

BUAN 6320

Database Foundation for Business Analytics

SUBMITTED BY

ABHISHEK ARYA (NET ID: axa220149)

ASSIGNMENT : 4

#SOLUTION 1

The screenshot displays the SQL Server Enterprise Manager interface. The left pane shows the 'assignment_4' schema with tables, views, stored procedures, and functions. The central pane shows a query window with the following SQL code:

```
select distinct author_id as id
from views
where viewer_id = author_id
order by id
```

The right pane shows the 'Result Grid' with the following data:

id
4
7

The bottom pane shows the 'Output' window with the following action log:

#	Time	Action	Message	Duration / Fetch
1	03:44:23	DROP DATABASE 'assignment_3'	7 row(s) affected	0.703 sec
2	03:44:41	Apply changes to Assignment_4	Changes applied	
3	03:45:52	create table views(article_id int default null, author_id int default null, viewer_id int default null, ...	Error Code: 1046. No database selected Select the default DB to be used by double-clicking it...	0.297 sec
4	03:46:06	create table views(article_id int default null, author_id int default null, viewer_id int default null, ...	0 row(s) affected	0.515 sec
5	03:46:14	Insert into views(article_id, author_id, viewer_id, view_date) values(1, 3, 5, 2019-08-01), (1, 3, ...	7 row(s) affected Records: 7 Duplicates: 0 Warnings: 0	1.484 sec
6	03:49:12	select distinct author_id as id from views where viewer_id = author_id order by id	2 row(s) returned	0.000 sec / 0.000 sec

SOLUTION 2

Navigator: SCHEMAS Filter objects assignment_4 Tables Views Stored Procedures Functions

Administration Schemas Information

Schema: assignment_4

SQL File 1*

```

38 ('Cat', 'Shirazi', 3, 2),
39 ('Cat', 'Siamese', 3, 3),
40 ('Cat', 'Bengal', 3, 4),
41
42
43 select query_name, round(avg(rating / position), 2) as quality, round(avg(rating < 3) * 100, 2) as poor_query_percentage
44 from queries
45 group by query_name;
46
47

```

Result Grid

query_name	quality	poor_query_percentage
Dog	2.50	33.33
Cat	0.66	33.33

Result 2

Output

Action Output

#	Time	Action	Message	Duration / Fetch
4	03:46:06	create table views (article_id int default null, author_id int default null, viewer_id int default null, view_date datetime default null)	0 row(s) affected	0.515 sec
5	03:46:14	insert into views (article_id, author_id, viewer_id, view_date) values(1, 3, 5, 2019-08-01), (1, 3, 4, 2019-08-02), (1, 3, 5, 2019-08-01), (1, 3, 4, 2019-08-02)	7 row(s) affected Records: 7 Duplicates: 0 Warnings: 0	1.484 sec
6	03:49:12	select distinct author_id as id from views where viewer_id = author_id order by id	2 row(s) returned	0.000 sec / 0.000 sec
7	03:57:56	create table queries (query_name varchar(50) default null, result varchar(50) default null, position int default null, rating float default null)	0 row(s) affected	0.469 sec
8	03:58:07	insert into queries (query_name, result, position, rating) values('Dog', 'Golden Retriever', 1, 5), ('Dog', 'Border Collie', 2, 5), ('Dog', 'Australian Shepherd', 3, 5), ('Cat', 'Siamese', 1, 3), ('Cat', 'Bengal', 2, 3), ('Cat', 'Shirazi', 3, 2)	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0	0.031 sec
9	03:58:12	select query_name, round(avg(rating / position), 2) as quality, round(avg(rating < 3) * 100, 2) as poor_query_percentage	2 row(s) returned	0.125 sec / 0.000 sec

Object Info Session

Query Completed

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

SOLUTION 3

Navigator: SCHEMAS Filter objects assignment_4 Tables Views Stored Procedures Functions

