SQL HAVING

HAVING

Comes after GROUP BY clause

Filters groups of rows

Similar functionality to WHERE, but WHERE can only filter individual rows

```
SELECT
    column_1,
    column_2,
    ...,
    aggregate_function(column_3)
FROM
    table_name
GROUP BY
    column_1,
    column_2,
    ...
HAVING
    conditional_expression;
```

GROUP BY example

Count number of books per genre

	id [PK] integer	title text	author text	genre text	year integer
1	1	Frankenstein	Mary Shelley	Novel	1818
2	2	The Great Gatsby	F. Scott Fitzgerald	Novel	1925
3	3	Big Fish	Daniel Wallace	Magical Realism	1998
4	4	Don Quixote	Miguel de Cervantes	Novel	1605

Group 1: Novel; 3 books

	id [PK] integer	title text	author text	genre text	year integer
1	1	Frankenstein	Mary Shelley	Novel	1818
2	2	The Great Gatsby	F. Scott Fitzgerald	Novel	1925
3	4	Don Quixote	Miguel de Cervantes	Novel	1605

Group 2: Magical Realism; 3 books

	id [PK] integer	title text	author text	genre text	year integer
1	3	Big Fish	Daniel Wallace	Magical Realism	1998

GROUP BY ... HAVING example

Count number of books per genre

```
SELECT genre, COUNT(*) AS book_count
FROM books
GROUP BY genre
HAVING(COUNT(*)) > 1;
```

Group 1: Novel; 3 books

	id [PK] integer	title text	author text	genre text	year integer
1	1	Frankenstein	Mary Shelley	Novel	1818
2	2	The Great Gatsby	F. Scott Fitzgerald	Novel	1925
3	4	Don Quixote	Miguel de Cervantes	Novel	1605

Group 2: Magical Realism; 3 books

	id [PK] integer	title text	author text	genre text	year integer
1	3	Big Fish	Daniel Wallace	Magical Realism	1998