

Milestone 3 Instructions

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Project 4

COVID-19 Management System

Connecting to the Database:

To run queries in the console or GUI application you need to have the mm_cpssc502102team04 database set up in your local connection. In your MYSQL workbench go to your local connection and open the milestone3dump.sql file. Run the SQL script and it will automatically create a new schema called mm_cpssc502102team04.

If you would like to instead use the database on the cloud you can access it through the Seattle U VPN and these credentials:

Hostname - cs100.seattleu.edu

Username - mm_cpssc502102team04

Password - mm_cpssc502102team04Pass-

Database: mm_cpssc502102team04

Using the Application:

Our application is a JDBC Application that uses Java to connect to our database and run queries through console mode and GUI Mode (or web mode). Once you've copied our database or connected to the cloud, download milestone3.zip and unzip it. You should see milestone2.pdf, milestone2query.sql, milestone3.mwb, milestone3dump.sql, queryrunner.zip, milestone3instructions.doc, and milestone3.ppt.

Unzip queryrunner.zip and open the folder inside of IntelliJ IDEA. Open up QueryRunner.java inside of /src/queryrunner. Build the file by clicking on the hammer in the tool bar in the right corner.



After building the files, press Ctrl+R or click the green sideways arrow to execute the GUI version of our application.

This GUI will appear, and inside of Hostname, User, Password, and Database enter in your credentials – either your local database credentials or the cloud credentials provided.

The screenshot shows a window titled "COVIDTRACKING". On the left, there are four input fields: "Hostname" with the value "cs100.seattleu.ec", "User" with "mm_cpssc502102", "Password" with a masked password "*****", and "Database" with "mm_cpssc502102". Below these fields is a "Connect" button. To the right of the "Connect" button is a "Show all ..." button with a dropdown arrow. Further right is a "Run Query" button. To the right of the "Run Query" button is a large empty box labeled "Output". Above the "Run Query" button is a green box containing a SQL query:

```
SELECT pi.lname, pi.fname, c.checkin_date, b.business_name, s.state_name FROM State_Dep_Health s JOIN Businesses b USING (state_dep_health_state_id) JOIN Checkins c USING (business_id) JOIN People p USING (people_id) JOIN Personal_Information pi USING (people_id) WHERE p.result = 'positive' ORDER BY s.state_name
```

Hit “Connect” once you’ve entered the proper credentials you should see that the Drop box to the right of the Connect button is now clickable, click it to see query options displayed below.

The screenshot shows a dropdown menu that appears after clicking the "Show all ..." button. The menu has a title "Show all ..." with a dropdown arrow. Below the title are several query options: "Show all active patients" (with a checkmark), "Show high risk places", "Hospital Inventory", "Active by State", "Current case static", "Current positive static", "Treatment static" (highlighted in blue), and "Average death age".

Once you choose a query, the SQL statement will be shown above. If you choose a query like “Inventory Check” that has parameters, the parameter input will appear, shown below.

COVIDTRACKING

Hostname: cs100.seattleu.ed

User: mm_cp502102

Password:

Database: mm_cp502102

```
SELECT h.hospital_name, s.item_id, s.inventory, i.item_name, i.description FROM Supply s INNER JOIN Hospitals h ON h.hospital_id = s.hospital_id INNER JOIN Items i ON i.item_id = s.item_id WHERE s.inventory <= ?
```

Disconnect
Inventor...
Run Query

LOW INVENTORY

Click “Run Query” to run and the results will appear like shown below.

COVIDTRACKING

Hostname: cs100.seattleu.ed

User: mm_cp502102

Password:

Database: mm_cp502102

```
SELECT h.hospital_name, s.item_id, s.inventory, i.item_name, i.description FROM Supply s INNER JOIN Hospitals h ON h.hospital_id = s.hospital_id INNER JOIN Items i ON i.item_id = s.item_id WHERE s.inventory <= ?
```

