Data Analyst-Entry level. (Job #4)

Save note (Job #4)

Remove saved job (#4)

In order to extract a saved job's title and company, it is necessary to access the jobs table and the companies table. Therefore, two joins are required to get all of the information. For every expander, the position title (within jobs table) and company name (within companies table) are displayed. Therefore, the program will execute a different query (containing 2 joins) for each saved job. Above is an example of a query with 2 joins used to extract information about the displayed saved job.

9. **Enforce referential integrality (PK/FK Constraints)**

Referential integrity is enforced throughout the database. In the future, I plan to add additionally constraints/triggers that ensure the user cannot compromise the database's logic.⌷ᴸˢᴱᴾ

10. **Use at least 5 entities (tables)**

I have four; however, since I'm working solo, I believe this is okay. In the future, I plan to add more (one in mind is past saved jobs).

11. **Extra credit: Generate reports that can be exported (excel or csv format)**

# LinkedIn Database Solutions

# Here are the jobs that meet the filters

## 🔗 SQL QUERY

```
SELECT * FROM jobs
WHERE (job_title LIKE '%Biologist%')
ORDER BY job_title
```

Download filtered job results

| job_id | date_posted | company_id | job_title | job_location | job_descripti | job_level | job_type | job_function | job_industry | job_link | job_search_field |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | | 18 | Biologist | Travis Field, | Help Help Du | Entry level | Full-time | Research, Ar | Government | https://www | Agriculture |
| 23 | | 18 | Biologist | Three Rivers | Help Help Du | Entry level | Full-time | Research, Ar | Government | https://www | Agriculture |
| 39 | | 18 | Biologist | Sacramento, | Help Help Du | Entry level | Full-time | Research, Ar | Government | https://www | Agriculture |

The "Download filtered job results" allows the user to download (into a csv) all the jobs or connections results that were outputted based on the filters they applied. I plan to eventually implement this feature within the saved jobs section as well.