MATRIX

IT BA syllabus

5 months

IT Biznes Analitika Matrix Academy Məzunlarının

90% işə qəbul aldığı istiqamətdir:

Tədrisi bitirən məzunların çalışdığı şirkətlər :





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IT BA syllabus

5 months

- Introduction to Business Analysis & IT Industry
- Business Analysis in IT
- IT project types (web, mobile, enterprise)
- BA role in product vs project environments
- Role & Responsibilities of a Business Analyst
- Core responsibilities
- BA deliverables
- BA vs PM vs Product Owner
- Software Development Life Cycle (SDLC)
- SDLC phases
- BA role in each phase
- Deliverables across lifecycle

- SQL 1 – Database Fundamentals & BA Role
- What is a database
- Tables, rows, columns
- Relational databases
- Data types overview
- Role of SQL in Business Analysis
- Data usage in real BA scenarios
- Dual/sysdate/null keywords

- SQL 2– SQL Fundamentals & Operators
- SELECT Statement
- Column & Table Aliases
- Arithmetic Operators
- Comparison Operators
- Logical Operators (AND, OR, NOT)
- BETWEEN /IN /LIKE / IS NULL
- DISTINCT

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SQL 3– ORDER BY & Single Row Functions

- Sorting /ORDER BY /ASC / DESC
- Sorting by Multiple Columns
- Fetch / Offset
- NULLS FIRST / NULLS LAST

SQL-4

- Single Row Functions
- UPPER /LOWER
- INITCAP /LENGTH /SUBSTR
- REPLACE /TRIM /Number Functions
- ROUND /TRUNC /ADD_MONTHS /MONTHS_BETWEEN
- Conversion & NULL Functions /TO_CHAR /TO_DATE
- NVL /COALESCE

SQL 5 – Aggregate Functions

- COUNT /SUM /AVG /MIN /MAX
- GROUP BY
- HAVING

SQL 6 – Joins

- INNER JOIN /LEFT OUTER JOIN
- RIGHT OUTER JOIN /FULL OUTER JOIN

SQL 7– Subqueries

- Single Row Subquery /Multiple Row Subquery
- IN Operator with Subqueries /EXISTS
- Correlated Subqueries

SQL 8 – Set Operators + View

- UNION /UNION ALL /INTERSECT
- MINUS /Practical Exercises with Set Operators
- Real Business Queries (Banking & Finance Examples)

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- SDLC Models (Waterfall, Agile, Hybrid)
- Waterfall model /Agile model
- Hybrid approach /Agile Frameworks (Scrum, Kanban)
- Scrum roles & ceremonies
- Kanban principles
- BA role in Agile
- Introduction to BA Tools
- BA tools overview
- Documentation vs tracking tools
- Workflow usage
- Jira, Confluence, Trello Overview
- Task tracking in Jira
- Documentation in Confluence
- Board workflows
- Stakeholder Identification and Analysis
- Stakeholder types
- Power/interest matrix
- Stakeholder mapping /Stakeholder Management Strategies
- Communication planning
- Conflict resolution
- Expectation alignment
- Requirement Engineering Overview
- Requirement lifecycle
- Validation & prioritization
- Requirement Types (Business, Functional, Non-functional)
- Business requirements
- Functional requirements
- Non-functional requirements
- Requirement Gathering Techniques
- Techniques overview
- Selecting the right approach
- Elicitation Techniques (Interview, Workshop, Survey, Observation)

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Interview methods

- Workshop facilitation
- Observation & surveys
- Requirement Documentation Best Practices
- Clarity & structure
- Avoiding ambiguity
- Traceability
- Introduction to Business Processes
- Process thinking
- Value streams
- As-Is and To-Be Process Modeling
- Gap analysis
- Process improvement
- BPMN Fundamentals
- BPMN purpose
- Core elements
- BPMN Elements and Notation
- Events, gateways
- Sequence flows
- Process Flow Diagrams
- Flow creation
- Real examples
- UML Overview
- UML purpose
- Usage scenarios
- UML Diagrams (Use Case, Activity, Sequence, Class)
- Use Case diagrams
- Activity diagrams
- Sequence diagrams
- Class diagrams