Welcome to using COVID-19 tracker System

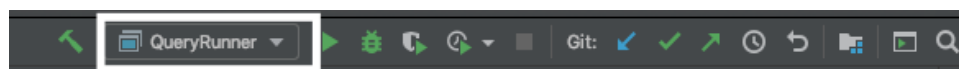
Disconnect
Inventor...
Run Query

LOW INVENTORY

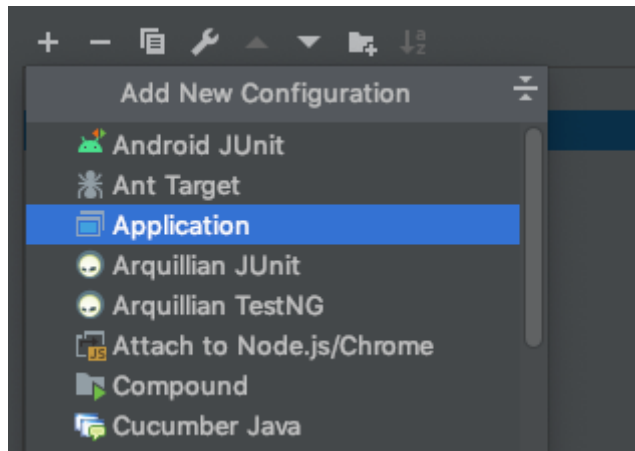
hospital_name	item_id	inventory	item_name	description
Hahn Hospital	53	10	Neurospora intermedia	boned gouge or sharked T's
Hauck Hospital	26	5	Treatment Set TS334128	mutes dirge Cs jumpers pub
Lowe Hospital	71	40	Lobelia Quercus	cuffs adore cs polliter lop
Haag Hospital	100	29	Acetaminophen	keg's feint ay exclaim off
Grimes Hospital	27	24	Acetaminophen Phenylephrine	naive huffy it chirp's cog
Boehm Hospital	38	41	Avobenzone, Octisalate, Octocr...	ivy's grins to bound's eel
O'Keefe Hospital	66	50	ACETAMINOPHEN, DEXTROME...	odder mousy oh loiters opt
Boehm Hospital	20	44	tinzaparin sodium	hoots sands go point's web
Harvey Hospital	99	14	Glyburide and Metformin Hydr...	ham's skill ms retrace win

Console Application

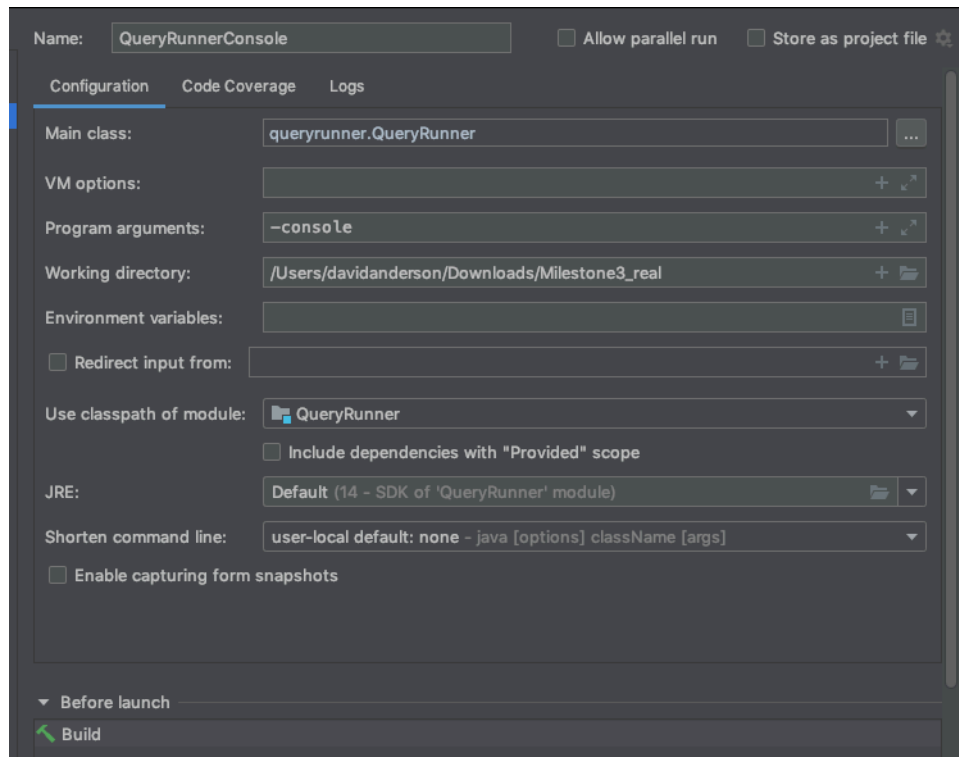
There are two different ways to access the console version of our application. The first way is to run it in IntelliJ IDEA, or to run it in the terminal. To run it in IntelliJ, first you have to specify the argument that you want to run the console application. Click on the icon to the right of the hammer in the right hand corner.



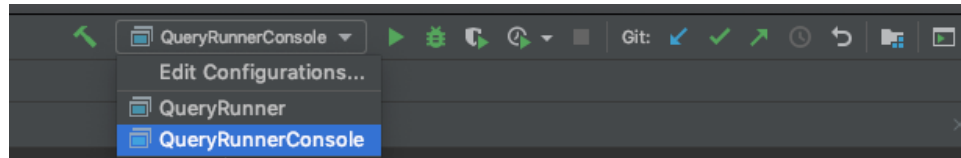
After that click “Edit Configurations” Click on the “+” and click “Applications



In the next screen, name it whatever you want, preferably something to do with console, put “queryrunner.QueryRunner” in Main class, and make sure to put “-console” in the Program arguments input box.



Hit “OK” and now you’ve created the console application. Switch to it by click the icon to the right of the hammer and select the new application. It should now look like this.