Administration Schemas Information

Schema: assignment_4

SQL File 1*

```

73
74
75
76
77
78
79
80
81
82

```

Result Grid

post_id	number_of_comments
1	3
2	2
12	0

Result 3

Output

Action Output

#	Time	Action	Message	Duration / Fetch
7	03:57:56	create table queries (query_name varchar(50) default null, result varchar(50) default null, position int default null, rating float default null)	0 row(s) affected	0.469 sec
8	03:58:07	insert into queries (query_name, result, position, rating) values('Dog', 'Golden Retriever', 1, 5), ('Dog', 'Border Collie', 2, 5), ('Dog', 'Australian Shepherd', 3, 5), ('Cat', 'Siamese', 1, 3), ('Cat', 'Bengal', 2, 3), ('Cat', 'Shirazi', 3, 2)	6 row(s) affected Records: 6 Duplicates: 0 Warnings: 0	0.031 sec
9	03:58:12	select query_name, round(avg(rating / position), 2) as quality, round(avg(rating < 3) * 100, 2) as poor_query_percentage	2 row(s) returned	0.125 sec / 0.000 sec
10	04:06:19	create table Submissions (sub_id int default null, parent_id int default null)	0 row(s) affected	0.063 sec
11	04:06:28	insert into Submissions (sub_id, parent_id) values(1, Null), (2, Null), (1, Null), (12, Null), (3, Null), (12, Null), (12, Null), (12, Null), (12, Null), (12, Null), (12, Null), (12, Null)	11 row(s) affected Records: 11 Duplicates: 0 Warnings: 0	1.828 sec
12	04:06:42	select L.post_id as post_id, coalesce(R.number_of_comments, 0) as number_of_comments from posts L left join (select post_id, count(distinct sub_id) as number_of_comments from Submissions R group by post_id) R on L.post_id = R.post_id	3 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Query Completed

SQLAdditions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

SOLUTION 4

Navigator: SCHEMAS
Filter objects
assignment_4
Tables
queries
students
subjects
submissions
views
Stored Procedures
Functions

Administration Schemas

Information Schema: assignment_4

SQL 4 x subjects

```

127
128
129
130 • select students.student_id , students.student_name , subjects.subject_name , count(examinations.student_id) as attende
131 from students join subjects
132 left join examinations
133 on students.student_id = examinations.student_id and subjects.subject_name = examinations.subject_name
134 group by students.student_id , subjects.subject_name
135 order by students.student_id , subjects.subject_name;

```

Result Grid

student_id	student_name	subject_name	attended_exams
1	Alice	Math	3
1	Alice	Physics	2
1	Alice	Programming	1
2	Bob	Math	1
2	Bob	Physics	0
2	Bob	Programming	1
6	Alex	Math	0
6	Alex	Physics	0

Result 2 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	05:55:37	insert into Examinations (student_id , subject_name) values(1, 'Math'), (1, 'Physics'), (1, 'Progr...	11 row(s) affected Records: 11 Duplicates: 0 Warnings: 0	0.032 sec
6	05:55:40	select students.student_id , students.student_name , subjects.subject_name , count(examina...	12 row(s) returned	0.000 sec / 0.000 sec
7	05:58:11	select students.student_id , students.student_name , subjects.subject_name , count(examina...	12 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions: Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Navigator: SCHEMAS
Filter objects
assignment_4
Tables
queries
students
subjects
submissions
views
Stored Procedures
Functions

Administration Schemas

Information Schema: assignment_4

SQL 4 x subjects

```

127
128
129
130 • select students.student_id , students.student_name , subjects.subject_name , count(examinations.student_id) as attende
131 from students join subjects
132 left join examinations
133 on students.student_id = examinations.student_id and subjects.subject_name = examinations.subject_name
134 group by students.student_id , subjects.subject_name
135 order by students.student_id , subjects.subject_name;

```

Result Grid

student_id	student_name	subject_name	attended_exams
2	Bob	Programming	1
6	Alex	Math	0
6	Alex	Physics	0
6	Alex	Programming	0
13	John	Math	1
13	John	Physics	1
13	John	Programming	1

Result 2 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	05:55:37	insert into Examinations (student_id , subject_name) values(1, 'Math'), (1, 'Physics'), (1, 'Progr...	11 row(s) affected Records: 11 Duplicates: 0 Warnings: 0	0.032 sec
6	05:55:40	select students.student_id , students.student_name , subjects.subject_name , count(examina...	12 row(s) returned	0.000 sec / 0.000 sec
7	05:58:11	select students.student_id , students.student_name , subjects.subject_name , count(examina...	12 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

SQLAdditions: Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.