Norbert Frick - IT-Manage
- ITM2025 - Bonus Exercise
- ITM2025 - Exercise 1
- ITM2025 - Exercise 2
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ITM2025 - Exercise 7

Performance summary

Assessed

Success status
Passed

Rating

Score
28.5 of 38 points

Attempts
1 of 1 attempts

Results

Course	Norbert Frick - IT-Management 2025 - 0442017 ID: 4862705870 / 111853504007190
Test	ITM2025 - Test 7 ID: 4933452285

You have passed the test!

Duration	0h 28m 4s 6/5/2025, 11:04 AM - 6/5/2025, 11:32 AM
Answered	24 of 24 questions (100%)
Your score	28.5 of 38 points (75%)
Necessary score	19.0
Success status	Passed

75%
Score: 28.5

Application Architecture 1
83%
Score: 5
of 6
go to section

Application Organization Matrix 2
57%
Score: 2
of 3.5
go to section

Application Role Matrix 2
67%
Score: 2
of 3
go to section

Application Function Matrix 2
100%
Score: 3.5
of 3.5
go to section

Application Interaction Matrix 2
67%
Score: 1
of 1.5
go to section

Application Communication Diagram 2
80%
Score: 2
of 2.5
go to section

Application User Location Diagram 2
0%
Score: 0
of 1.5
go to section

Application Use Case Diagram 3
79%
Score: 7.5
of 9.5
go to section

Enterprise Manageability Diagram 1

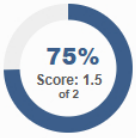
Process Application Realization Diagram 2

Software Engineering Diagram 2

Application Migration Diagram 2

go to section > go to section > go to section > go to section >

COBIT 2019 1



go to section >

Application Architecture 5 of 6 points (83%)

Task 1: Software and Application Architecture

Status	Answered	
Your score	5 / 6	83%

Response

Look at the given statements below and assign each statement to the correct architecture type.

0.5 points for each correct assignment, -0.5 points for each inncorrect assignment.

Software Architecture

- Focuses on component relationships within a single system
- Addresses algorithmic efficiency and data structure choices
- Uses design patterns like layered architecture or microservices
- Prioritizes code maintainability and technical debt management
- Decides between monolithic vs. distributed system design

Application Architecture

- Defines integration points between CRM and ERP systems
- Aligns SaaS solutions with business capability models
- Creates strategic roadmaps spanning multiple IT projects
- Ensures compliance with GDPR across all enterprise apps
- Manages application portfolio lifecycle across the organization
- Governed by enterprise architecture boards
- Specifies API contracts for inter-service communication

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Application Organization Matrix 2 of 3.5 points (57%)

The Application Organization Matrix depicts the relationship between systems (application components) and organizational units within the enterprise. This matrix serves as a foundational tool for understanding how different business units interact with and depend upon various application systems. The matrix enables architects to identify which organizational units own, operate, or consume services from specific applications, facilitating better governance and operational planning.

operational planning.

In banking contexts, this matrix proves particularly valuable for understanding regulatory compliance requirements, as different organizational units may have varying access controls and audit requirements. The matrix also supports organizational restructuring initiatives by clearly showing application dependencies across business units

Task 2: Matrix Relationship Identification

Status	Answered	
Your score	0 / 0.5	0%

Response

Given a bank's organizational structure with departments (Personal Banking, Business Banking, Treasury, Risk, IT, Audit) and applications (Mobile Banking App, Credit Assessment System, Treasury Management System), what relationship should exist between the Treasury department and the Credit Assessment System?

- [ ] No Relationship
- [ ] Heavy User
- [x] Light User
- [ ] Owner
- [ ] Consumer

Task 3: Matrix Completion

Status	Answered	
Your score	2 / 3	67%

Response

Complete an Application-Organization Matrix by dragging the correct relationship types (Owner, Heavy User, Light User, Consumer, Operator, Auditor, No Relationship) to the appropriate cells for a Credit Card Processing System across six bank departments

- Heavy User
- Operator
- Light User
- Owner
- Consumer
- Auditor
- No Relationship

IT Operations
- Operator

Compliance
- Auditor

Corporate Banking
- Light User

Risk Management
- Consumer

Retail Banking
- Heavy User

Treasury
- No Relationship

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Application Role Matrix 2 of 3 points (67%)

The Application-Role Matrix illustrates the relationship between application components and business roles that use them within the enterprise. This matrix maps which specific roles interact with which applications, supporting security planning, training requirements, and user experience design. The matrix enables organizations to understand application security requirements, define role-based access controls, and identify gaps in application coverage for specific business roles.