Type in Ctrl+R to run it and you should see the console asking you for your credentials. Fill them according to what’s displayed below.

```
Connect to database using console
host: cs100.seattleu.edu
user: mm_cpssc502102team04
password: mm_cpssc502102team04Pass-
database: mm_cpssc502102team04
```

If you entered the correct credentials, you will see the queries below.

```
Connected to Database!

Queries displayed below:

1. Show Positive Checkins
2. Show High Risk Businesses
3. Hospital Inventory
4. Tests by State
5. Case Statistics
6. Testing Statistics
7. Treatment Statistics
8. Average Age of Death
9. Highest Recovery State
10. Inventory check
11. Create Check-in
12. Case Update
13. Patient Status
14. Get Contact Tracer
15. Search by State

Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2):
```

Listed are all the descriptions of the queries that we have provided. To run a query, type in the number corresponding with the query. For example, if you wanted the Average Age of Death, then you would type in 8 and then press enter. Now let’s walk through the queries and see what results we get.

Queries

1. Show Positive Checkins

For this query, it shows all people that have tested positive for COVID-19 and on which date they visited a certain business. If you run it, you will get the following.

Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): 2

lname	fname	checkin_date	business_name	state_name
Frift	Maury	2020-05-18 21:35:34	Bogan, Satterfield and Hodkiewicz	California
Seyffert	Miriam	2020-04-15 08:02:58	Gulgowski-Collins	California
Winspur	Brockie	2020-04-30 17:54:30	Bogan, Satterfield and Hodkiewicz	California
Dinning	Floyd	2020-03-18 15:46:16	Hamill Inc	California
Chalfain	Yetta	2020-06-25 19:40:41	Hamill Inc	California
Cato	Uriel	2020-05-03 04:33:42	Gulgowski-Collins	California
Treanor	Cullie	2020-08-29 03:49:58	Hamill Inc	California
Chalfain	Yetta	2020-05-13 08:00:00	Bogan, Satterfield and Hodkiewicz	California
Cato	Uriel	2020-05-24 21:05:06	Zboncak-Greenfelder	Colorado
Mackley	Dallon	2020-09-24 08:24:49	Hegmann, Fahey and Gorczany	Colorado
Piner	Shaylah	2020-10-10 06:15:34	Jacobs-Collier	Colorado
Silly	Bryana	2020-07-13 20:07:25	Abbott LLC	Colorado
Witt	Vivie	2020-05-21 10:10:01	Zboncak-Greenfelder	Colorado
Killoran	Cass	2020-10-19 07:00:08	Hegmann, Fahey and Gorczany	Colorado
Georgeau	Hobey	2020-09-25 19:05:22	Hegmann, Fahey and Gorczany	Colorado
Chalfain	Yetta	2020-07-06 23:03:50	Zboncak-Greenfelder	Colorado
Kensington	Vikky	2020-04-23 02:36:05	Jacobs-Collier	Colorado
Richardes	Conn	2020-09-19 15:36:29	Hegmann, Fahey and Gorczany	Colorado
Kitney	Rodney	2020-09-11 21:45:53	Kunde, Runolfsdottir and Jones	Delaware
De la Yglesia	Wyndham	2020-09-08 15:05:44	Kunde, Runolfsdottir and Jones	Delaware
De la Yglesia	Wyndham	2020-06-02 05:10:46	Harvey and Sons	Delaware
Kensington	Vikky	2020-05-04 22:35:44	Cartwright Inc	Delaware
Winspur	Brockie	2020-04-10 15:37:44	O'Reilly, Poulos and Marquardt	Delaware
Browse	Lutero	2020-04-15 01:12:50	Harvey and Sons	Delaware
Chalfain	Yetta	2020-05-08 11:53:35	Harvey and Sons	Delaware
Chalfain	Yetta	2020-04-25 14:00:24	Treutel LLC	Delaware
Lancaster	Mohammed	2020-03-22 21:25:32	Kertzmman, Pfannerstill and Marks	Idaho
Lisamore	Dore	2020-08-16 09:59:43	Kertzmman, Pfannerstill and Marks	Idaho
Beldon	Tabby	2020-07-20 23:33:47	Hailey Inc	Idaho
Vitallo	Wolff	2020-07-03 22:53:40	Padberg-Kutch	Idaho
Primarolo	Ermengarde	2020-05-10 04:36:45	Kertzmman, Pfannerstill and Marks	Idaho

2. Show High Risk Businesses

For this query, it shows the businesses that have the most positive Checkins. If you run it you will see the following.

Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): 2

positive_visits	business_name	state_name
8	Ernser, Crist and Hauck	Washington
6	Kertzmman, Pfannerstill and Marks	Idaho
5	Farrell-Murray	Texas
4	Gibson-Lemke	Oregon
4	Russel Inc	Tennessee
4	Kautzer Inc	Texas
4	Prohaska and Sons	Tennessee
4	Rippin-Schroeder	Louisiana
4	Hegmann, Fahey and Gorczany	Colorado
4	King and Sons	Washington
3	Kuhn and Sons	Louisiana
3	Bernier-Morissette	Tennessee
3	Dibbert Inc	New York
3	Price Group	Oregon
3	Graham LLC	Tennessee
3	Fay, Oberbrunner and Hudson	Texas
3	Hailey Inc	Idaho

3. Hospital Inventory

This query displays hospitals that have a name “like” the user input and displays their inventory for each drug in their supply. The following query uses a Hospital_Name parameter of “Ha”.

