

# Structure of Exam

Donnerstag, 4. Februar 2021 09:05

1: Evaluate SQL Queries (5 Points)	- 1 Part
2: Define SQL Queries (25Points)	- 2 Parts
3: Create a Star Schema (10 Points)	- 1 Part
4: Evaluate ML Model (10 Points)	- 1 Part

# Evaluate SQL Query 1 - Solution

Montag, 27. Januar 2020 18:54

Addresskind	
AKID	Descr
10	Private
20	Work

Address			
AID	ZIP	PID	AKID
1	13297	1	10
2	24188	1	20
3	80900	2	20
4	63452	2	20
5	14187	2	20

Person	
PID	Name
1	Miller
2	Johnson

Name

-----

Miller

```
select Name
from Person P
    inner join Address A on P.PID = A.PID
    inner join Addresskind AK on A.AKID = AK.AKID
where AK.Descr = 'Private'
```

# Evaluate SQL Query 2 - Solution

Montag, 27. Januar 2020 18:54

Addresskind	
AKID	Descr
10	Private
20	Work

Address			
AID	ZIP	PID	AKID
1	13297	1	10
2	24188	1	20
3	80900	2	20
4	63452	2	20
5	14187	2	20

Person	
PID	Name
1	Miller
2	Johnson

```
select Name
from Person P
where (
  select count(*)
  from
    Address A
    inner join Addresskind AK on A.AKID = AK.AKID
  where
    P.PID = A.PID and
    AK.Descr = 'Private'
) > 1
```