For banking institutions, this matrix proves essential for regulatory compliance, particularly regarding segregation of duties and access controls required by financial services regulations. It also supports workforce planning and training program development by clearly showing which roles require proficiency with specific applications

Task 4: Role-Application Access Validation

Status	Answered	
Your score	0.5 / 0.5	100%

Response

In a properly designed banking system, a Teller role should have Primary access to the Risk Analytics application for daily transaction processing. True or False?

Unanswered	Right	Wrong	
☐	☐	☑	Teller role should have Primary access

Task 5: Role Access Levels

Status	Answered	
Your score	1.5 / 2.5	60%

Response

Match each banking role with their appropriate access level for the Loan Origination System: Teller, Loan Officer, Risk Analyst, Branch Manager, Compliance Officer.

	Compliance Officer	Loan Officer	Teller	Risk Analyst	Branch Manager
Audit Access	☑	☐	☐	☐	☐
Approval Authority	☐	☐	☐	☐	☑
No Access	☐	☐	☐	☐	☐
Limited Input	☐	☐	☑	☐	☐
Primary User	☐	☑	☐	☐	☐
Read-Only	☐	☐	☐	☑	☐

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Application Function Matrix 3.5 of 3.5 points (100%)

The Application-Function Matrix demonstrates the relationship between application components and business functions within the enterprise. This matrix helps architects understand which applications support which business capabilities, enabling gap analysis, rationalization opportunities, and functional coverage assessment. The matrix facilitates business impact analysis by showing which applications are critical for specific business functions and identifying potential single points of failure.

In banking environments, this matrix supports business continuity planning by clearly mapping critical business functions to their supporting applications. It also aids in regulatory compliance by ensuring adequate application support for mandatory banking functions such as anti-money laundering, customer due diligence, and financial reporting.

Task 6: Function Coverage Analysis

Status	Answered	
Your score	2 / 2	100%

Response

Which applications would typically provide PRIMARY support for the 'Customer Onboarding' function in a modern bank? Select all that apply.

- ☑ Document Management System
- ☐ Payment Gateway
- ☑ CRM System
- ☐ Risk Management System
- ☑ Core Banking System
- ☑ KYC/AML System

Task 7: Functional Assessment

Status	Answered	
Your score	1.5 / 1.5	100%

Response

After reviewing the Application-Function Matrix, you notice that the 'Fraud Detection' function has no PRIMARY application support. This represents a functional gap that requires immediate attention through either internal development or external acquisition.

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Application Interaction Matrix 1 of 1.5 points (67%)

The Application Interaction Matrix depicts communications relationships between application components within the enterprise. This matrix provides a systematic view of how applications exchange data, invoke services, or interact with each other, supporting integration planning, data flow analysis, and system dependency mapping. The matrix enables architects to identify integration complexity, potential bottlenecks, and opportunities for simplification in the application landscape.

For banking institutions, this matrix proves crucial for understanding systemic risk, regulatory compliance requirements for data flows, and integration complexity management. It supports impact analysis for system changes and helps identify critical integration points that require enhanced monitoring and resilience measures.

Task 8: Sequence Analysis

Status	Answered	
Your score	1 / 1	100%

Response

Arrange the following application interactions in the correct sequence for processing a loan application: 1) CRM captures application, 2) Risk Engine analyzes creditworthiness, 3) Core Banking creates account, 4) Regulatory Platform receives notification, 5) Mobile App updates customer.

- CRM captures application
- Risk Engine analyzes creditworthiness
- Core Banking creates account
- Regulatory Platform receives notification
- Mobile App updates customer

Task 9: Integration Pattern Identification

Status	Answered	
Your score	0 / 0.5	0%

Response

For high-volume payment processing between the Payment Hub and Core Banking System, which interaction pattern is most appropriate?