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): 3
Value for Hospital_Name (like): Ha
+-----+-----+-----+-----+
| Hospital_ID | Hospital_Name | Inventory | Item_Name |
+-----+-----+-----+-----+
| 6           | Haag Hospital | 29        | Acetaminophen |
| 6           | Haag Hospital | 206       | NITROUS OXIDE |
| 9           | Harvey Hospital | 144      | Guaifenesin, Dextromethorphan HBR |
| 9           | Harvey Hospital | 107      | Menthol |
| 9           | Harvey Hospital | 14       | Glyburide and Metformin Hydrochloride |
| 28          | Hane Hospital | 418      | DIPHENHYDRAMINE HYDROCHLORIDE |
| 28          | Hane Hospital | 157      | Gemcitabine Hydrochloride |
| 28          | Hane Hospital | 428      | Chicory |
| 37          | Hauck Hospital | 5        | Treatment Set TS334128 |
| 37          | Hauck Hospital | 461      | Treatment Set TS334128 |
| 39          | Hahn Hospital | 10       | Neurospora intermedia |
| 39          | Hahn Hospital | 238      | Sodium Fluoride |
| 39          | Hahn Hospital | 313      | IBUPROFEN AND DIPHENHYDRAMINE HCL |
+-----+-----+-----+-----+
```

4. Tests by State

This query displays the total number of COVID-19 tests conducted by each state.

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): 4
+-----+-----+
| Total_Tests | state_name |
+-----+-----+
| 20          | Texas     |
| 20          | California |
| 34          | Delaware  |
| 29          | Colorado  |
| 10          | New York  |
| 22          | Oregon    |
| 5           | Washington |
| 26          | Louisiana |
| 19          | Tennessee |
| 15          | Idaho     |
+-----+-----+
```

5. Case Statistics

This query shows the statistics for Case numbers across all states (how many recovered, deceased, and active infection).

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): 5
+-----+-----+
| status   | number |
+-----+-----+
| deceased | 7      |
| recovered | 22     |
| active   | 21     |
+-----+-----+
```

6. Testing Statistics

This query shows the general statistics for tests across all states.

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): ▶
+-----+-----+
| result | number |
+-----+-----+
| negative | 150   |
| positive | 50    |
+-----+-----+
```

7. Treatment Statistics

This query shows statistics on how effective treatments are. Count_Suc is the number of recovered cases from this treatment, Count_All is how many total cases treatment was used on.

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): ▶
+-----+-----+-----+-----+-----+
| Count_Suc | Count_All | Suc_rate | treatment_method_id | treatment_name |
+-----+-----+-----+-----+-----+
| 1 | 2 | 0.5000 | 12 | Venlafaxine Hydrochloride |
| 1 | 1 | 1.0000 | 15 | Deb Med Antimicrobial Foaming Hand Wash Fresh Grapefruit |
| 1 | 1 | 1.0000 | 22 | Everyday Sunscreen Broad Spectrum SPF 50 |
| 1 | 1 | 1.0000 | 37 | Mucus Relief DM Max |
| 1 | 2 | 0.5000 | 40 | Topiramate |
| 1 | 1 | 1.0000 | 51 | Clonidine Hydrochloride |
| 2 | 2 | 1.0000 | 53 | ELCURE AC-LEX Serum |
| 1 | 2 | 0.5000 | 56 | Direct Safety Aspirin Free |
| 1 | 1 | 1.0000 | 61 | CHELIDONIUM MAJUS |
| 1 | 2 | 0.5000 | 69 | Haloperidol |
| 1 | 1 | 1.0000 | 100 | Ulta Vanilla Sugar Anti-Bacterial Deep Cleansing |
| 1 | 1 | 1.0000 | 103 | Meprobamate |
| 1 | 1 | 1.0000 | 104 | Galantamine |
| 1 | 1 | 1.0000 | 118 | Colgate Cavity Protection |
| 1 | 1 | 1.0000 | 149 | Pravastatin Sodium |
| 1 | 1 | 1.0000 | 158 | INSOMNIA RELIEF |
| 1 | 1 | 1.0000 | 162 | VP-PNV-DHA |
| 1 | 1 | 1.0000 | 167 | Childrens mucus relief multi-symptom cold |
| 1 | 1 | 1.0000 | 171 | Pramipexole |
| 2 | 2 | 1.0000 | 174 | Rough Pigweed |
+-----+-----+-----+-----+-----+
```

8. Average Age of Death

This query shows the average age of death across all states.

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): ▶
+-----+
| average_deceased_age |
+-----+
| 25.2857 |
+-----+
```


9. Highest Recovery State

This query shows the state with the most recovered cases.

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): 9
+-----+-----+
| state_name | recovered |
+-----+-----+
| Washington | 5         |
+-----+-----+
```

10. Inventory Check

With the user specifying the number of inventory qualifying as “LOW INVENTORY”, this query displays which hospitals have a low inventory of a given drug.