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- ERD (Entity Relationship Diagram)
- Entities, attributes
- Relationships
- Data modeling basics
- Introduction to Documentation (BRD, SRS, FRD)
- Document types
- Usage scenarios
- Business Requirements Document (BRD) Structure
- Sections
- Business goals
- Stakeholder needs
- Software Requirements Specification (SRS)
- Functional specification
- System behavior
- Functional Requirements Document (FRD)
- Functional logic
- System workflows
- Writing Clear and Non-Ambiguous Requirements
- Writing techniques
- Acceptance criteria
- Examples
- Introduction to System Design Principles
- System components
- Architecture basics
- Basic UI/UX Principles for BA
- UX fundamentals
- User flows
- Usability

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- Introduction to APIs/API fundamentals
- Integration role
- API Types (REST, SOAP, GraphQL)
- API architectures
- Differences
- HTTP Methods (GET, POST, PUT, DELETE)
- Request methods
- Use cases
- Status Codes and Error Handling
- Error interpretation
- Working with Postman
- API requests
- Testing basics
- Swagger and API Documentation
- Reading API docs
- Endpoint structure
- API Testing Basics
- Functional testing
- Response validation
- API Integration Concepts
- Integration basics
- Reading Integration Documentation
- Understanding flows
- Technical specs
- Writing Integration Documents
- Documentation structure
- Use cases
- Data Flow and System Interaction
- Data movement
- System communication

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Real Industry Sessions with Experts

👨‍💼 4 Sessions with IT Business Analysis Chapter Leads

- Conducted by experienced Chapter Leads from the banking domain
- Focus on real-world banking processes and system workflows
- Live discussion of how Business Analysts work in real projects
- Case-based simulations from actual industry scenarios

👨‍💻 Session with Software Developer

- Understanding how developers interpret requirements
- How BAs collaborate with developers
- Common gaps and how to avoid them
- From requirement → implementation flow

🧪 Session with QA Engineer

- Role of QA in the development process
- How requirements are tested and validated
- Writing test scenarios from BA perspective

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Real Technical Interview Based Assessments

Throughout the **4-month** program,
all assessments are conducted as **individual technical interviews**, simulating real hiring processes.

- Each evaluation is held in a 1-on-1 interview format
- Questions are based on real BA technical interview scenarios
- Covers: requirements, SQL, diagrams, API understanding
- Focus on analytical thinking and problem-solving, not memorization
- Personalized feedback after each session

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Capstone Project – Bank Simulation

Project Title: **Digital Credit Management System**

Project Description

Students will simulate a real-world banking system by analyzing, designing, and documenting a digital credit management platform.
The system enables customers to apply for loans, supports automated decision-making, and manages repayment processes.

Project Objective

- **Simulate a real banking/FinTech project environment**
- **Apply Business Analysis knowledge end-to-end**
- **Deliver full BA documentation and integration analysis**

Domain
Retail Banking / FinTech

🔍 What Students Will Work On

- **Credit application flow (customer journey)**
- **Loan approval & decision logic**
- **Payment & repayment management**
- **System interactions between services**
- **API-based integrations**

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Capstone Project – Bank Simulation

Deliverables

- Business Requirements Document (BRD)
- Functional & System Specifications (SRS/FRD)
- BPMN Process Diagrams (As-Is / To-Be)
- UML Diagrams (Use Case, Sequence, ERD)
- API Analysis & Postman Collection
- Integration Documentation
- SQL Queries for business insights
- Final Presentation (End-to-End Solution)

Final Outcome

Students will complete a job-ready portfolio project simulating a real banking system, demonstrating their ability to work as a Business Analyst in a real IT environment.



SƏNİN ÜÇÜN ƏSL NETWORKİNQ MÜHİTİ YARATMIŞIQ

Müxtəlif sahələrin peşəkarlarının təcrübələrini bölüşdüyü seminarlarımız, online vebinarlar, qısa və ya uzunmüddətli vörkşoplar, ekskursiyalarımız və daha çoxu tədris müddətini daha aktiv və maraqlı keçməsinə şərait yaradır.



HƏFTƏİÇİ ÖYRƏNİRİK, HƏFTƏSONU əylənirik

Matrixdə tələbə olmaq doğma bir ailəyə üzv olmaqdır. Məqsədimiz yalnız yeni məlumatlar öyrətmək deyil, eyni zamanda şəxsi inkişafınızı dəstəkləməkdir.

Səmimi, yeniliklərə və əyləncəyə daim açıq olan komandamızla maraqlı səyahətlər, təbiət səfərləri, adrenalinli oyunlar, bayram şənlikləri və daha çoxu networkinginizi inkişaf etdirərək xatirənizə maraqlı anlar qatır.





Gələcəyinizi bu gündən qurun!
Matrix-də başlayın və **karyera yolunda** inamlı addımlar atın.

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