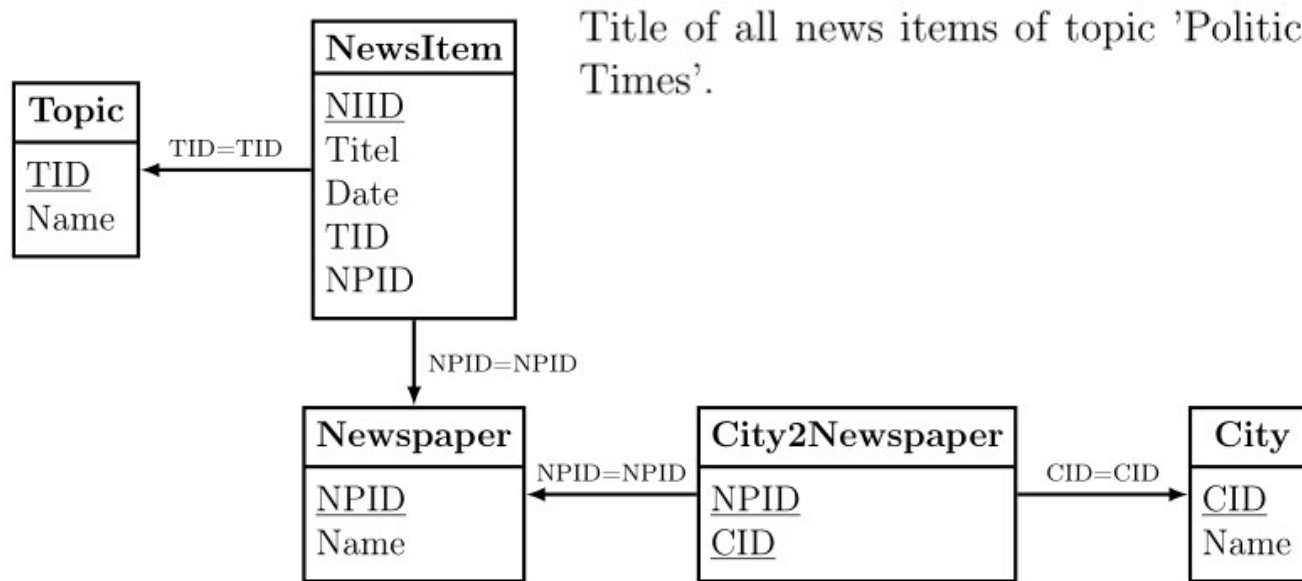
Name

-----

no result record

# Define SQL Query 1 - Solution

Montag, 27. Januar 2020 18:55

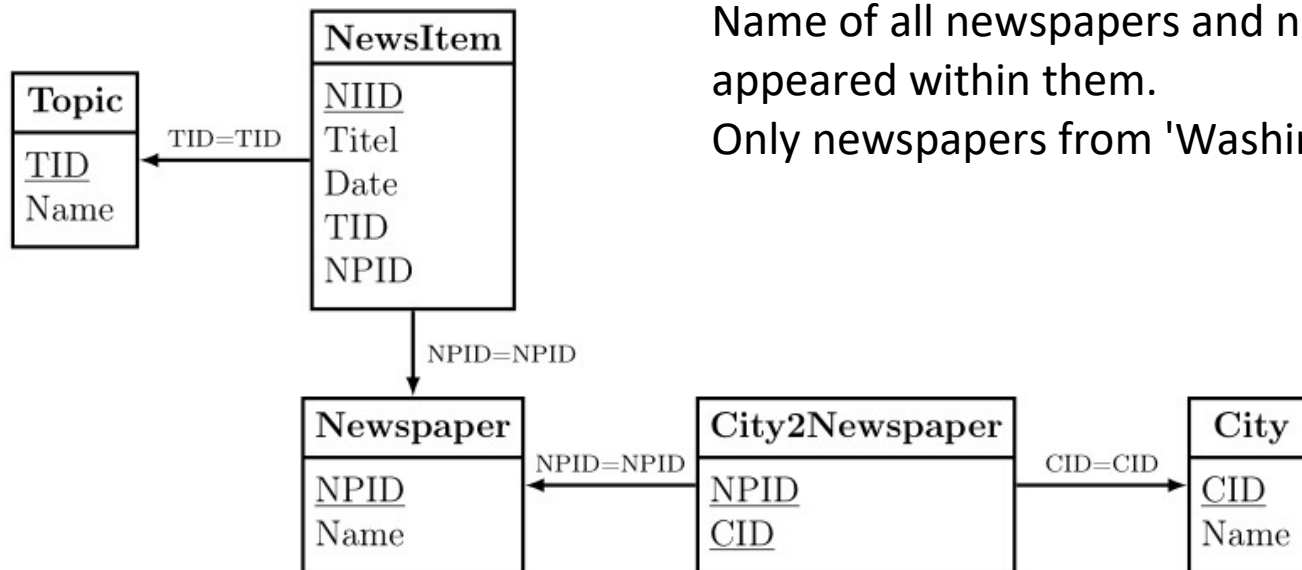


Title of all news items of topic 'Politics' that appeared in the 'New York Times'.

```
select title
from topic t
      join newsitem ni on t.tid=ni.tid
      join newspaper np on ni.npid=np.npid
where
  np.name = 'New York Times' and
  t.name = 'Politics';
```