```
Value for LOW INVENTORY: 10
+-----+-----+-----+-----+-----+
| hospital_name | item_id | inventory | item_name | description |
+-----+-----+-----+-----+-----+
| Hahn Hospital | 53      | 10       | Neurospora intermedia | boned gouge or sharked T's |
| Hauck Hospital | 26      | 5        | Treatment Set TS334128 | muts dirge Cs jumpers pub |
| Lowe Hospital | 71      | 40       | Lobelia Quercus | cuffs adore cs politer lop |
| Haag Hospital | 188     | 29       | Acetaminophen | keg's feint ay exclaim off |
| Grimes Hospital | 27     | 24       | Acetaminophen Phenylephrine | naive huffy it chirp's cog |
| Boehm Hospital | 38     | 41       | Avobenzone, Octisalate, Octocrylene | ivy's grins to bound's eel |
| O'Keefe Hospital | 66     | 50       | ACETAMINOPHEN, DEXTROMETHORPHAN, PHENYLEPHRINE | odder mousy oh loiters opt |
| Boehm Hospital | 28     | 44       | tinzaparin sodium | hoots sands go point's web |
| Harvey Hospital | 99     | 14       | Glyburide and Metformin Hydrochloride | ham's skill ms retrace win |
+-----+-----+-----+-----+-----+
```

11. Create Checkin

This action query inserts a new Check-in into the Checkins table with a user specified “people_id”, “business_id” and checkin_date in “YYYY-MM-DD hh:mm:ss” format.

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): 11
Value for people_id: 1
Value for business_id: 2
Value for checkin_date YYYY-MM-DD hh:mm:ss: 2020-11-14 11:11:11
Rows affected = 1
```

12. Case Update

This query allows the user to update the status of a given people_id. Note that there is error checking so that the status can only be changed to “deceased”, “recovered”, or “active”.

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): 12
Value for status: deceased
Value for case_id: 10
Rows affected = 1
```

13. Patient Status

This query displays the status, and personal information about a given case_id. Since we changed case_id = 10 status to “deceased” in the previous step. If the user puts in 10 for case_id, we will see that that patient is now “deceased”.

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): 13
Value for case_id: 10
+-----+-----+-----+-----+
| case_id | status | lname | fname | people_id |
+-----+-----+-----+-----+
| 10      | deceased | Bubeer | Estevan | 40         |
+-----+-----+-----+-----+
```

14. Get Contact Tracer

This query displays information about a COVID-19 carrier who may have been in contact with a given people_id. This checks whether they had a check-in on the same day and business as someone who diagnosed as positive within 14 days of the check-in. This query will ask three times for the same people_id. This only generates results when querying with people_id = 1, 12, 32

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): 14
Value for people_id (which person you want to know may have had contact, same as others): 1
Value for people_id (which person you want to know may have had contact, same as others): 1
Value for people_id (which person you want to know may have had contact, same as others): 1
+-----+-----+-----+-----+
| business_id | checkin_date | date_diagnosed | people_id |
+-----+-----+-----+-----+
| 21          | 2020-05-03 04:33:42 | 2020-05-07     | 28        |
+-----+-----+-----+-----+
```

15. Search by State

This query shows total tests done by a state using a user “like” input. In this example I put in “C” and it generated California and Colorado.

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): 15
Value for state_name like: C
+-----+-----+
| Total_Tests | state_name |
+-----+-----+
| 20          | California |
| 29          | Colorado  |
+-----+-----+
```

Show SQL Statement

We decided that displaying the query description was easier on the eyes, but we still wanted the user the ability to see the SQL statements. To display the SQL statements, type in “show 3” to print out the SQL statement for query 3. If you wanted to show multiple SQL statements at once, for example, 3 4 and 5, type in “show 3 4 5”.

Both are displayed below.

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): show 3
SQL Statement for query number 3: SELECT COUNT(*) AS Total_Tests, s.state_name FROM Tests JOIN State_Dep_Health s USING (state_dep_health_state_id) GROUP BY state_dep_health_state_id;
```

```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): show 3 4 5
SQL Statement for query number 3: SELECT COUNT(*) AS Total_Tests, s.state_name FROM Tests JOIN State_Dep_Health s USING (state_dep_health_state_id) GROUP BY state_dep_health_state_id;
SQL Statement for query number 4: SELECT status, count(people_id) as number FROM Cases group by status;
SQL Statement for query number 5: SELECT result, count(people_id) as number FROM People group by result;
```

Custom Query

We also wanted users to have the ability to add their own custom queries, so they're not limited to the 15 stored in the application. To do this type in “custom” when prompted. Lets make a query that grabs Personal Information for people that have last names that start with A.


```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): custom
Type new query description: People whose last name start with
Type SQL Statement: select * FROM Personal_Information where lname like ?
Does the query have parameters? (y/n) y
Is the query an action query? (y/n) n
Type parameter names with spaces delimiting them: lname
Are any parameters 'like'? (y/n) y
What index is the parameter (first parameter has index of 0, space indexes): 0
Success: People whose last name start with successfully added to queries.
Type 'exit' to quit, anything else to continue: n
```

Type in the query description (this is what will be displayed when queries are displayed), type in the SQL statement, parameters should be “?”, type “y” if there are parameters, “n” if it’s an action query, the name of the parameter (delimited with spaces if there are multiple parameters), “y” if any of your parameters are “like”, and then the index or indices of which parameters are “like” variables. For example, if you have three parameters and the first and third ones are “like” variables, type in “0 2”.

Once created, the next time you display the queries, the query you just made will be appended to the end.

