### 1. \*\*Query: Find Publications by Conference\*\*

-- \*\*Description\*\*: This query searches for all publications associated with a specific conference.

EXPLAIN SELECT \* FROM Publications WHERE conference\_ID = 'CONF001';

-- \*\*Index Used\*\*: `idx\_publications\_conference\_id`

A screenshot of a computer

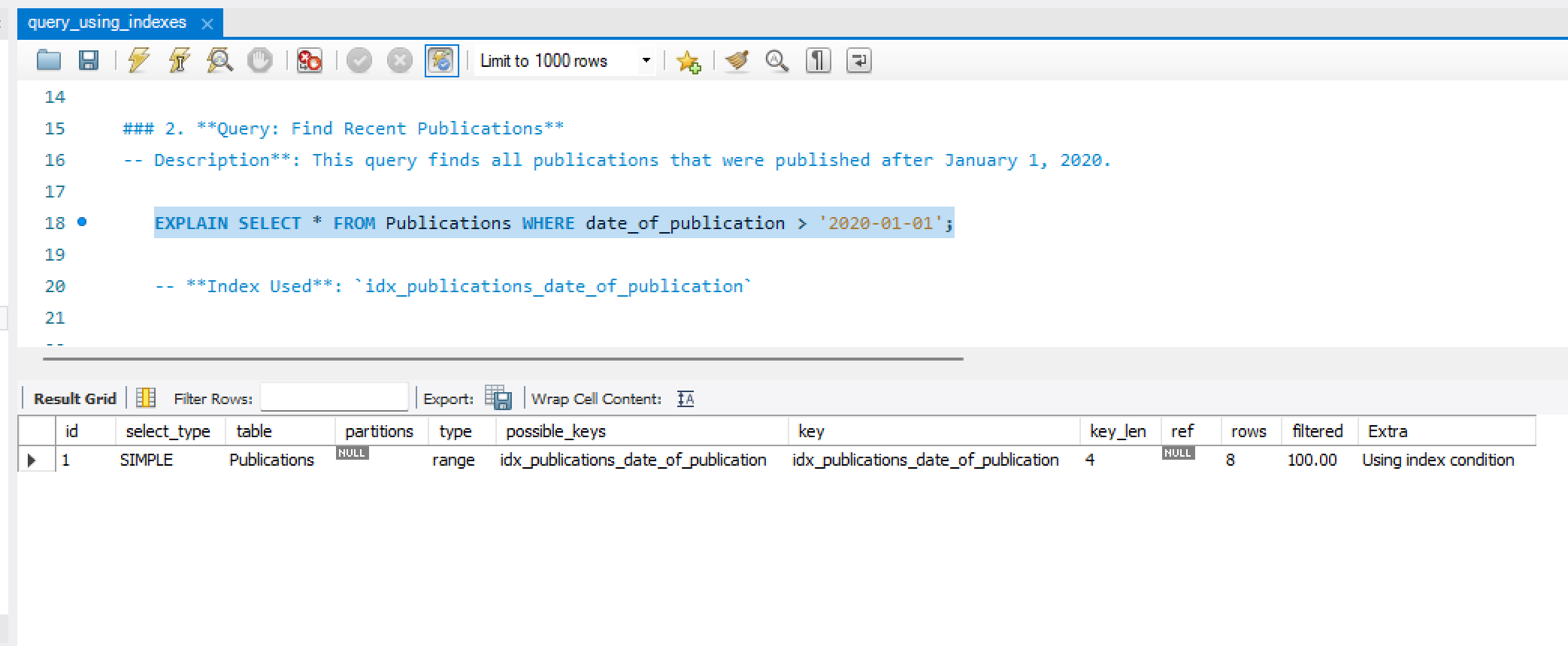
Description automatically generated

### 2. \*\*Query: Find Recent Publications\*\*

-- Description\*\*: This query finds all publications that were published after January 1, 2020.

EXPLAIN SELECT \* FROM Publications WHERE date\_of\_publication > '2020-01-01';

-- \*\*Index Used\*\*: `idx\_publications\_date\_of\_publication`



### 3. \*\*Query: Find Authors by Institution\*\*

-- \*\*Description\*\*: This query searches for authors affiliated with a specific institution.

