Backendprogrammering 1

RELATIONSDATABASER

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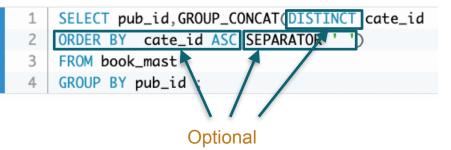076-174 90 43

NACKADEMIN

Aggregerade funktioner

- AVG
- COUNT
- SUM
- MIN
- MAX
- GROUP_CONCAT
  - DISTINCT
  - ORDER BY
  - SEPARATOR

GROUP_CONCAT

book_id	book_name	isbn_no	cate_id	aut_id	pub_id	dt_of_pub	pub_lang	no_page	book_price
BK001	Introduction to Electrodynamics	0000979001	CA001	AUT001	P003	2001-05-08	English	201	85.00
BK002	Understanding of Steel Construction	0000979002	CA002	AUT002	P001	2003-07-15	English	300	105.50
BK003	Guide to Networking	0000979003	CA003	AUT003	P002	2002-09-10	Hindi	510	200.00
BK004	Transfer of Heat and Mass	0000979004	CA002	AUT004	P004	2004-02-16	English	600	250.00
BK005	Conceptual Physics	0000979005	CA001	AUT005	P006	2003-07-16	NULL	345	145.00
BK006	Fundamentals of Heat	0000979006	CA001	AUT006	P005	2003-08-10	German	247	112.00
BK007	Advanced 3d Graphics	0000979007	CA003	AUT007	P002	2004-02-16	Hindi	165	56.00
BK008	Human Anatomy	0000979008	CA005	AUT008	P006	2001-05-17	German	88	50.50

```
1  SELECT pub_id,GROUP_CONCAT(DISTINCT cate_id
2  ORDER BY  cate_id ASC SEPARATOR ' ')
3  FROM book_mast
4  GROUP BY pub_id
```

Optional

```
+---------+---------------------------------
| pub_id | GROUP_CONCAT(DISTINCT cate_id
ORDER BY  cate_id ASC SEPARATOR ' ') |
+---------+---------------------------------
| P001   | CA002 CA004
| P002   | CA003
| P003   | CA001 CA003
| P004   | CA002 CA005
| P005   | CA001 CA004
| P006   | CA001 CA005
| P007   | CA002 CA005
| P008   | CA004 CA005
+---------+---------------------------------
8 rows in set (0.00 sec)
```

Sträng-funktioner

- CONCAT
- LENGTH
- LEFT
- REPLACE
- SUBSTRING
- TRIM
- FORMAT

Datum-funktioner

- CURDATE
- DATEDIFF
- DAY
- DATE_ADD
- DATE_SUB
- DATE_FORMAT
- DAYNAME
- DAYOFWEEK

- NOW
- MONTH
- STR_TO_DATE
- WEEK
- WEEKDAY
- YEAR

Subqueries

- *Predicate subqueries* - utökade logiska konstruktioner i `WHERE`- och `HAVING`-delarna.
- *Skalära subqueries* - fristående frågor som returnerar ett enda värde.

Predicate subqueries

- Kan enbart användas i
  `WHERE`- och `HAVING`-
  delarna. Måste returnera
  en kolumn.

```
mysql> SELECT * FROM Client WHERE C_ID IN
    -> (SELECT C_ID FROM Products);
+------+---------------+----------+
| C_ID | Name          | City     |
+------+---------------+----------+
| 1    | A K Ltd       | Delhi    |
| 2    | V K Associate | Mumbai   |
| 3    | R K India     | Banglore |
| 5    | A T Ltd       | Delhi    |
+------+---------------+----------+
4 rows in set (0.00 sec)
```

Skalära subqueries

- Returnerar ett enda värde.
- Kan användas där en kolumn kan användas.


```
1  ●  SELECT
2         c.customerName,
3         (SELECT SUM(amount)
4          FROM payments
5          WHERE customerNumber = c.customerNumber) AS TotalPaid
6     FROM customers c;
```

erview	Output	Snippets	Result (1) ×

Fetched 122 records. Duration: 0.

customerName	TotalPaid
Atelier graphique	22314.36
Signal Gift Stores	80180.98
Australian Collectors, Co.	180585.06999999998
La Rochelle Gifts	116949.68000000001
Baane Mini Imports	104224.79
Mini Gifts Distributors Ltd	584188.2400000001