```
Queries displayed below:

1. Show Positive Checkins
2. Show High Risk Businesses
3. Hospital Inventory
4. Tests by State
5. Case Statistics
6. Testing Statistics
7. Treatment Statistics
8. Average Age of Death
9. Highest Recovery State
10. Inventory check
11. Create Check-in
12. Case Update
13. Patient Status
14. Get Contact Tracer
15. Search by State
16. get people like
17. People whose last name start with
```



Let's run it now! If we put in "A" for the like parameter lname we'll get the following result.

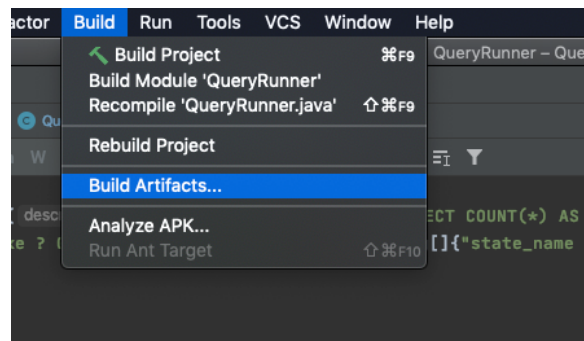
```
Query to run (type 'custom' for custom query to add, type 'show 2' to show SQL for query 2): ls
Value for lname: A
```

lname	fname	ethnicity	sex	dob	street	city	state	zip_code	phone	people_id
Asken	Cello	Micronesian	Male	1923-02-27 23:24:49	8 Graceland Pass	El Paso	Texas	14751	915-122-8376	14
Alsop	Reynolds	Kiowa	Male	1928-10-09 09:23:43	374 Farmco Pass	Peoria	Illinois	19581	309-674-4265	29
Atlee	Beulah	Sioux	Female	2004-08-04 13:42:31	5692 Kropf Park	Boston	Massachusetts	69875	781-542-8673	47
Anear	Quent	American Indian	Male	2000-01-07 06:41:22	1837 Crest Line Junction	Sacramento	California	07375	916-638-9714	58
Allitt	Cherey	Cree	Female	1989-04-05 01:24:19	25065 Fairview Parkway	Spring	Texas	96829	409-204-1108	121
Adshad	Brew	Yuman	Male	2010-12-21 23:41:00	76 Clove Junction	Bronx	New York	52498	917-741-3405	141