EXPLAIN SELECT \* FROM Authors WHERE institution\_ID = 'INST001';

-- \*\*Index Used\*\*: `idx\_authors\_institution\_id`

A screenshot of a computer

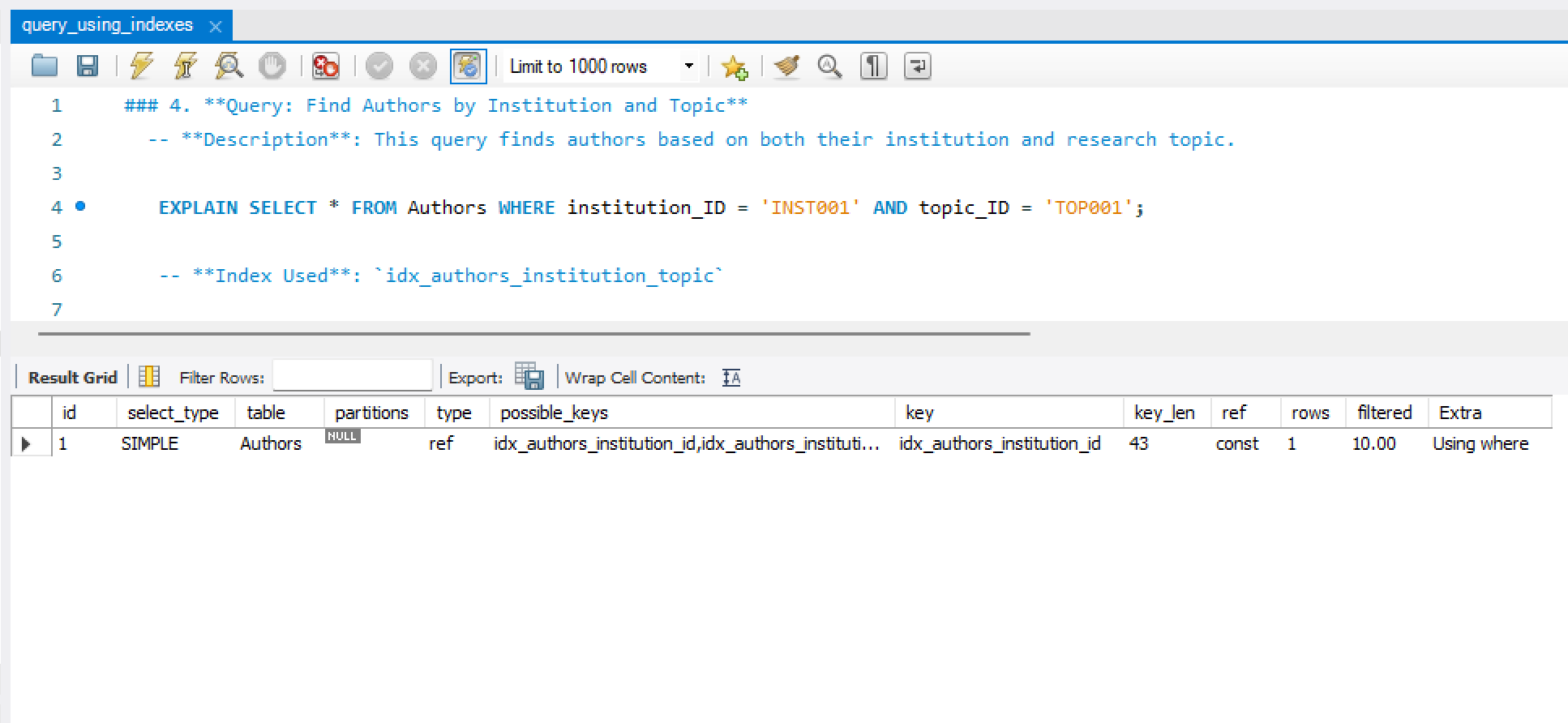
Description automatically generated

### 4. \*\*Query: Find Authors by Institution and Topic\*\*

-- \*\*Description\*\*: This query finds authors based on both their institution and research topic.

