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ICE Task 2

Azure Storage Accounts:

• Blob Storage

Blob storage is optimised for storing unstructured data. It is used for large amounts of data such as text or binary data.
Blobs can store images, documents, media files, backups, archives, logs, streaming data, and big data sets for analytics.

Examples of applications:
Content Delivery Network (CDN): websites and/or applications that need to deliver multimedia content to users globally with low latency.

Data Lake for Big Data Analytics: Used for storing large-scale structured and unstructured datasets in data lake scenarios to be analysed with Azure Data Lake Analytics or Azure Synapse Analytics.

Backup and Disaster Recovery Solutions: Applications that perform automated backups of files, databases, or virtual machines to ensure availability and data recovery in case of failure.

• File Storage

File storage offers managed file shares in the cloud accessible via the SMB & NFS protocols.
Designed as a replacement for on-premises file servers.
They structured data like files, shared documents, and application configurations.

Examples of Applications:
Shared Network Drive: Businesses can replace their on-premises file servers and use azure file storage as a centralised file-sharing location that allows multiple users to access and collaborate on shared files securely.

Lift and Shift Legacy Applications: Traditional applications depend on file shares, and Azure File storage can serve these legacy applications without modifying the code

CI?CD Pipeline Storage: developer teams can store and build artefacts or deployment configurations that need to be shared between distributed build agents or teams.

• Queue Storage

Queue storage is designed for storing and retrieving messages in a queue in a reliable and scalable manner. It supports decoupling of components in distributed applications.

Queue's can store text-based messages that contain data such as processing instructions or simple status updates. Each message can be up to 64KB in size.

Examples of Applications:
Order Processing Systems: E-commerce applications that use queues to manage and process incoming customer orders asynchronously by workers or services in the backend.

Task Management in Microservices: Applications with multiple micro services can use queues to communicate between services, ensuring tasks are processed sequentially or in a specific order.

Logging & Monitoring Solutions: Loggins frameworks or monitoring applications can store incoming logs or monitoring events in a queue for batch processing or asynchronous analysis.

- **Table Storage**

Table storage is a NoSQL key-value store that is highly scalable. It's used for storing structured data that does not require complex relationships, such as with relational databases.

It stores key-value pairs that are structured in tables. It can be used to store datasets like logs, catalogs, user profiles, or any other type of data that needs to be retrieved quickly using keys.

Examples of Applications:
Web and Mobile App User Profiles: Storing user information like preferences, profile data, and session information for web and mobile applications in a scalable manner.

IoT Data Storage: Applications collecting massive amounts of data from IoT devices can store telemetry data or sensor readings in Azure Table Storage due to its scalability.

Audit Logs for Applications: Storing and retrieving application activity logs or security audit trails for large-scale applications in a cost-effective and fast-access way.