Astlett	Luciano	Chamorro	Male	1976-09-16 12:23:32	0 Vahlen Pass	Oklahoma City	Oklahoma	68889	405-100-0088	165
Alldridge	Augustina	Bangladeshi	Female	1947-08-15 05:52:59	8 Lunder Trail	Roanoke	Virginia	38307	540-792-2008	185
Amsberger	Vincent	Polynesian	Male	1938-05-18 19:32:23	245 Thackeray Drive	Columbus	Ohio	15248	614-652-1785	190

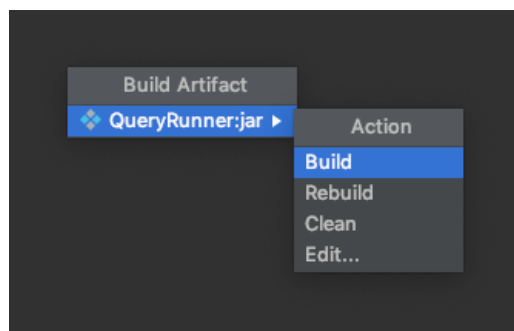
Running Application from Terminal

If you would like to run either the GUI or the console application from a terminal all you have to do is first build the artifact.

Click on Build, Build Artifacts in the toolbar.



Another window will pop up and then click on Build.

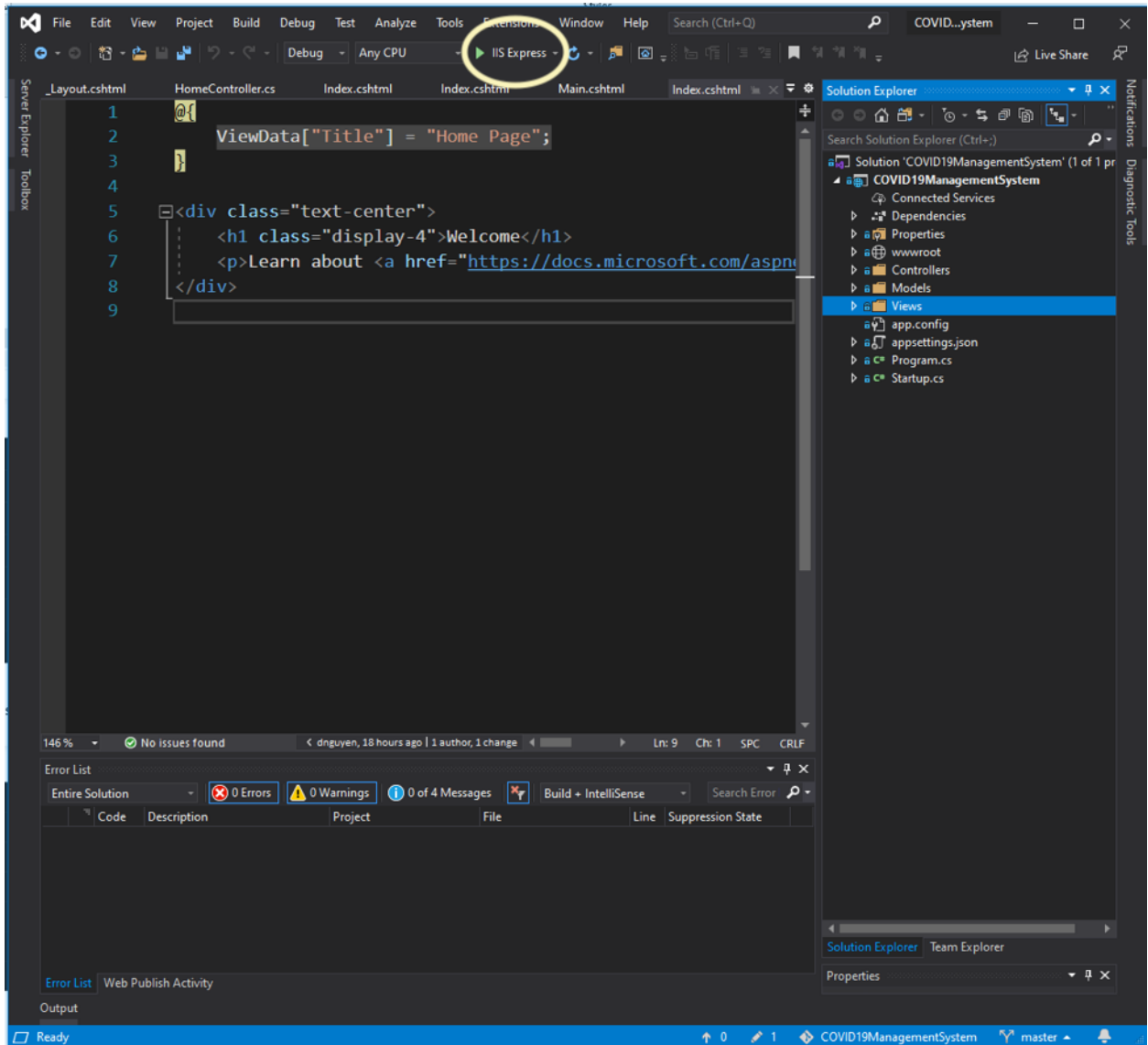


Then in your terminal navigate to classes/artifacts/QueryRunner.jar and then type in "java -jar QueryRunner.jar" for the GUI application, or "java -jar QueryRunner.jar -console" for the console version.

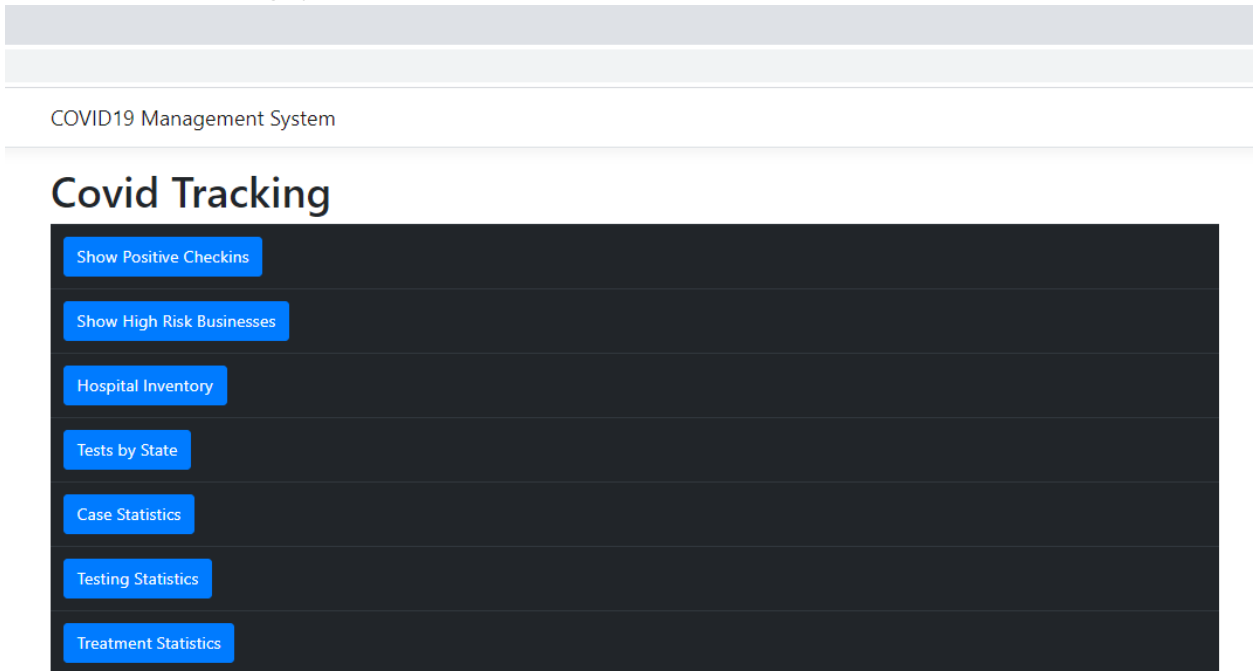
All of this code lives in https://github.com/ZhuojingXie/Milestone3_real

Web Application

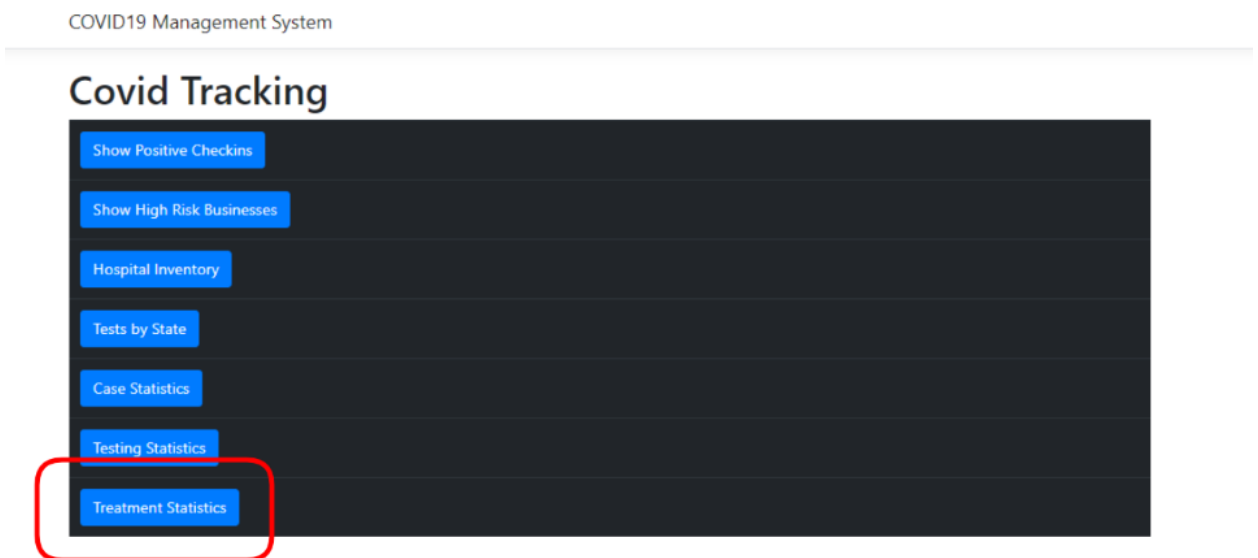
1. Clone Webapp solution from github:
<https://github.com/davednguyen/COVID19ManagementSystemWebApp.git>
2. Connect VPN to Seattle system.
3. Open webapp project using Visual studio 2019 or newer (download VS <https://visualstudio.microsoft.com/downloads/>).
