





Y This is a session containing a few questions and their solutions by a tutor for undergraduate students who are new to this topic. Evaluate the overall responses of the tutor on the basis of: 1. Technical accuracy 2. Clarity of explanation 3. Educational value 4. Appropriate level for undergraduate students. Only rating number is needed on the scale of 1-5.

I'll carefully evaluate the tutor's response based on the four criteria you specified:

- 1. Technical Accuracy: 5/5
- The SQL query is technically correct
- Properly joins the Works and Company tables
- Correctly filters for the specific company and salary condition
- Matches the given schema requirements
- 2. Clarity of Explanation: 4/5
- Provides a clear, step-by-step breakdown of the query
- Explains the purpose of each part of the SQL statement
- Could potentially benefit from slightly more detail about table joins
- 3. Educational Value: 4/5
- Breaks down the query logic for students learning SQL
- Explains the reasoning behind each clause
- Demonstrates how to use JOIN and WHERE conditions
- Offers opportunity for students to understand query construction
- 4. Appropriate Level for Undergraduate Students: 5/5
- Uses simple, straightforward language
- Explains technical concepts without overwhelming complexity
- Provides just enough detail for beginners to understand
- Leaves room for students to explore and ask follow-up questions

Overall, this is a high-quality explanation that effectively teaches SQL query construction to undergraduate students, with minor room for incremental improvement in explanation depth.





I'll evaluate the tutor's responses based on the four criteria:

- 1. Technical Accuracy: 5/5
- First query correctly joins Works and Employee tables
- Second query correctly simplifies to using only the Works table
- Both queries accurately address the original problem statement



- Demonstrates understanding of SQL query optimization
- 2. Clarity of Explanation: 5/5
- Provides clear, step-by-step explanations
- Breaks down the logic behind each query
- Explains why the second query is more efficient
- Uses bullet points to make explanations easy to follow
- Encourages student thinking by validating their question
- 3. Educational Value: 5/5
- Shows two approaches to solving the same problem
- Demonstrates the concept of query optimization
- Explains the rationale behind each design choice
- Highlights the importance of using only necessary tables
- Promotes critical thinking by engaging with the student's question
- 4. Appropriate Level for Undergraduate Students: 5/5
- Uses simple, accessible language
- Breaks down complex SQL concepts into digestible pieces
- Provides just enough detail without overwhelming the student
- Encourages student participation and questioning
- Demonstrates learning as an iterative process

Overall, this is an excellent tutorial interaction that effectively teaches SQL query construction and optimization to undergraduate students.





I'll evaluate the tutor's response based on the four criteria:

- 1. Technical Accuracy: 5/5
- Correctly follows the process of finding candidate keys
- Methodically applies closure computation
- Systematically checks attribute combinations
- Accurately determines the candidate key
- Correctly applies functional dependency rules
- 2. Clarity of Explanation: 5/5
- Breaks down the solution into clear, logical steps
- Uses bullet points to explain each stage of the process
- Provides detailed reasoning for each decision
- Shows step-by-step computational closure
- $\bullet\;$  Explains why certain attribute combinations do or do not work as keys
- 3. Educational Value: 5/5
- Demonstrates a comprehensive approach to finding candidate keys
- Teaches the methodology of closure computation
- Shows how to methodically check and validate keys

- Provides insight into functional dependencies
- Encourages systematic problem-solving approach
- 4. Appropriate Level for Undergraduate Students: 5/5
- Uses clear, accessible language
- Breaks down a complex concept into manageable steps
- Provides enough detail without overwhelming the student
- Explains technical concepts in a straightforward manner
- Shows the reasoning behind each step of the process

Overall, this is an exceptional tutorial response that thoroughly and clearly explains how to find candidate keys, making it an excellent learning resource for undergraduate students studying database design and functional dependencies.





I'll evaluate the tutor's response based on the four criteria:

- 1. Technical Accuracy: 5/5
- Correctly computes attribute closures
- Systematically checks functional dependencies
- Accurately identifies multiple candidate keys
- Follows the closure algorithm precisely
- Demonstrates correct reasoning for minimal superkeys
- 2. Clarity of Explanation: 5/5
- Breaks down the solution into clear, logical steps
- Provides detailed explanations for each computation
- Uses bullet points to clarify the reasoning
- Shows each stage of closure computation
- Explains how different functional dependencies interact
- 3. Educational Value: 5/5
- Demonstrates a comprehensive approach to finding candidate keys
- Teaches systematic method for closure computation
- Shows how to identify and verify minimal superkeys
- Explains the logic behind each step
- Provides insight into functional dependency analysis
- 4. Appropriate Level for Undergraduate Students: 5/5
- Uses clear, accessible language
- Breaks down a complex concept into manageable steps
- Provides enough detail without overwhelming the student
- Explains technical concepts in a straightforward manner
- Shows step-by-step reasoning that students can follow

Interestingly, this solution is slightly different from the previous one, but equally valid. The tutor discovers two candidate keys: (Supplier, StockQuantity) and (ProductName,

