

ASSESSMENT – DBMS (MySQL)

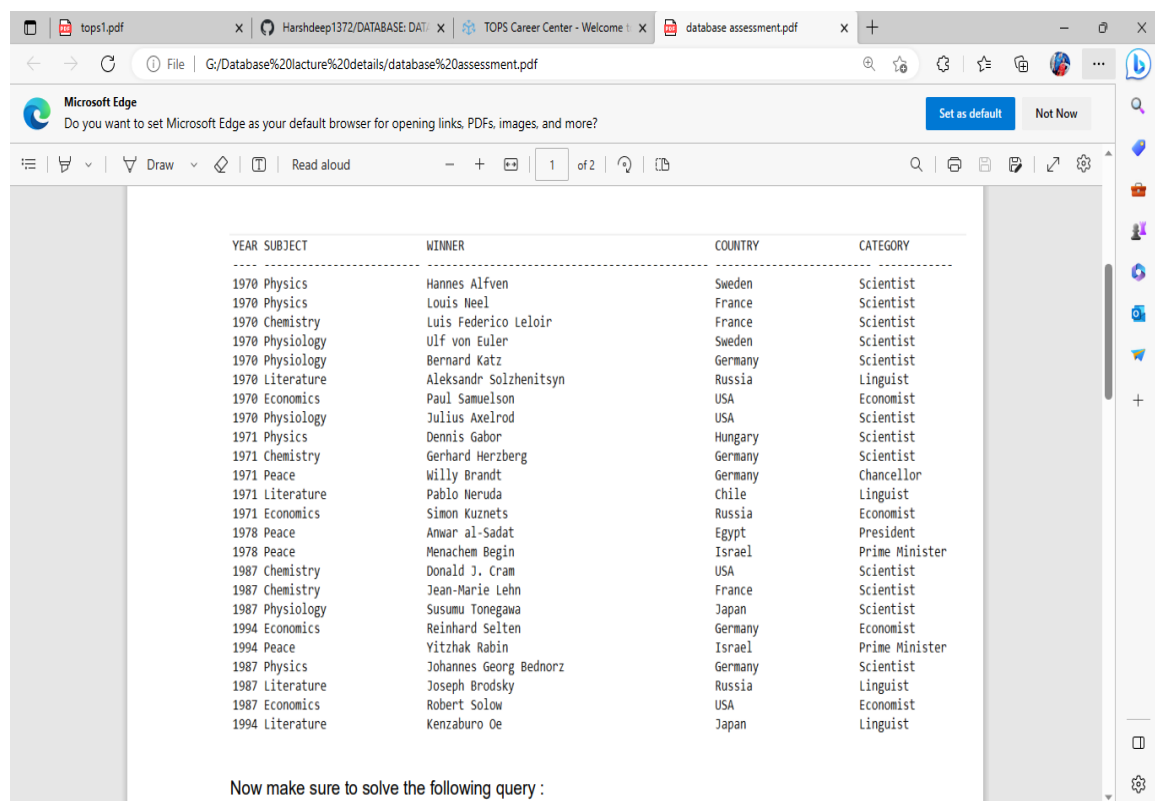
- Write SQL query to solve the problem given below

Consider a scenario in which you have to create a table called Nobel_win where you have given the information about the entity who has achieved nobel prize in a particular subject all over the world.

Over here the table Nobel_win will contain attributes like year, subject, winner, country and category

You need to use the sql commands to create the table given and to solve the problem given below.

Eg:-



YEAR	SUBJECT	WINNER	COUNTRY	CATEGORY
1970	Physics	Hannes Alfven	Sweden	Scientist
1970	Physics	Louis Neel	France	Scientist
1970	Chemistry	Luis Federico Leloir	France	Scientist
1970	Physiology	Ulf von Euler	Sweden	Scientist
1970	Physiology	Bernard Katz	Germany	Scientist
1970	Literature	Aleksandr Solzhenitsyn	Russia	Linguist
1970	Economics	Paul Samuelson	USA	Economist
1970	Physiology	Julius Axelrod	USA	Scientist
1971	Physics	Dennis Gabor	Hungary	Scientist
1971	Chemistry	Gerhard Herzberg	Germany	Scientist
1971	Peace	Willy Brandt	Germany	Chancellor
1971	Literature	Pablo Neruda	Chile	Linguist
1971	Economics	Simon Kuznets	Russia	Economist
1978	Peace	Anwar al-Sadat	Egypt	President
1978	Peace	Menachem Begin	Israel	Prime Minister
1987	Chemistry	Donald J. Cram	USA	Scientist
1987	Chemistry	Jean-Marie Lehn	France	Scientist
1987	Physiology	Susumu Tonegawa	Japan	Scientist
1994	Economics	Reinhard Selten	Germany	Economist
1994	Peace	Yitzhak Rabin	Israel	Prime Minister
1987	Physics	Johannes Georg Bednorz	Germany	Scientist
1987	Literature	Joseph Brodsky	Russia	Linguist
1987	Economics	Robert Solow	USA	Economist
1994	Literature	Kenzaburo Oe	Japan	Linguist