EXPLAIN SELECT \* FROM Authors WHERE institution\_ID = 'INST001' AND topic\_ID = 'TOP001';

-- \*\*Index Used\*\*: `idx\_authors\_institution\_topic`

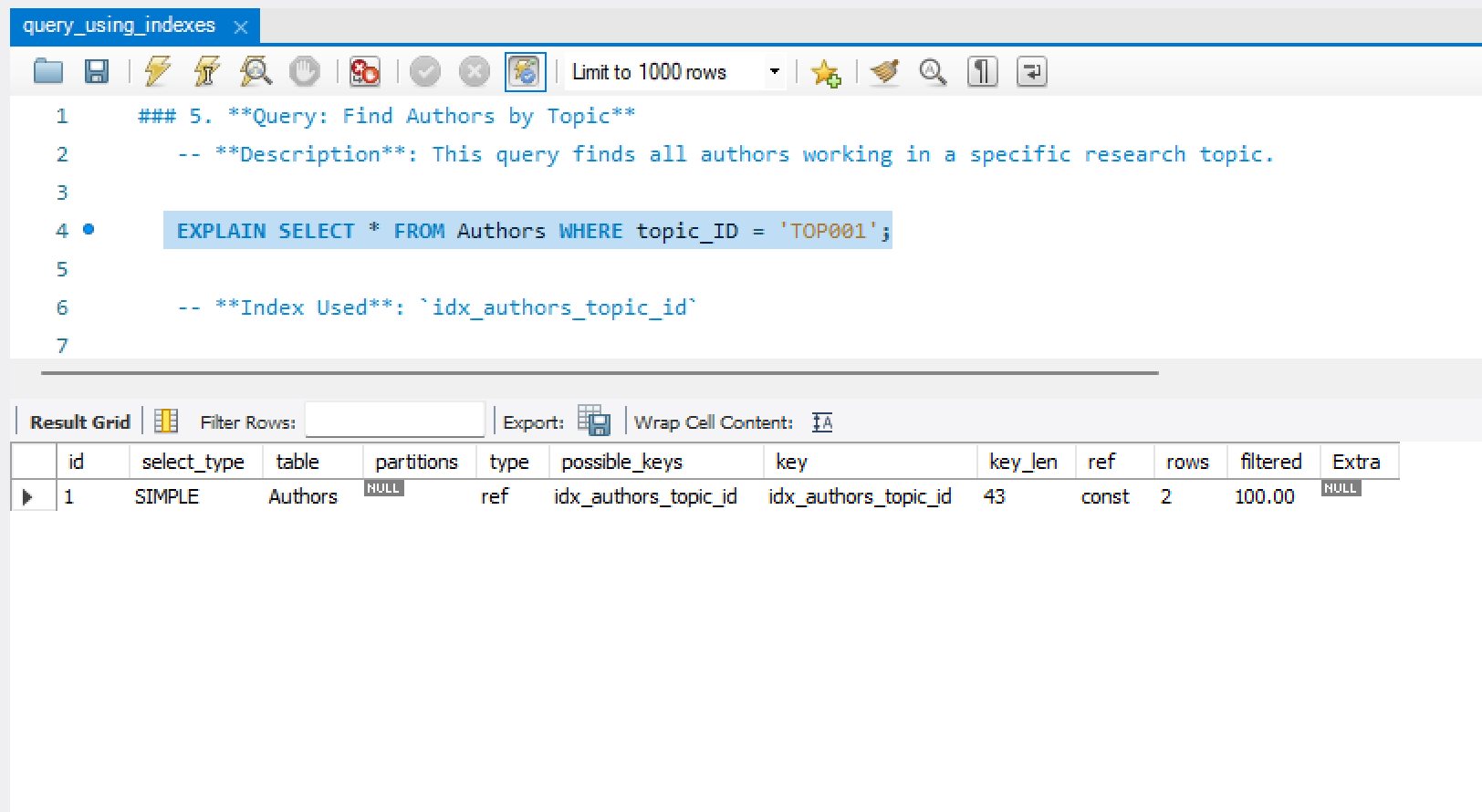


### 5. \*\*Query: Find Authors by Topic\*\*

-- \*\*Description\*\*: This query finds all authors working in a specific research topic.

EXPLAIN SELECT \* FROM Authors WHERE topic\_ID = 'TOP001';

-- \*\*Index Used\*\*: `idx\_authors\_topic\_id`



### 6. \*\*Query: Find Publications by Author\*\*

-- \*\*Description\*\*: This query retrieves publications authored by a specific author.

EXPLAIN SELECT \* FROM Pub\_Author WHERE author\_ID = 'AUTH001';

-- \*\*Index Used\*\*: `idx\_pub\_author\_author\_id`

A screenshot of a computer

Description automatically generated

### 7. \*\*Query: Find Authors by Publication\*\*

-- \*\*Description\*\*: This query finds all authors of a particular publication.