## Define SQL Query 2a - Solution

Montag, 27. Januar 2020 18:55



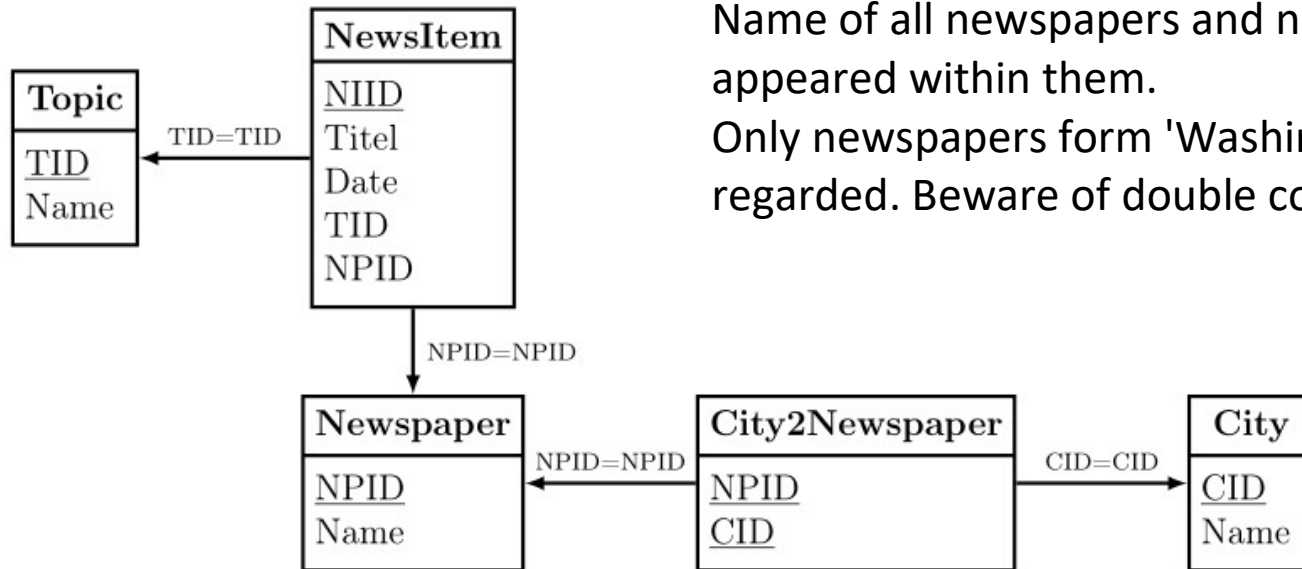
Name of all newspapers and number of news items, that appeared within them.

Only newspapers from 'Washington' should be regarded.

```
select np.name, count(*)  
from newspaper np  
      join newsitem ni on ni.npid=np.npid  
      join city2newspaper c2n on c2n.npid=np.npid  
      join city c on c.cid=c2n.cid  
where c.name='Washington'  
group by np.name
```

