

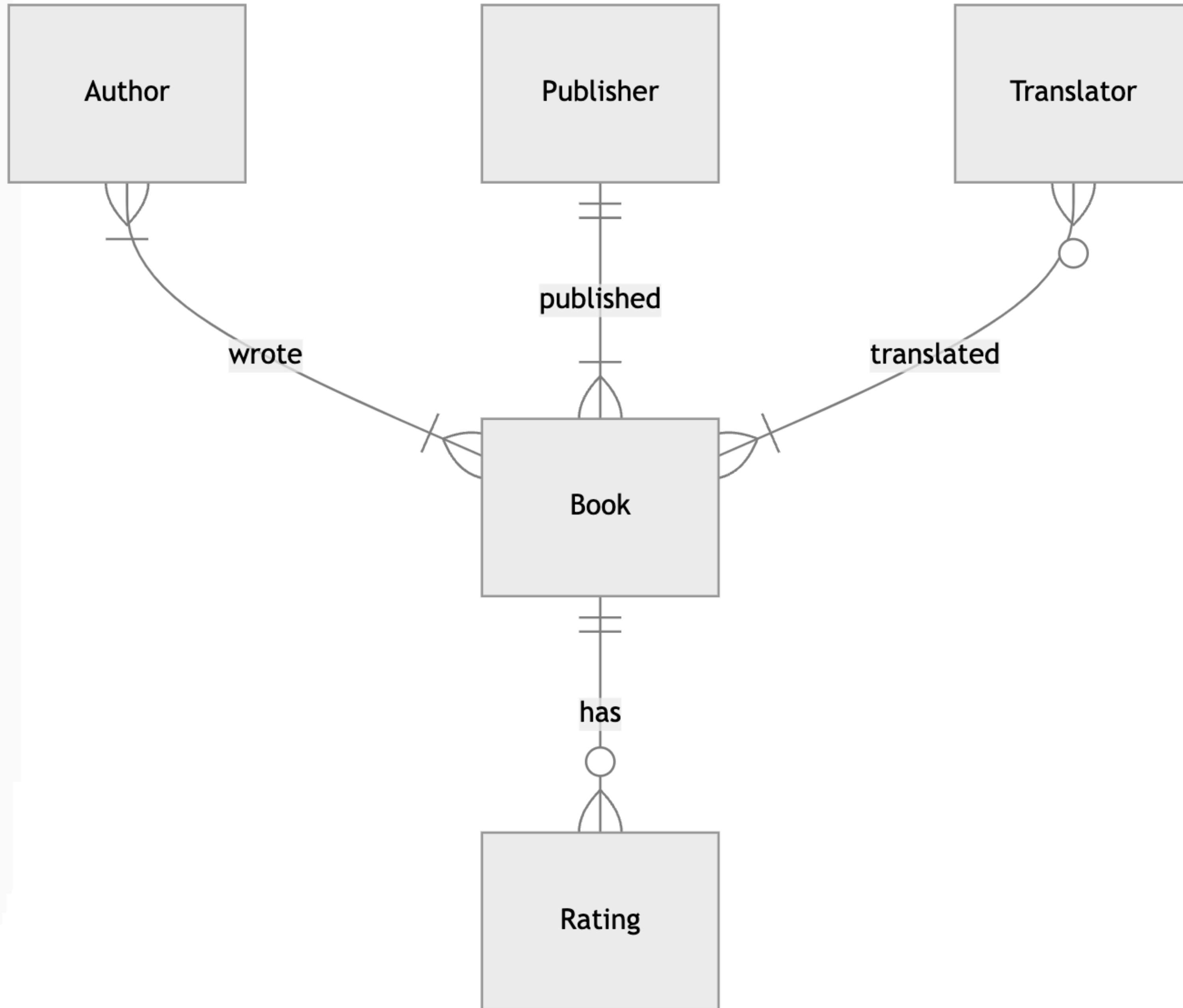
Introduction to

Databases with SQL

Viewing



The Booker Prizes



authors

id	name
23	Eva Baltasar
31	Han Kang
27	Gauz
58	Olga Tokarczuk

authored

author_id	book_id
23	1
31	74
27	4
58	78

books

id	title
1	Boulder
74	The White Book
4	Standing Heavy
78	Flights

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Gauz	27	27	4	4	Standing Heavy
Olga Tokarczuk	58	58	78	78	Flights

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View

A virtual table defined by a query

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Simplifying

Aggregating

Partitioning

Securing

...