EXPLAIN SELECT \* FROM Pub\_Author WHERE publication\_ID = 'PUB001';

-- \*\*Index Used\*\*: `idx\_pub\_author\_publication\_id`

A screenshot of a computer

Description automatically generated

### 8. \*\*Query: Find Keywords Associated with a Publication\*\*

-- \*\*Description\*\*: This query retrieves keywords linked to a particular publication.

EXPLAIN SELECT \* FROM Pub\_Key WHERE publication\_ID = 'PUB001';

-- \*\*Index Used\*\*: `idx\_pub\_key\_publication\_id`

A screenshot of a computer

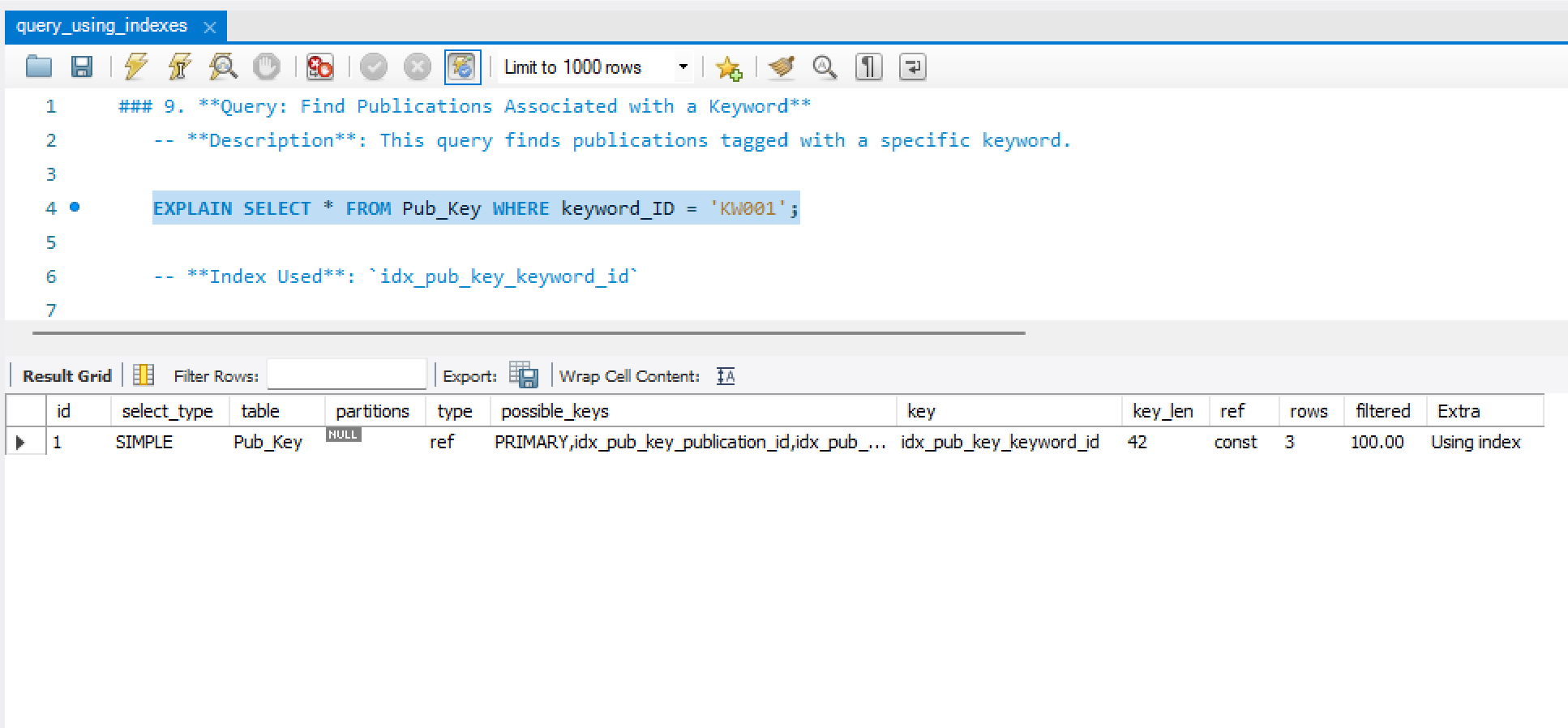
Description automatically generated

### 9. \*\*Query: Find Publications Associated with a Keyword\*\*

-- \*\*Description\*\*: This query finds publications tagged with a specific keyword.