- [ ] File-based exchange
- [x] Event-driven messaging
- [x] Real-time
- [ ] Batch processing
- [ ] Manual transfer

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Application Communication Diagram 2 of 2.5 points (80%)

The Application Communication Diagram provides a visual representation of communication relationships between application components, showing how applications interact through interfaces and data flows. This diagram enhances the Application Interaction Matrix by adding visual context and architectural patterns, making complex integration landscapes more comprehensible to stakeholders. The diagram supports service-oriented architecture planning by illustrating service relationships and dependencies.

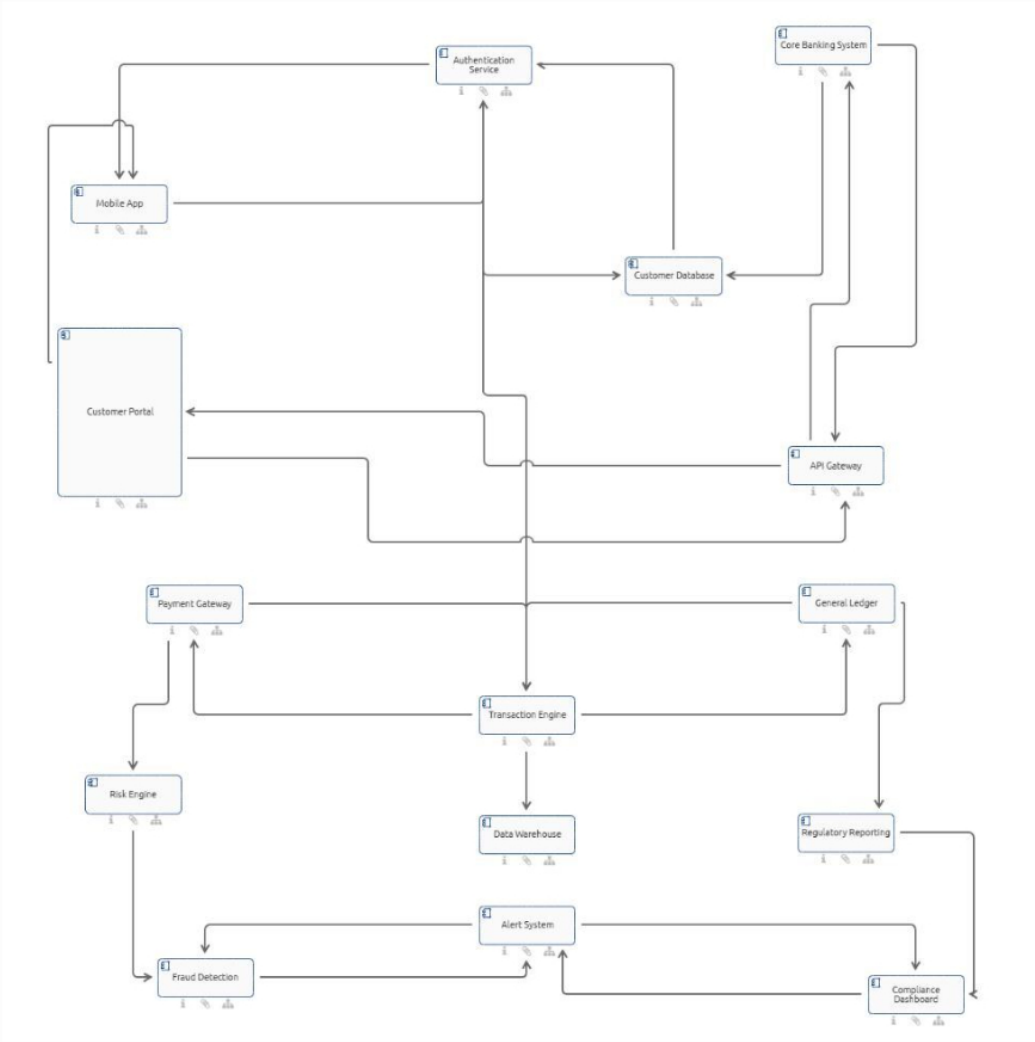
In banking contexts, this diagram helps visualize the flow of financial data, customer information, and regulatory reports across the application landscape. It supports compliance audits by clearly showing data lineage and processing chains, while also facilitating impact analysis for system changes and integration planning for new services.

