Title and objective

AZ-900 Fundamentals Showcase — E-Commerce on Azure

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Show how Azure supports a secure, scalable e-commerce website

- Align with AZ-900 fundamentals and cloud architecture concepts
- Highlight deployment models, service models, core services, cost, and security
- Apply theory in a practical, visual format

AZ-900 Basics Recap

- **Cloud Benefits**: Scalability, cost-efficiency, global reach

- **Azure Regions**: Data centers across the world for redundancy and performance

- **Resource Groups**: Logical containers for managing services

- **Subscriptions**: Billing and access control boundaries

- **Management Tools**: Azure Portal, CLI, PowerShell

Deployment Models

- **Public Cloud**
- Services hosted by Azure and shared across users
- Example: Your e-commerce app hosted on Azure App Service

- **Private Cloud**
- Dedicated infrastructure for one organization
- Used by banks, hospitals, or government agencies

- **Hybrid Cloud**
- Combines public and private clouds
- Example: On-prem database + Azure frontend

Cloud Service Models — IaaS, PaaS, SaaS

- **IaaS (Infrastructure as a Service)**
- Provides virtual machines, storage, networking
- Example: Azure VM used for backend logic

- **PaaS (Platform as a Service)**
- Provides managed hosting and runtime environments
- Example: Azure App Service for your frontend

- **SaaS (Software as a Service)**
- Ready-to-use applications delivered over the internet
- Example: Microsoft 365, Gmail

Core Azure Services Used

- **Azure App Service**
- Hosts the frontend of the e-commerce website
- Scalable and managed platform (PaaS)

- **Azure Blob Storage**
- Stores product images and media files
- Cost-effective and secure

- **Azure SQL Database**
- Stores product, order, and user data
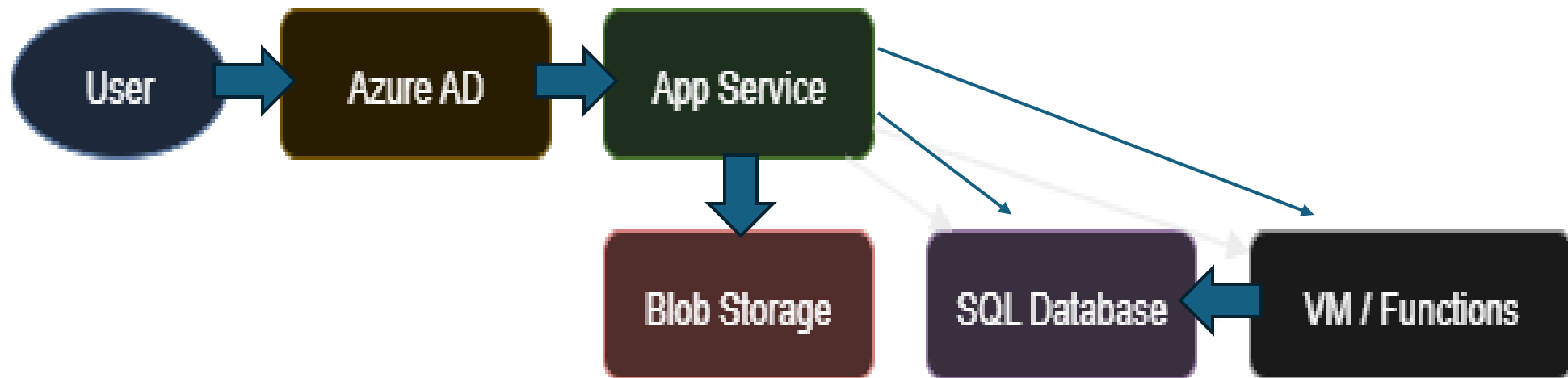- Reliable relational database

- **Azure AD (Active Directory)**
- Handles user authentication
- Integrates with identity management

- **Azure VM / Functions** *(optional)*
- Used for backend logic or AI features
- Flexible compute options

Use Case Diagram

Cost Estimation

- Estimated Costs (Azure Calculator)

- App Service → ~₹1,500 / month

- SQL Database → ~₹2,000 / month

- Blob Storage → ~₹500 / month

- VM (Optional) → ~₹3,000 / month

Key Benefits of Azure

- Why Azure?

- **Scalability** → Auto-scale apps globally
- **Security** → Identity, encryption, compliance
- **Reliability** → 99.9%+ SLA uptime
- **Cost Efficiency** → Pay-as-you-go model

Security

- **Azure AD** for authentication

- **RBAC (Role-Based Access Control)** for permissions

- **Firewalls and Network Security Groups (NSGs)** for traffic control

- Optional: **Encryption at rest and in transit**

Conclusion

❖Wrap-Up

- Learned **AZ-900 core concepts**
- Showcased a **real-world use case**
- Demonstrated **security + cost awareness**
- Azure provides a **flexible, reliable, secure cloud**