EXPLAIN SELECT \* FROM Pub\_Key WHERE keyword\_ID = 'KW001';

-- \*\*Index Used\*\*: `idx\_pub\_key\_keyword\_id`

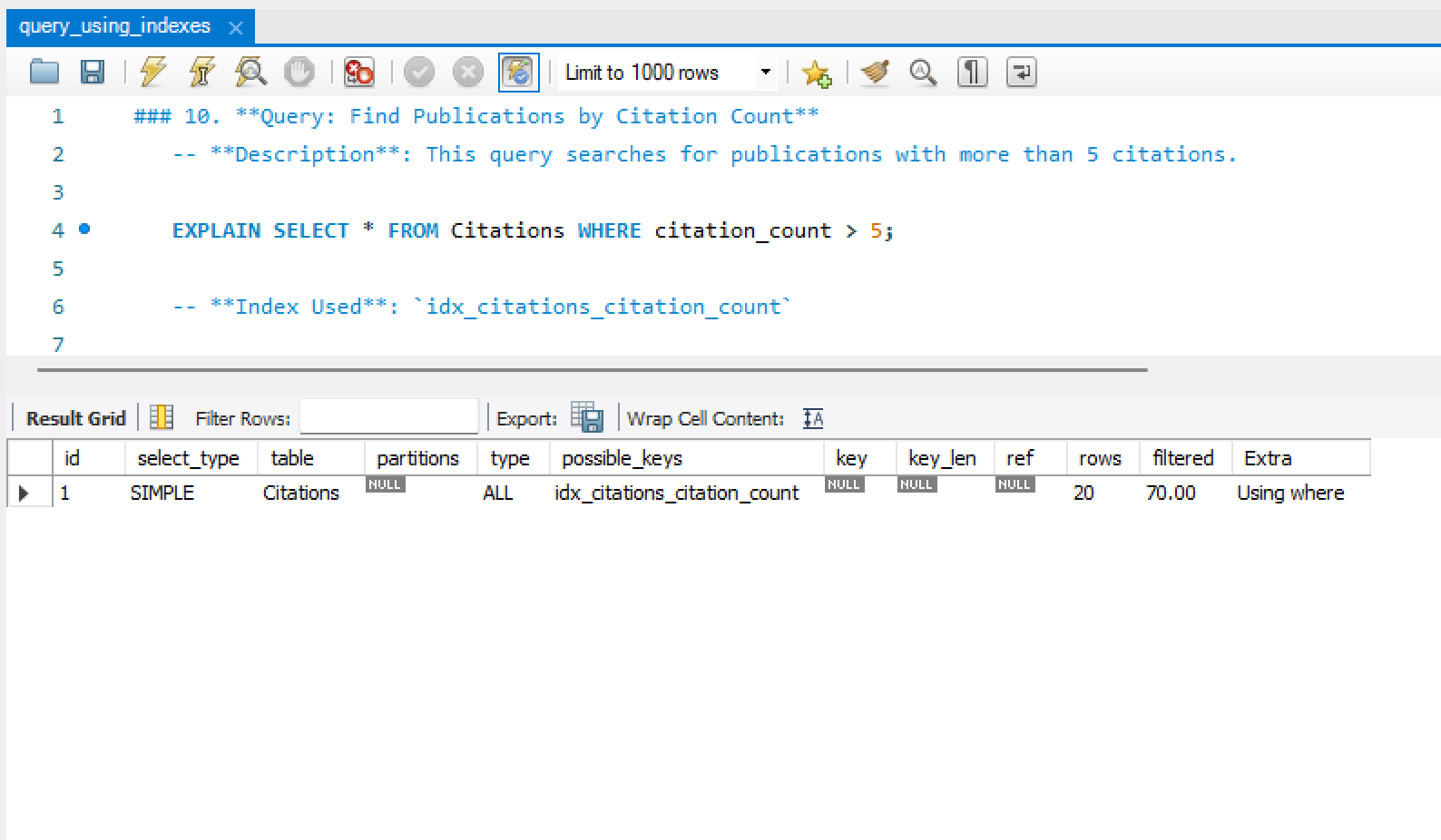


### 10. \*\*Query: Find Publications by Citation Count\*\*

-- \*\*Description\*\*: This query searches for publications with more than 5 citations.