## Define SQL Query 2b - Solution

Montag, 27. Januar 2020 18:55

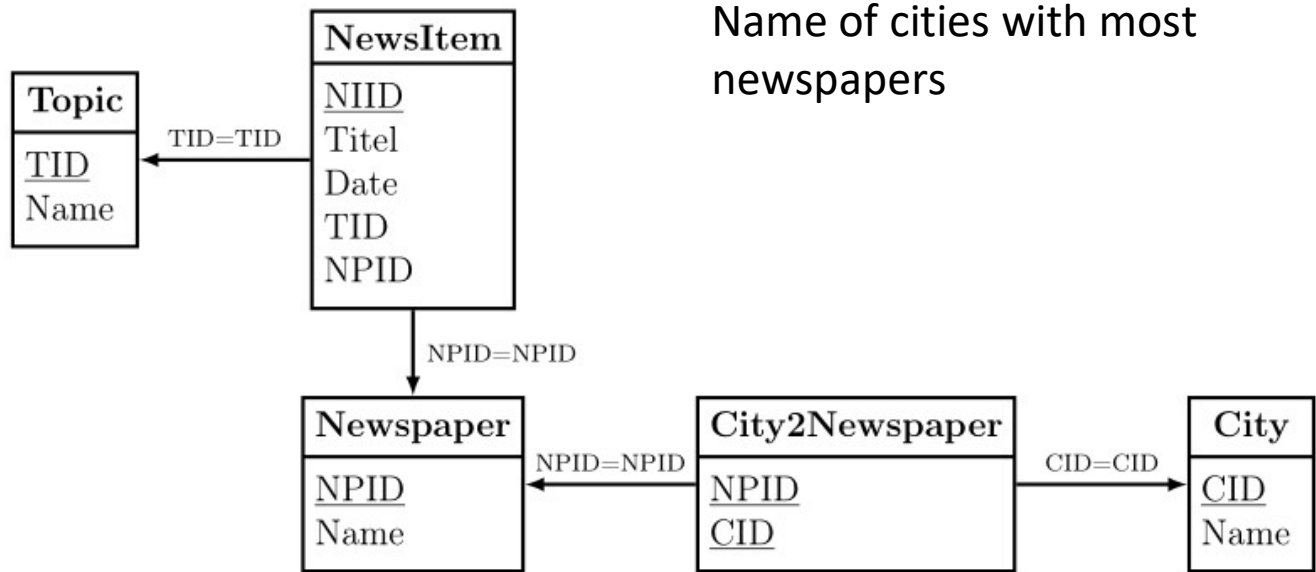


Name of all newspapers and number of news items, that appeared within them.  
Only newspapers from 'Washington' and 'New York' should be regarded. Beware of double counting the same newspaper.

```
select name, count(*)
from newspaper np
join newsitem ni on ni.npid=np.npid
join (select npid
from city2newspaper c2n
join city c on c.cid=c2n.cid
where name='Washington' or name='New York'
group by npid ) nn on nn.npid=np.npid
group by np.name
```

# Define SQL Queries 3 - Solution

Montag, 27. Januar 2020 18:55



Name of cities with most newspapers

```
select name
from city c
      join city2newspaper c2n on c2n.cid=c.cid
group by c.name
having count(*) =
      (select max(npcount)
       from (select count(*) as npcount from city2newspaper group by cid)
      )
```

# Create a Star Schema - Solution

Mittwoch, 8. Juli 2020 11:03

Create a star schema for the following domain: **Production**.

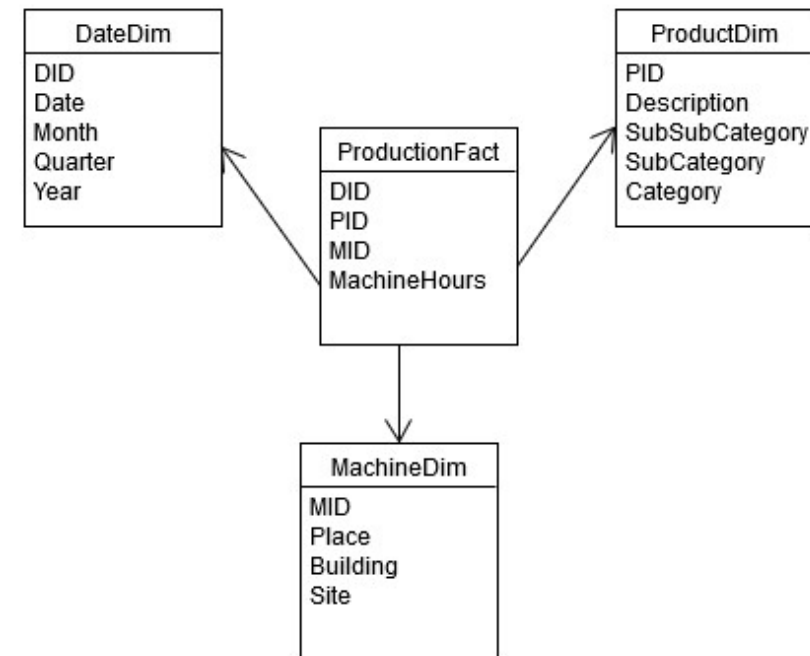
- The model should contain a time dimension and two further dimensions, the first of which should contain at least a three-level hierarchy, and the second at least a two-level hierarchy.
- Provide one fact table with at least one measure.

Draw your model with umletino

( <http://www.umlet.com/umletino/umletino.html> ).

Export a PNG file and attach that file to your reply mail.

Click File Export then select Save Image File





# Evaluate ML Model

Montag, 10. Januar 2022 10:51

- Understanding Recall, Precision, Accuracy
- Understanding Confusion Matrix
- Understanding Scoring Classifier
- Understanding ROC Curve