Stored Procedures

Question 1: What is a Stored Procedure?

Explain what a stored procedure is and why it is useful in database management. Provide an example of a scenario where a stored procedure would be beneficial.

Question 2: How Do Stored Procedures Improve Performance?

Describe how stored procedures can improve the performance of database operations. Include an explanation of precompilation and reduced network traffic in your answer.

Question 3: Explain Input and Output Parameters in Stored Procedures

What are input and output parameters in stored procedures? How are they used? Provide an example of a stored procedure that uses both input and output parameters.

Question 4: How Can Stored Procedures Enhance Security?

Discuss how stored procedures can enhance database security. Include an explanation of how they help prevent SQL injection attacks.

Question 5: Debugging and Maintaining Stored Procedures

What are some best practices for debugging and maintaining stored procedures? Why is it important to document stored procedures?

SQL Views

Question 1: Purpose of Views

- o Explain the purpose of SQL views in a database system. How do they differ from physical tables? Provide an example of a scenario where a view would be useful.

Question 2: Simplifying Queries

- o Suppose you have a complex query that joins multiple tables and applies filters. How can a view simplify this process? Write a paragraph explaining the benefits of encapsulating such a query in a view.

Question 3: Data Security

- o How can SQL views be used to enhance data security? Provide an example of a situation where a view restricts access to sensitive data, such as employee salaries.

Question 4: Real-World Application

- o Imagine you are designing a database for a university. Describe a scenario where a view would be helpful for students, faculty, or administrators. What data would the view include, and why would it be beneficial?