EXPLAIN SELECT \* FROM Citations WHERE citation\_count > 5;

-- \*\*Index Used\*\*: `idx\_citations\_citation\_count`

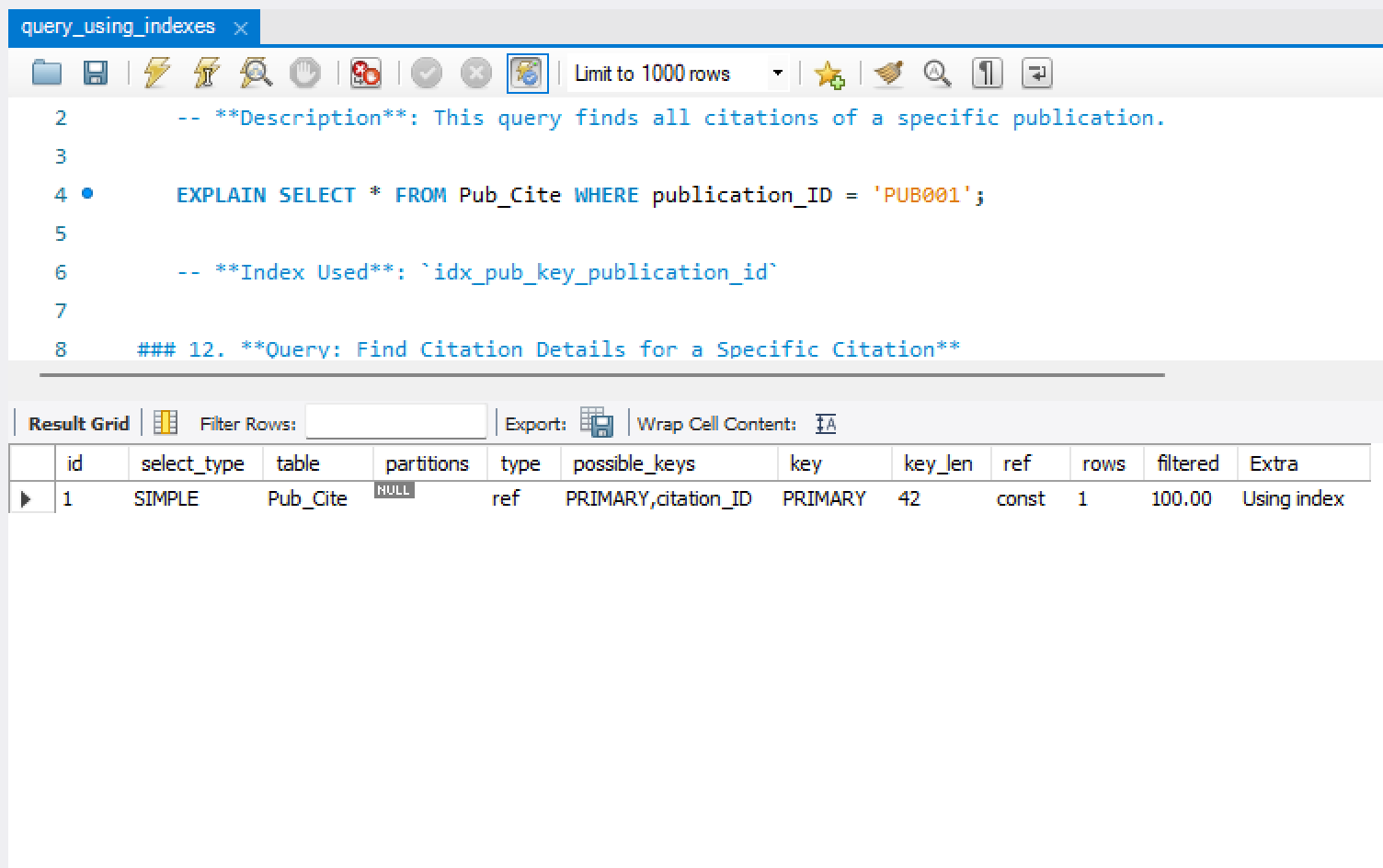


### 11. \*\*Query: Find Citations for a Specific Publication\*\*

-- \*\*Description\*\*: This query finds all citations of a specific publication.

EXPLAIN SELECT \* FROM Pub\_Cite WHERE publication\_ID = 'PUB001';

-- \*\*Index Used\*\*: `idx\_pub\_key\_publication\_id`



### 12. \*\*Query: Find Citation Details for a Specific Citation\*\*

-- \*\*Description\*\*: This query retrieves details for a specific citation by its ID.

EXPLAIN SELECT \* FROM Pub\_Cite WHERE citation\_ID = 'CIT001';

-- \*\*Index Used\*\*: Citation indexes on `citation\_ID`