Task 10: Diagram Interpretation

Status	Answered	
Your score	0 / 0.5	0%

Response

In the banking communication diagram, if the API Gateway fails, which systems would be directly impacted?



- [x] All customer-facing systems
- [x] Customer Portal and Mobile App
- [ ] Only Customer Portal
- [ ] Only internal systems
- [ ] No systems affected

Task 11: Communication Pattern Identification

Status	Answered	
Your score	2 / 2	100%

Response

Classify each communication link as Synchronous (S) or Asynchronous (A): Customer Portal to Core Banking, Risk Engine to Data Warehouse, Alert System to Compliance Dashboard, Mobile App to Transaction Engine

	Alert System to Compliance Dashboard	Mobile App to Transaction Engine	Customer Portal to Core Banking	Risk Engine to Data Warehouse
Synchronous (S)	☐	☑	☑	☐

Asynchronous (A)	☑	☐	☐	☑

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Application User Location Diagram 0 of 1.5 points (0%)

The Application and User Location Diagram illustrates the geographical distribution of applications and their users across different business locations. This diagram helps architects understand where applications are deployed, where users access them from, and how geographical distribution affects performance, compliance, and operational requirements. The diagram supports capacity planning, disaster recovery planning, and regulatory compliance by showing data residency and access patterns.

For banking institutions, this diagram proves essential for regulatory compliance in different jurisdictions, cross-border data transfer requirements, and business continuity planning. It also supports customer service optimization by showing user access patterns and application hosting locations that affect response times and service quality.

Task 12: Compliance Analysis

Status	Answered	
Your score	0 / 0.5	0%

Response

According to data residency regulations, customer data from EU users can be processed on servers located in the Singapore data center without additional compliance measures.

Unanswered	Right	Wrong	
☐	☐	☑	Customer data from EU users can be processed on servers located in the Singapore data center.

Task 13: Performance Optimization

Status	Answered	
Your score	0 / 1	0%

Response

Tokyo office users report slow response times when accessing the Core Banking System. Based on the summary of the location diagram (see below), what are two possible solutions?

Summary of Application User Location Diagram:

North America Region:
- New York Data Center: Core Banking (Primary), Trading Platform, Risk Analytics
- Chicago Office: 500 Users (Traders, Risk Analysts, Operations)
- Los Angeles Branch: 200 Users (Retail Banking, Customer Service)

Europe Region:
- London Data Center: Core Banking (Secondary), Regulatory Reporting, Compliance Systems
- Frankfurt Office: 300 Users (Corporate Banking, Risk Management)
- Paris Branch: 150 Users (Private Banking, Wealth Management)

Asia Pacific Region:
- Singapore Data Center: Trading Platform (Primary), Payment Gateway
- Tokyo Office: 250 Users (Investment Banking, Trading)
- Sydney Branch: 100 Users (Retail Banking, Commercial Banking)

- ☑ Increase bandwidth
- ☑ Deploy local cache
- ☐ Reduce user access
- ☐ Move to Singapore data center
- ☐ Implement Content Delivery Network

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Application Use Case Diagram 7.5 of 9.5 points (79%)

The Application Use Case Diagram displays relationships between consumers and providers of application services, showing how actors interact with application systems to accomplish business goals. This diagram provides a user-centric view of application functionality, supporting user experience design, security planning, and functional requirement validation. The diagram helps validate that applications adequately support business roles and processes while identifying potential gaps in functionality.

In banking environments, use case diagrams prove valuable for regulatory compliance documentation, user training program development, and security access control design. They support audit requirements by clearly showing who can perform which actions within banking systems and help ensure appropriate segregation of duties across different user roles.

Task 14: Access Control Validation

Status	Answered	
Your score	0.5 / 1.5	33%

Response

Which use cases should a Teller role have access to in a loan processing system? Select all appropriate options.

