

Exercise 3

- 1) The problem arises due to the violation of the principle of projection pushdown. Projecting the book column before applying the GROUP BY and having clauses can lead to unnecessary computation and performance issues.
- 2) To fix the problem, we could first apply the aggregation and filtering operations and then project the columns. If we do this, the aggregation is only performed for the relevant data and in the end, only the necessary columns are included.