



# FINAL PROJECT

## **(Biding management System)**

Sky Academy – Round 2 (Backend training)

- 
- Instructors:
  - 1. Wedyan Alswiti.
  - 2. Ghaidaa Hammad.
  - 3. Razan Al Samadi.
-

## Objective

Develop a backend system for managing tenders and bidding using **.NET 8, EF Core, and Domain-Driven Design (DDD)** with an **SQL database**.

## Project Scope

Students will implement a backend that supports:

- ✓ **User Management** (Registration, Authentication, Role-Based Access Control)
- ✓ **Tender Creation & Management** (CRUD operations, document uploads)
- ✓ **Bid Submission** (Secure storage, validation, modification)
- ✓ **Tender Evaluation** (Scoring, auditing, notifications)

## Technology Stack

- **Backend:** .NET 8 (ASP.NET Core Web API)
- **Database:** SQL Server with EF Core
- **Architecture:** Domain-Driven Design (DDD)
- **Authentication:** JWT-based authentication and authorization
- **API Documentation:** Swagger

## Project Deliverables

- ◆ **Source Code** – Hosted on GitHub
- ◆ **API Documentation** – Using Swagger
- ◆ **Database Schema** – ER diagrams, SQL scripts

## Grading Criteria

- ✓ **Code Quality** – Clean architecture & SOLID principles
- ✓ **DDD Implementation** – Proper use of aggregates, repositories, and value objects
- ✓ **Design Patterns Implementation** – Proper use design patterns like state management.
- ✓ **Database Design** – Proper relationships, indexing, and normalization

# Tenders Management System

## 1. User Management

- User registration and authentication.

### User Stories:

1. As a user, I want to register and create an account so that I can access the system.
2. As a user, I want to reset my password so that I can regain access if I forget it.

## 2. Tender Creation and Management

- Creation of tenders with details like title, description, deadline, budget, and eligibility criteria.
- Attachment upload support for tender-related documents.
- Categorization of tenders by industry, type, and location.
- Tender amendment functionality.

### User Stories:

1. As a procurement officer, I want to create a new tender with all required details so that suppliers can bid on it.
2. As a procurement officer, I want to upload tender-related documents so that bidders can access them.

## 3. Bid Submission and Management

- Online bid submission with support for document uploads.
- Automatic validation of bid requirements before submission.

### User Stories:

1. As a bidder, I want to See Open Tenders.
2. As a bidder, I want to submit my bid online so that I can participate in tenders remotely.
3. As a bidder, I want to upload supporting documents with my bid so that I can meet tender requirements.

## 4. Tender Evaluation and Awarding

- Criteria-based evaluation mechanism.
- Automated scoring system for bid comparisons.
- Awarding

### User Stories:

1. As an evaluator, I want to review submitted bids so that I can make informed decisions.
2. As an evaluator, I want to see an automated scoring based on price so that I can quickly compare bids
3. As an evaluator, I want to be able to select winning bid.

# Tender Document Sample

## 1. Tender Overview

**Tender Title:** [Insert Tender Name]  
**Tender Reference Number:** [Unique Tender ID]  
**Issued By:** [Organization Name]  
**Issue Date:** [DD/MM/YYYY]  
**Closing Date:** [DD/MM/YYYY]  
**Tender Type:** [Open / Restricted / Single Source]  
**Tender Category:** [Construction, IT Services, Consulting, etc.]  
**Budget Range:** [Optional – Mention if applicable]  
**Contact Email:** [procurement@example.com]

## 2. Scope of Work

### 2.1 Project Description

Provide a **detailed description** of the project, including its objectives, background, and key deliverables.

### 2.2 Deliverables

- [List specific deliverables expected from the bidder]
- [Example: Development of a software solution, construction of infrastructure, etc.]

### 2.3 Expected Timeline

Activity	Expected Date
Tender Publish	[DD/MM/YYYY]
Bid Submission Deadline	[DD/MM/YYYY]
Bid Evaluation	[DD/MM/YYYY]

## 3. Eligibility Criteria

- Bidders must meet the following criteria:
- ✓ **Registered Company** with valid business license
  - ✓ **Minimum [X] years of experience** in the relevant field
  - ✓ **Financial Stability** (Submit financial statements of the last [X] years)

- ✓ **Past Experience** (Provide references of similar projects)
- ✓ **Compliance with Industry Standards**

## 4. Submission Guidelines

- **Documents Required:**
  - Technical Proposal
  - Financial Proposal
  - Company Profile

## 5. Payment Terms

- **Payment Schedule:** [e.g., 30% advance, 40% upon milestone completion, 30% on final approval]
- **Payment Method:** [Bank Transfer / Check / Online Payment]
- **Penalties for Delays:** [Specify penalty clauses]

## 6. Contact Information

For any queries regarding this tender, contact:

✉ **Email:** [procurement@example.com]

☎ **Phone:** [+XX-XXXX-XXXXXX]

# Bid Submission Document

## 1. Bidder Information

- **Company Name:** [Enter Company Name]
- **Registration Number:** [Enter Registration Number]
- **Address:** [Enter Address]
- **Email:** [Enter Email]
- **Phone:** [Enter Phone Number]

## 2. Tender Reference

- **Tender Reference Number:** [Enter Tender ID]

### 3. Bid Proposal

#### 3.1 Technical Proposal Summary

[Provide a summary of the technical approach, methodology, and proposed solution.]

#### 3.2 Financial Proposal

Item Description	Quantity	Unit Price	Total Price
[Item 1]	X	\$XXX	\$XXXX
[Item 2]	X	\$XXX	\$XXXX
Total Bid Amount -	-		\$XXXXX

### 4. Supporting Documents

The following documents are attached to support this bid:

- ✓ Company Registration Certificate
- ✓ Tax Compliance Certificate
- ✓ Financial Statements (Last 2 Years)

### 5. Declaration

We, [Company Name], hereby submit this bid in response to the above-mentioned tender.  
We confirm that:

- All provided information is accurate and complete.
- We comply with all tender requirements.
- We understand and accept the terms and conditions set forth in the tender document.

Authorized Signatory: \_\_\_\_\_

Date: \_\_\_\_\_

---

**\*\* Important Notes:**

1. You Have 2 weeks to complete all the requirements in this project.
  2. while submit on GitHub you should include all project details as migration of database, API, DTO and Entities.
  3. the submission of project at 12/04/2025 at 10:00 am. and any submission after this time will be ignored **(no exceptions for anyone)**.
  4. Please make sure while submission on GitHub enter your Full name (from 4 parts).
  4. make sure to share the project submission on your GitHub link and send this link to Ayah by email (a.hajali@skyits.com).
-