- [ ] Perform Risk Assessment
- [x] Update Customer Information
- [x] Submit Loan Application
- [ ] Override Loan Decisions
- [ ] Approve Large Loans
- [x] View Application Status

Task 15: Relationship Analysis 1/2

Status	Answered	
Your score	4 / 4	100%

Response

Connect each banking role with their primary use case!

- Branch Manager
- Loan Officer
- Customer Service Representative
- System Administrator
- Risk Analyst

Perform Risk Assessment	Risk Analyst
Review Loan Applications	Loan Officer
Manage User Accounts	System Administrator
Update Customer Information	Customer Service Representative
Review Portfolio Risk	Risk Analyst
Conduct Credit Analysis	Loan Officer
Submit Loan Application	Customer Service Representative
Override Loan Decisions	Branch Manager

Task 16: Relationship Analysis 2/2

Status	Answered	
Your score	3 / 4	75%

Response

Connect each banking role with their primary use case! (Continued)

System Administrator

Loan Officer

Customer Service Representative

Risk Analyst

Branch Manager

Approve Large Loans

Branch Manager

Monitor Compliance

Risk Analyst

Monitor System Performance

System Administrator

Generate Loan Documents

Loan Officer

View Application Status

Customer Service Representative

Approve/Reject Loans

Loan Officer

Generate Risk Reports

Risk Analyst

Schedule Appointments

Customer Service Representative

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Enterprise Manageability Diagram 1 of 1 points (100%)

The Enterprise Manageability Diagram illustrates how applications interact with management and monitoring systems that support operational oversight of the enterprise. This diagram focuses specifically on enterprise management software, showing monitoring, logging, backup, security management, and performance management components. The diagram helps architects design comprehensive operational support systems and identify gaps in enterprise management capabilities.

For banking institutions, this diagram proves critical for regulatory compliance, operational risk management, and service level agreement monitoring. Banks require sophisticated monitoring and management capabilities to ensure system availability, detect fraud, maintain audit trails, and comply with stringent regulatory requirements for operational resilience.

Task 17: Incident Response Flow

Status	Answered	
Your score	1 / 1	100%

Response

Order the management system response to a critical application failure!

Performance degradation detected

Alert notification sent

Incident ticket created

Operations team notified

Business continuity activated

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Process Application Realization Diagram 1 of 1 points (100%)

The Process/Application Realization Diagram clearly depicts the sequence of events when multiple applications are involved in executing a business process. This diagram enhances application communication diagrams by adding temporal sequencing, handoff points between batch and real-time processing, and process flow constraints. The diagram identifies complex interaction sequences that could be simplified and potential rationalization opportunities to improve process efficiency.

In banking contexts, this diagram proves essential for process optimization, regulatory compliance documentation, and risk management. Banks must demonstrate clear process flows for regulatory audits, optimize customer experience through efficient processing, and identify potential points of failure in critical business processes such as loan origination, payment processing, and regulatory reporting.

Task 18: Process Bottleneck Identification

Status	Answered	
Your score	0.5 / 0.5	100%

Response

In the mortgage origination process (see description below), which step represents the most likely bottleneck if loan application volume increases by 300%?

Mortgage origination process

1. Customer Application (CRM System)
   ↓ (Real-time validation)
2. Credit Check (Credit Bureau Interface)
   ↓ (Batch overnight processing)
3. Risk Assessment (Risk Engine)
   ↓ (Real-time scoring)
4. Document Verification (Document Management)
   ↓ (Manual review handoff)
5. Underwriting Review (Loan Origination System)
   ↓ (Approval workflow)
6. Loan Setup (Core Banking System)
   ↓ (Account creation)
7. Documentation (Document Generation System)
   ↓ (Final processing)
8. Regulatory Notification (Compliance System)

- ○ Credit Check
- ✓ Document Verification
- ○ Risk Assessment
- ○ Customer Application
- ○ Underwriting Review

Task 19: Process Optimization

Status	Answered	
Your score	0.5 / 0.5	100%

Response

To reduce mortgage processing time from 5 days to 2 days, which modification would have the greatest impact?

