# RDB Assessment

Welcome to the course assessment for the RDB module!

In this session, you will complete the RDB project.

By the end of this session, you will be able to:

● Apply SQL techniques for querying, aggregating and joining data.

● Solve the given challenges using SQL.

Put your Relational Databases development skills to the test! Use your knowledge of SQL to analyse learners data.

After completing it, make sure you come back to complete a reflection.

**Directions:**

● **Send** the word doc to your instructor.

[genfsd2021@gmail.com](mailto:genfsd2021@gmail.com)

● **Reflect** on the following questions.

**Questions:**

● **What did you like about this project?**

● **What did you struggle with in this project?**

● **What would make your experience with this assessment better?**

Deadline: 4th Mar 2022, 2359

### Task: Use your knowledge of SQL and analyze some mockup learners data.

### Download this document and place your SQL solution and the printscreen of the result outputs in the respective question area.

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-

There are two tables provided:

**users table:**

* user\_id
* email\_domain
* Country
* City
* postal
* Mobile\_app
* sign\_up\_at

**progress table:**

* user\_id
* learn\_cpp
* learn\_sql
* learn\_html
* learn\_javascript
* learn\_java

### **Answer the following questions. You are required to paste your SQL scripts and the printscreen of the result outputs to the respective questions.**

1. Use your knowledge of queries and aggregate functions to get to know the data:
   1. What are the Top 25 schools with the most number of students in descending order on **.edu** domains? Please filter by school email domain and the number of students.

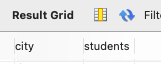
Example of the Result Grid headers:



|  |
| --- |
| *Paste your SQL scripts and the printscreen of the result outputs here for Qns 1a.*  select count(\*) as num\_students, email\_domain  from users  group by email\_domain  order by num\_students desc |

* 1. List out all the cities with the number of students from the respective cities in descending order.

Example of the Result Grid headers:



|  |
| --- |
| *Paste your SQL scripts and the printscreen of the result outputs here for Qns 1b.*  select city, count(\*) as students  from users  group by city  order by students desc |

* 1. How many **.edu** students are located in New York?

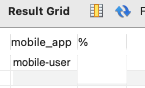
Example of the Result Grid headers:



|  |
| --- |
| *Paste your SQL scripts and the printscreen of the result outputs here for Qns 1c.*  select city, count(\*) as students  from users  where city= "New York" |

* 1. The mobile\_app column contains either mobile-user or NULL (Empty). How many of these students are using the mobile app and how many are not? Please show the results in percentages (%).

Example of the Result Grid headers:



|  |
| --- |
| *Paste your SQL scripts and the printscreen of the result outputs here Qns 1d.*  select count(mobile\_app) as "mobile-user", count(\*) \* 100.0 / (select count(\*) from users) as "%"  from users  where mobile\_app = "mobile-user"  group by mobile\_app |

* 1. How many students have completed sql from ALL Schools?

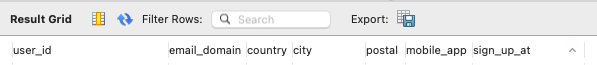
Example of the Result Grid headers:



|  |
| --- |
| *Paste your SQL scripts and the printscreen of the result outputs here Qns 1e.*  select count(\*) as students\_completed\_sql  from progress  *where learn\_sql = "completed"* |

* 1. List out all students’ details with the sign up date from 1st of March 2017 to 15th April 2017.

Example of the Result Grid headers:



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| *Paste your SQL scripts and the printscreen of the result outputs here Qns 1f.*  select \* from users  where (sign\_up\_at between '2017-03-01' and '2017-04-15') |

1. Join the two tables using JOIN and then see what you can dig out of the data!
   1. What courses are the New Yorkers students taking? (List according to ascending order of email\_domain)

Example of the Result Grid headers:



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| --- |
| *Paste your SQL scripts and the printscreen of the result outputs here Qns 2a.*  select email\_domain, country, city, learn\_cpp, learn\_sql, learn\_html, learn\_javascript, learn\_java  from users  inner join progress  on users.user\_id = progress.user\_id  where city = "New York"  order by email\_domain asc |

* 1. List the details of the students completed sql and java from their respective Schools (**.edu** domains) (List according to ascending order of email\_domain)

Example of the Result Grid headers:



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| --- |
| *Paste your SQL scripts and the printscreen of the result outputs here Qns 2b.*  select email\_domain, country, city, users.user\_id, learn\_sql, learn\_java  from users  inner join progress  on users.user\_id = progress.user\_id  where learn\_sql = "completed" and learn\_java = "completed"  order by email\_domain asc |

* 1. List the details of the students with their modules progress in the City that starts with ‘F’ or the City that ends with ‘D’.

Example of the Result Grid headers:



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| --- |
| *Paste your SQL scripts and the printscreen of the result outputs here Qns 2c.*  select users.user\_id, email\_domain, city, country, learn\_cpp, learn\_sql, learn\_html, learn\_javascript, learn\_java  from users  inner join progress  on users.user\_id = progress.user\_id  where city like 'f%'  or city like '%d' |

* 1. List the details of the students taking different courses from the School with the most number of students. (Note: You are not supposed to use the answer derived from Question 1a)

Example of the Result Grid headers:



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| --- |
| *Paste your SQL scripts and the printscreen of the result outputs here Qns 2d.* |

* 1. Which module is most popular among the students from the School with the most number of students? And which module is the least popular among the students? (Hint: [Count(If)](https://thispointer.com/count-with-if-condition-in-mysql-query/))

Example of the Result Grid headers:



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| --- |
| *Paste your SQL scripts and the printscreen of the result outputs here Qns 2e.* |