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name	title
Eva Baltasar	Boulder
Han Kang	The White Book
Gauz	Standing Heavy
Olga Tokarczuk	Flights

```
SELECT ...;
```



```
CREATE VIEW name AS
```

```
SELECT ...;
```

Aggregating

book_id	rating
1	4
1	3
1	4
2	2
2	3

book_id	rating
1	4
1	3
1	4
2	2
2	3

book_id	rating
1	4
2	3

book_id	rating
1	3.67
2	2.5

CREATE VIEW ...

CREATE TEMPORARY VIEW ...

CTE

Common Table Expression

```
WITH name AS (  
    SELECT ...  
), ...  
SELECT ... FROM name;
```

Partitioning

books

id	title	year
1	Boulder	2023
2	Whale	2023
14	Paradis	2022
23	After the Sun	2022
34	Minor Detail	2021
39	The Perfect Nine	2021

books

id	title	year
1	Boulder	2023
2	Whale	2023
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34	Minor Detail	2021
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books

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books

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23	After the Sun	2022
34	Minor Detail	2021
39	The Perfect Nine	2021

Securing

rides

id	origin	destination	rider
1	Good Egg Galaxy	Honeyhive Galaxy	Peach
2	Castle Courtyard	Cascade Kingdom	Mario
3	Metro Kingdom	Mushroom Kingdom	Luigi
4	Seaside Kingdom	Deep Woods	Bowser

rides

id	origin	destination
1	Good Egg Galaxy	Honeyhive Galaxy
2	Castle Courtyard	Cascade Kingdom
3	Metro Kingdom	Mushroom Kingdom
4	Seaside Kingdom	Deep Woods

Soft Deletions



71541 MUSEUM OF FINE ARTS, BOSTON, MASS.

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collections

id	title	deleted
1	Farmers working ...	0
2	Imaginative land...	0
3	Profusion of ...	0
4	Peonies and ...	0

collections

id	title	deleted
1	Farmers working ...	1
2	Imaginative land...	0
3	Profusion of ...	0
4	Peonies and ...	0

```
SELECT * FROM "collections"  
WHERE "deleted" = 0;
```

collections

id	title	deleted
1	Farmers working ...	0
2	Imaginative land...	0
3	Profusion of ...	0
4	Peonies and ...	0

current_collections

id	title
1	Farmers working ...
2	Imaginative land...
3	Profusion of ...
4	Peonies and ...

collections

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```
CREATE TRIGGER name
```

```
CREATE TRIGGER name
```

```
INSTEAD OF DELETE ON view
```

```
CREATE TRIGGER name  
INSTEAD OF DELETE ON view  
FOR EACH ROW
```

```
CREATE TRIGGER name  
INSTEAD OF DELETE ON view  
FOR EACH ROW  
BEGIN
```

```
CREATE TRIGGER name  
INSTEAD OF DELETE ON view  
FOR EACH ROW  
BEGIN  
    ...;  
END
```

```
CREATE TRIGGER name  
INSTEAD OF DELETE ON view  
FOR EACH ROW  
BEGIN  
    ...;  
END;
```



```
CREATE TRIGGER name
  INSTEAD OF INSERT ON view
  FOR EACH ROW
  BEGIN
    ...;
  END;
```

```
CREATE TRIGGER name
  INSTEAD OF INSERT ON view
  FOR EACH ROW WHEN condition
  BEGIN
    ...;
  END;
```

collections

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