Mortgage origination process

1. Customer Application (CRM System)
   ↓ (Real-time validation)
2. Credit Check (Credit Bureau Interface)
   ↓ (Batch overnight processing)
3. Risk Assessment (Risk Engine)
   ↓ (Real-time scoring)
4. Document Verification (Document Management)
   ↓ (Manual review handoff)
5. Underwriting Review (Loan Origination System)
   ↓ (Approval workflow)
6. Loan Setup (Core Banking System)
   ↓ (Account creation)
7. Documentation (Document Generation System)
   ↓ (Final processing)
8. Regulatory Notification (Compliance System)

- [ ] Parallel risk assessment
- [ ] Real-time underwriting
- [x] Bot-supported document management
- [ ] Faster credit checks
- [ ] Batch optimization

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Software Engineering Diagram 1.5 of 1.5 points (100%)

The Software Engineering Diagram focuses on the technical structure and deployment architecture of application software across the enterprise technology platform. This diagram addresses the organization of deployable units, their dependencies, connectivity requirements, and how application configuration generates capacity requirements for technology components. The diagram supports technical planning, deployment automation, and infrastructure optimization by showing the relationship between software components and their hosting infrastructure.

For banking institutions, this diagram proves crucial for regulatory compliance regarding system security, disaster recovery planning, and operational resilience requirements. Banks must demonstrate robust software architecture that supports high availability, security isolation, and scalable performance under varying load conditions.

Task 20: Deployment Architecture Analysis

Status	Answered	
Your score	0.5 / 0.5	100%

Response

For a high-frequency trading application requiring sub-millisecond response times, which deployment pattern is most appropriate?

- [ ] Cloud functions
- [ ] Hybrid architecture
- [x] Bare metal servers
- [ ] Virtualized servers
- [ ] Container orchestration

Task 21: Scalability Planning

Status	Answered	
Your score	1 / 1	100%

Response

During peak trading hours, the transaction processing tier experiences 10x normal load. To handle this efficiently, the system should implement Horizontal scaling for the API layer and Vertical scaling for the database tier.

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Application Migration Diagram 0.5 of 1.5 points (33%)

The Application Migration Diagram identifies the transition path from baseline to target application components, supporting accurate migration cost estimation and implementation planning. This diagram shows the sequence of migration activities, temporary applications or bridges required during transition, staging areas, and infrastructure requirements to support the migration process. The diagram enables project managers to plan complex migrations while maintaining business continuity.

In banking environments, application migration diagrams prove essential for regulatory compliance during system changes, business continuity planning, and risk management. Banks must demonstrate that migrations maintain data integrity, audit trails, and operational capability throughout the transition period while meeting regulatory requirements for system changes.

Task 22: Migration Risk Assessment

Status	Answered	
Your score	0 / 1	0%

Response

Rank the given migration risks in order of priority for a core banking system migration.

Data loss

Regulatory compliance

Customer service disruption

Performance degradation

Integration failures

Task 23: Migration Sequence Planning

Status	Answered	
Your score	0.5 / 0.5	100%

Response

Which system must be migrated FIRST in a core banking transformation?

- ○ Customer Portal
- ○ Regulatory Reporting
- ✓ Account Management
- ○ Payment Gateway

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COBIT 2019 1.5 of 2 points (75%)

Task 24: COBIT 2019 Governance System Principles

Status	Answered	
Your score	1.5 / 2	75%

Response

Select all correct statements about COBIT 2019's six governance system principles. Multiple answers may be correct.

- ☐ Dynamic governance recognizes the static nature of IT and emphasizes maintaining consistent governance practices over time
- ☑ Meeting stakeholder needs focuses on understanding and prioritizing stakeholder requirements to align IT goals with their expectations
- ☑ Holistic approach encourages organizations to consider all enterprise aspects including people, processes, technology, and information
- ☑ Tailoring to enterprise needs requires organizations to adapt the governance system according to their specific characteristics and requirements
- ☑ End-to-end governance system provides a single integrated framework that encompasses the core enterprise functions with focus on IT
- ☑ The framework separates governance from management, recognizing they have different purposes and responsibilities

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Test execution

Information

Availability: Expired at 6/17/2025, 11:59 PM

Max. attempts: 1 | No further attempts are available to you

Results of this test are visible to administrators and tutors of this course.

Start test

Change log