**USE Cases DMDD\_Assigment\_3**

Use Cases

1. How many total courses are available for Information Systems Program in Northeastern University?

SQL Statement:

SELECT

a.program\_name,

COUNT(a.course\_name),

b.program\_url

FROM

neu\_course\_catalog a

LEFT OUTER JOIN

NEU\_Program\_Detail b

ON

a.program\_name = b.program\_name

where b.program\_name = 'Information Systems'

GROUP BY

a.program\_name;

1. List top rated professors at NEU whose rating is above 4. Also mention the courses and its description taught by the professor.

SQL Statement:

SELECT

a.program\_name,b.faculty\_name,b.faculty\_rating, a.course\_name, a.course\_description

FROM

neu\_Course\_Catalog a

RIGHT OUTER JOIN

NEU\_course\_Faculty b

ON

a.course\_id = b.course\_id

WHERE

b.faculty\_rating >= 4

Order by b.faculty\_rating desc;

1. What are the core course requirements for Information Systems, Software Engineering Systems and Data Analytics?

SQL Statement:

SELECT

a.program\_name, GROUP\_CONCAT(a.course\_id SEPARATOR  '|'),

COUNT(a.course\_id), b.program\_url

FROM

Course\_Core\_requirement a

LEFT JOIN

NEU\_Program\_Detail b

ON

a.program\_name = b.program\_name

GROUP BY

a.program\_name;

1. List courses available for Data Analytics Engineering along with its course\_outcome.

SQL Statement:

SELECT

program\_name, course\_id,course\_name, course\_description

FROM

NEU\_Course\_Catalog

WHERE program\_name = 'Data Analytics Engineering';

1. What is the average overall rating given by students to a professor for a given course?

SQL Statement:

SELECT faculty\_name, round (AVG(faculty\_rating),1) as Average\_rating

FROM NEU\_course\_Faculty

GROUP BY faculty\_name;

1. Which courses students need to take to do specialization in Big Data Systems concentration and which resources are available for them?

SQL Statement:

SELECT

c.program\_name,a.specialization, a.course\_id, c.course\_name,

            b.course\_rating,b.online\_platform

FROM

NEU\_Specialization a

LEFT JOIN

NEU\_course\_catalog c on c.course\_id = a.course\_id

LEFT JOIN

Resource\_material1 b

ON a.course\_id = b.course\_id

WHERE

a.specialization like '%Big Data%';

1. List details about all the Masters programs available in Northeastern University

SQL Statement:

SELECT

\*

FROM

NEU\_program\_Detail;

1. Which job positions for students in Data Analytics Engineering and list the details related to those positions?

SQL Statement:

SELECT

program\_name, title, company\_name,description

FROM

Jobs\_info

WHERE

program\_name LIKE '%Data%';

1. List the events hosted by Northeastern University for students by Data Analytics Engineering Department.

SQL Statement:

SELECT

program\_name, event\_name

FROM

Neu\_Events

WHERE

program\_name = 'Data Analytics Engineering';

1. Which professors teach courses related to Big Data Systems and list the ratings given by students for the course?

SQL Statement:

SELECT

a.program\_name, a.faculty\_name, b.course\_name, c.course\_rating,

b.course\_description

FROM

NEU\_Course\_Faculty a

JOIN NEU\_Course\_Catalog b ON a.program\_name = b.program\_name

JOIN Resource\_material1 c ON c.course\_id = b.course\_id

WHERE

b.course\_name like '%Big-Data Systems%'

ORDER BY c.course\_rating;

1. Find the average course rating for Information Systems Program

SQL Statement:

SELECT

b.program\_name, AVG(a.course\_rating)

FROM

Resource\_material1 a

RIGHT JOIN

NEU\_Course\_Catalog  b

ON

a.course\_id = b.course\_id

WHERE

b.program\_name  ='Information Systems';

1. List courses with lowest rating.

SQL Statement:

SELECT

a.course\_id,a.course\_rating,b.course\_name,b.course\_description

FROM

Resource\_material1 a

LEFT JOIN

NEU\_Course\_catalog b

on a.course\_id = b.course\_id

where

course\_rating = (select min(course\_rating) from resource\_material1);

1. Find the professors who taught DAMG 7350, INFO 5100, DAMG 6105, DAMG 7275 courses.

SQL Statement:

SELECT \* FROM NEU\_course\_Faculty WHERE faculty\_name  = ANY (

SELECT

faculty\_name

FROM

NEU\_course\_Faculty

WHERE

course\_id  IN ('DAMG 7350', 'INFO 5100', 'DAMG 6105', 'DAMG 7275'));

1. Which resources are available for students who have chosen Information Systems program?

SQL Statement:

SELECT

a.program\_name, a.faculty\_name, b.course\_id, c.software\_download\_url,

c.professional\_certificate, c.online\_platform

FROM

NEU\_Course\_Faculty a

JOIN NEU\_Course\_Catalog b ON a.program\_name = b.program\_name

JOIN Resource\_material1 c ON c.course\_id = b.course\_id

WHERE

a.program\_name = 'Information Systems';

15. Still Pending