Now make sure to solve the following query :

Make sure to make your clean and clear code

ANSWER→

Create Table :-

```
MySQL 8.0 Command Line Client
| sys |
+-----+
11 rows in set (0.00 sec)

mysql> use nobel;
Database changed
mysql> show tables;
+-----+
| Tables_in_nobel |
+-----+
| nobel_win |
+-----+
1 row in set (0.00 sec)

mysql> select * from nobel_win;
+-----+-----+-----+-----+-----+
| YEAR | SUBJECT | WINNER | COUNTRY | CATEGORY |
+-----+-----+-----+-----+-----+
| 1970 | Physics | Hannes Alfvén | Sweden | Scientist |
| 1970 | Physics | Louis Néel | France | Scientist |
| 1970 | Chemistry | Luis Federico Leloir | France | Scientist |
| 1970 | Physiology | Ulf von Euler | Sweden | Scientist |
| 1970 | Physiology | Bernard Katz | Germany | Scientist |
| 1970 | Literature | Aleksandr Solzhenitsyn | Russia | Linguist |
| 1970 | Economics | Paul Samuelson | USA | Economist |
| 1970 | Physiology | Julius Axelrod | USA | Scientist |
| 1971 | Physics | Dennis Gabor | Hungary | Scientist |
| 1971 | Chemistry | Gerhard Herzberg | Germany | Scientist |
| 1971 | Peace | Willy Brandt | Germany | Chancellor |
| 1971 | Literature | Pablo Neruda | Chile | Linguist |
| 1971 | Economics | Simon Kuznets | Russia | Economist |
| 1978 | Peace | Anwar al-sadat | Egypt | President |
| 1978 | Peace | Menachem Begin | Israel | Prime Minister |
| 1987 | Chemistry | Donald J. Cram | USA | Scientist |
| 1987 | Chemistry | Jean-Marie Lehn | France | Scientist |
| 1987 | Physiology | Susumu Tonegawa | Japan | Scientist |
| 1994 | Economics | Reinhard Selten | Germany | Economist |
| 1994 | Peace | Yitzhak Rabin | Israel | Prime Minister |
| 1987 | Physics | Johannes Georg Bednig | Germany | Scientist |
| 1987 | Literature | Joseph Brodsky | Russia | Linguist |
| 1987 | Economics | Robert Solow | USA | Economist |
| 1994 | Literature | Kenzaburo Oe | Japan | Linguist |
+-----+-----+-----+-----+-----+
24 rows in set (0.00 sec)

mysql>
```

1. Write sql query to find the nobel prize winners of the year 1970. Return year, subject and winner

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 show databases;
2 SELECT year, subject, winner FROM Nobel_win WHERE year = 1970;
3
4
5
```

The result grid displays the following data:

year	subject	winner
1970	Physics	Hannes Alfven
1970	Physics	Louis Neel
1970	Chemistry	Luis Federico Leloir
1970	Physiology	Ulf von Euler
1970	Physiology	Bernard Katz
1970	Literature	Aleksandr Solzhenitsyn
1970	Economics	Paul Samuelson
1970	Physiology	Julius Axelrod

The bottom panel shows the action output for the query:

#	Time	Action	Message	Duration / Fetch
45	21:03:37	select * from nobel_win LIMIT 0, 1000	24 row(s) returned	0.000 sec / 0.000 sec
46	21:25:19	show databases	11 row(s) returned	0.015 sec / 0.000 sec
47	21:25:19	SELECT year, subject, winner FROM Nobel_win WHERE year = 1970 LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec

2. Write sql query to find the nobel prize winners in chemistry between the years 1965 and 1975. Begin and end values are included Return year, subject, winner and country

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL code:

```
1 show databases;
2 SELECT year, subject, winner, country
3 FROM Nobel_win
4 WHERE subject = 'Chemistry'
5 AND year BETWEEN 1965 AND 1975;
6
7
```

The result grid displays the following data:

year	subject	winner	country
1970	Chemistry	Luis Federico Leloir	France
1971	Chemistry	Gerhard Herzberg	Germany

The bottom panel shows the action output for the query:

#	Time	Action	Message	Duration / Fetch
47	21:25:19	SELECT year, subject, winner FROM Nobel_win WHERE year = 1970 LIMIT 0, 1000	8 row(s) returned	0.000 sec / 0.000 sec
48	21:30:44	show databases	11 row(s) returned	0.000 sec / 0.000 sec
49	21:30:44	SELECT year, subject, winner, country FROM Nobel_win WHERE subject = 'Chemistry' AND year BETWEEN 1965 AND 1975	2 row(s) returned	0.000 sec / 0.000 sec

3. Write sql query to retrieve the details of the winners whose first name matches with the string 'Louis'. Return year, subject, winner, country

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL query:

```
1 show databases;
2 SELECT year, subject, winner, country
3 FROM nobel_win
4 WHERE winner LIKE 'Louis%';
```

The result grid displays the following data:

year	subject	winner	country
1970	Physics	Louis Neel	France

The bottom panel shows the execution log with the following entries:

#	Time	Action	Message	Duration / Fetch
49	21:30:44	SELECT year, subject, winner, country FROM nobel_win WHERE subject = 'Chemistry' AND year BET...	2 row(s) returned	0.000 sec / 0.000 sec
50	21:33:59	show databases	11 row(s) returned	0.000 sec / 0.000 sec
51	21:33:59	SELECT year, subject, winner, country FROM nobel_win WHERE winner LIKE 'Louis%'; LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec

4. Write sql query to find Nobel prize winners for the subject that does not begin with the letter 'P'. Order the result by year, descending and winner in ascending

The screenshot shows the MySQL Workbench interface. The query editor contains the following SQL query:

```
1 show databases;
2 SELECT year, subject, winner
3 FROM nobel_win
4 WHERE subject NOT LIKE 'P%';
5 ORDER BY year DESC, winner ASC;
```

The result grid displays the following data:

year	subject	winner
1994	Literature	Kenzaburo Oe
1994	Economics	Reinhard Sellen
1987	Chemistry	Donald J. Cram
1987	Chemistry	Jean-Marie Lehn
1987	Literature	Joseph Brodsky
1987	Economics	Robert Solow
1971	Chemistry	Gerhard Herzberg
1971	Literature	Pablo Neruda
1971	Economics	Simon Kuznets
1970	Literature	Aleksandr Solzhenitsyn
1970	Chemistry	Luis Federico Leloir
1970	Economics	Paul Samuelson

The bottom panel shows the execution log with the following entries:

#	Time	Action	Message	Duration / Fetch
51	21:33:59	SELECT year, subject, winner, country FROM nobel_win WHERE winner LIKE 'Louis%'; LIMIT 0, 1000	1 row(s) returned	0.000 sec / 0.000 sec
52	21:36:23	show databases	11 row(s) returned	0.000 sec / 0.000 sec
53	21:36:23	SELECT year, subject, winner FROM nobel_win WHERE subject NOT LIKE 'P%'; ORDER BY year DE...	12 row(s) returned	0.000 sec / 0.000 sec

5. Write sql query to find the details of 1970 Nobel prize winners. Order the result by subject, ascending except for 'Chemistry' and 'Economics' which will come at the end of the result set. Return year, subject, winner, country and category.

The screenshot shows the MySQL Workbench interface. The SQL editor contains the following query:

```
1 show databases;
2 SELECT year, subject, winner, country, category
3 FROM Nobel_win
4 WHERE year = 1970
5 ORDER BY
6 CASE
7 WHEN subject IN ('Chemistry', 'Economics') THEN 1
8 ELSE 0
9 END,
10 subject ASC;
11
```

The Results tab shows the following data:

year	subject	winner	country	category
1970	Literature	Aleksandr Solzhenitsyn	Russia	Linguist
1970	Physics	Hannes Alfvén	Sweden	Scientist
1970	Physics	Louis Néel	France	Scientist
1970	Physiology	Ulf von Euler	Sweden	Scientist
1970	Physiology	Bernard Katz	Germany	Scientist
1970	Physiology	Julius Axelrod	USA	Scientist
1970	Chemistry	Luis Federico Leloir	France	Scientist
1970	Economics	Paul Samuelson	USA	Economist

The Output tab shows the following messages:

#	Time	Action	Message	Duration / Fetch
53	21:36:23	SELECT year, subject, winner FROM Nobel_win WHERE subject NOT LIKE 'P%'; ORDER BY year DE...	12 row(s) returned	0.000 sec / 0.000 sec
54	21:42:15	show databases	11 row(s) returned	0.000 sec / 0.000 sec
55	21:42:16	SELECT year, subject, winner, country, category FROM Nobel_win WHERE year = 1970 ORDER BY ...	8 row(s) returned	0.016 sec / 0.000 sec