

## Quiz 1

### Question: Problem Scenario:

(Marks 5)

You are working for a retail company that stores product data, customer information and sales records using traditional file processing systems (e.g., CSV files, text files). The company faces several challenges such as

1. Redundancy: customer data is duplicated across multiples files.
2. Inconsistency: Product prices differ in sales and product files.
3. Limited query capability: Employees must manually search files for generating reports.
4. Poor scalability: As data grow the system becomes harder to maintain and prone to errors.

Identify the limitation of the file processing approach in this scenario and explain why a database system would be better.

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### Question: Problem Scenario:

(Marks 5)

A small healthcare clinic stores patient record, appointments, and billing information in individual flat files (e.g., spreadsheets and text files). Over times, the clinic has encountered several challenges:

1. Redundant Data: Patient info (name and contact) is repeated in appointment and billing files.
2. Inconsistent Data: The contact details of patient are sometimes updated in one file but not in others, leading to errors.
3. Slow Data Retrieval: Searching for a patient's entire medical history takes too long due to manual lookups across multiple files.
4. Data Security Concerns: Sensitive patient data is not well-protected in text files and lacks access control mechanism.

Explain the limitation of the file processing approach used by the clinic and why a database solution is necessary.

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