These question should take about 65 min to complete, they should be answered in the following languages: MySql, PHP, HTML, CSS.

DATABASE (MYSQL) (20 MIN)

1) (5 min) What are different JOINS used in SQL?

INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL OUTER JOIN, CROSS JOIN

SAMPLE TABLES

table_1

Id	student_id	last_name	first_name	Info
1	A001	Smith	Doe	{"campus":"Toronto","student_number":"ST-33422"}
2	A002	Fergurson	Linda	{"campus":"Toronto","student_number":"ST-33453"}
3	A003	Macini	Totti	{"campus":"Vancouver","student_number":"ST-33498"}
4	A005	Mariana	Pavarotti	{"campus":"Milan","student_number":"ST-458784"}

table_2

Id	student_id	last_name	first_name	joining_date
1	A001	Smith	Doe	2021-01-01
2	A005	Mariana	Pavarotti	2021-01-01
3	A007	Kate	Duran	2019-05-15
4	A008	Bruce	Waine	2019-01-01

2) (5 min) Using the sample tables above, write a query to create a full outer join.

SELECT table_1.last_name, table_1.first_name, table_2.joining_date FROM table_1 FULL OUTER JOIN table_2 ON table_1.student_id = table_2.student_id.

3) (5 min) Using the sample tables above, write a query to extract student_number from the info column

SELECT student_id as student_id, json_extract(table_1.info, '$.student_number') as student_number FROM student_1

4) (5 min) Using the invoices table below, you need to get aggregates for Paid monthly totals AND after each year you must add a row for yearly total. The data needs to be grouped by currency.

Invoices

id	inv_no	date	status	amount	currency
1	IL-001	2015-01-01	Paid	500	CAD
2	IL-002	2015-01-09	Paid	188.35	CAD
3	IL-003	2015-03-05	Paid	73.75	USD
4	IL-004	2015-05-01	Paid	100	CAD
5	IL-005	2015-09-01	Paid	153.57	USD
6	IL-006	2015-09-15	Paid	15.35	CAD
7	IL-007	2015-11-25	Paid	88.55	CAD
8	IL-008	2016-05-11	Paid	75.74	CAD
9	IL-009	2016-05-22	Paid	45.25	USD
10	IL-010	2016-05-29	Paid	55.78	CAD
11	IL-011	2017-04-15	Paid	44.55	CAD
12	IL-012	2017-04-24	Paid	887.25	CAD
13	IL-013	2018-01-05	Paid	55.25	USD
14	IL-014	2018-01-06	Paid	56.25	CAD
15	IL-015	2018-01-07	Paid	57.25	CAD
16	IL-016	2018-01-08	Paid	58.25	USD
17	IL-017	2018-01-09	Paid	59.25	CAD
18	IL-018	2018-01-10	Paid	60.25	CAD
12311	IL-12311	2021-10-01	Pending	350	CAD

PROGRAMMING (PHP) (25 MIN)

1) (5 min) Write a function to print Floyd's Triangle, with a parameter for number rows.

Example output: floydsTriangle(5)

```
1
23
456
78910
1112131415
```

Please Refer -> **https://github.com/karandeepvirk85/Assignment-for-Guard.me**

2) (10 min) Write a function to validate a string with the following rules:
- at least one letter
- at least two digits
- at least one special character, excluding the exclamation mark
- minimum 5 characters, maximum 20 characters
- the third letter must be uppercase
- it must contain 1 vowel (a, e, i, o, u)

Please Refer-> **https://github.com/karandeepvirk85/Assignment-for-Guard.me**

3) (10 min) Write a web crawler that will search our website (https://www.guard.me) for the string "I'm Batman, and you found me" and display the url.

FRONT END (10 MIN)

1) (10 min) Using HTML and CSS, create a responsive page with the below design:
   - you can use a CSS framework such as bootstrap
   - the colors, font, and size do not need to be an exact match, just reasonably similar

PRACTICE AREAS

- LITIGATION
  I'm a paragraph. Click here to add your own text and edit me. It's easy.

- BUSINESS
  I'm a paragraph. Click here to add your own text and edit me. It's easy.

- INSOLVENCY
  I'm a paragraph. Click here to add your own text and edit me. It's easy.

- FRAUD
  I'm a paragraph. Click here to add your own text and edit me. It's easy.

- DISPUTE RESOLUTION
  I'm a paragraph. Click here to add your own text and edit me. It's easy.

- TAX
  I'm a paragraph. Click here to add your own text and edit me. It's easy.

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GIT (10 MIN)

1) (5 min) How do you revert your last commit, but still have the changes in an uncommitted state?

   git reset --soft HEAD~1

2) (5 min) Explain the development life cycle using branches.

   1). A develop branch is created from master.
   2). A release branch is created from develop.
   3). Feature branches are created from develop.
   4). When a feature is complete it is merged into the develop branch.
   5). When the release branch is done it is merged into develop and master.
   6). If an issue in master is detected a hotfix branch is created from master.
   7). Once the hotfix is complete it is merged to both develop and master