4. On Visual Studio, click "IIS Express" button to run the application.



5. Load Covid-19 Tracking system on a browser



6. Click on any query to run a report from database (ex: click on "Treatment Statistics" button)



7. App display result on the page

COVID19 Management System

Treatment Statistics

Count Success	Count	Success Rate	Treatment ID	Name
1	2	0.5	12	Venlafaxine Hydrochloride
1	1	1	15	Deb Med Antimicrobial Foaming Hand Wash Fresh Grapefruit
1	1	1	22	Everyday Sunscreen Broad Spectrum SPF 50
1	1	1	37	Mucus Relief DM Max
1	2	0.5	40	Topiramate
1	1	1	51	Clonidine Hydrochloride
2	2	1	53	ELCURE AC-LEX Serum
1	2	0.5	56	Direct Safety Aspirin Free
1	1	1	61	CHELIDONIUM MAJUS
1	2	0.5	69	Haloperidol
1	1	1	100	Ulta Vanilla Sugar Anti-Bacterial Deep Cleansing
1	1	1	103	Meprobamate
1	1	1	104	Galantamine
1	1	1	118	Colgate Cavity Protection
1	1	1	149	Pravastatin Sodium
1	1	1	158	INSOMNIA RELIEF
1	1	1	162	VP-PNV-DHA
1	1	1	167	Childrens mucus relief multi-symptom cold
1	1	1	171	Pramipexole
2	2	1	174	Rough Pigweed

8. Return to List of Query, click on “COVID-19 Management System”

COVID19 Management System

Treatment Statistics

Count Success	Count	Success Rate	Treatment ID	Name
1	2	0.5	12	Venlafaxine Hydrochloride
1	1	1	15	Deb Med Antimicrobial Foaming Hand Wash Fresh Grapefruit
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