FIRAT UNIVERSITY

Technology Faculty
Software engineering program

YMT218 – OOP
project and documentation

Developer
HAMZAH KOURDIEH

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1. INTRODUCTION

1.1. Project Definition
Development of the Umawi Bank will involve creating a website using C#. Each change will be logged and synchronized for team collaboration. The development environment will be set up on Windows.

1.2. purpose of project
The purpose of this document is to provide a comprehensive overview of the Umawi Bank. It aims to clarify the system's purpose, features, interfaces, functionalities, operational constraints, and responses to outside influences. This document targets both stakeholders and developers, as a proposal for approval by Dr. Baydogan.

1.3. Project scope
The Umawi Bank software system is designed for bank management, enabling customers to send and receive money in different currencies.

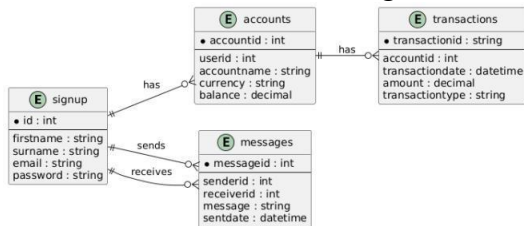### 1.4. Kullanılacak Teknolojiler
C#, Visual Studio, DevExpress

2. PROJECT PLAN

2.1. System users
Customer People use the program to send and receive money.
Admin Person managing the bank

2.2. GANT Workflow Diagram

2.3. Functional Needs (Must Haves)
1. **User Authentication**
   a. Secure login and logout.
   b. Role-based access (Admin, Teller, Customer).
2. **Account Management**
   a. Create, update, and delete customer accounts.
   b. View account details and transaction history.
3. **Transactions**
   a. Deposit and withdraw money.
   b. Transfer funds between accounts.
   c. Generate transaction receipts.
4. **Report Generation**
   a. Generate reports for transactions, customers, and account summaries.
   b. Export reports to PDF and Excel using DevExpress.
5. **Customer Support Requests**
   a. Submit and view support tickets.
   b. Track status of customer queries or issues.

2.4. Non-functional needs (additional properties)
1. Performance
   a. The system should respond within 2 seconds to user actions.
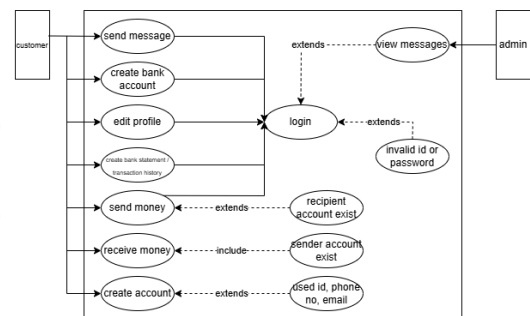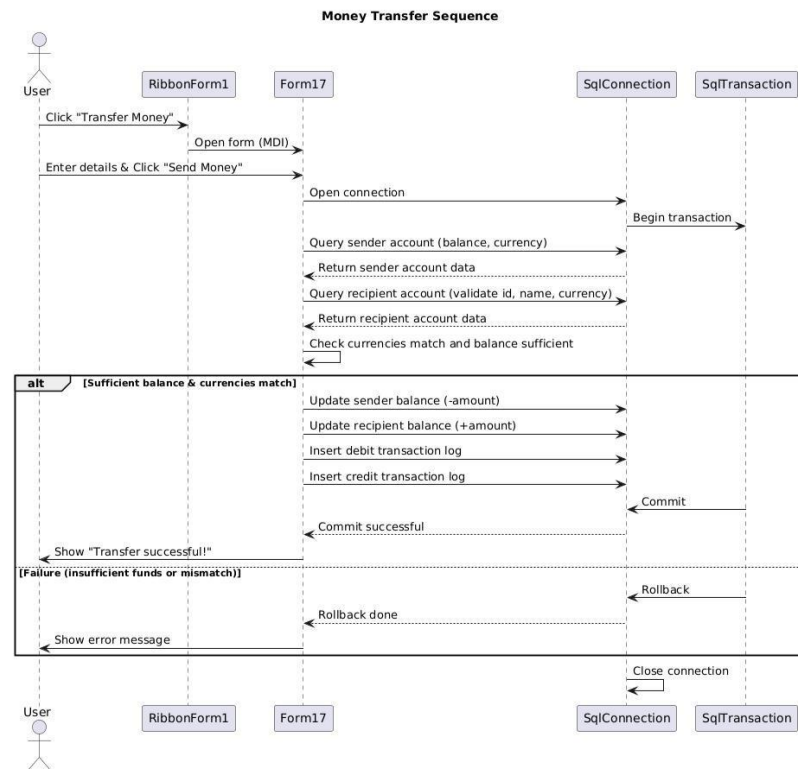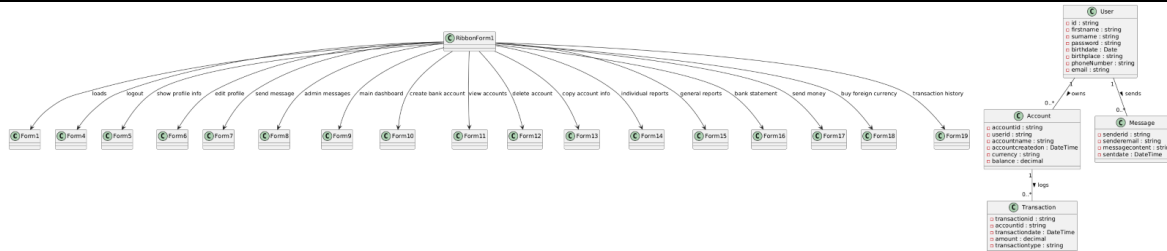   b. Capable of handling multiple users simultaneously.
2. Usability
   a. User-friendly interface built with DevExpress components.
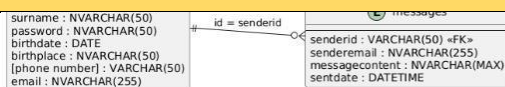   b. Minimal training required for end users.
3. **Portability**
   a. Compatible with multiple Windows-based systems.

2.5. UML Diagrams

Money Transfer Sequence

<table>
<tr><td colspan="2" style="background-color:#F5C842">**3. PROJECT REALIZATION**</td></tr>
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3.3. Outputs and Reports

Outputs: The system confirms successful registrations, logins, transactions, account creations, and profile updates. It displays error messages for invalid actions. Transaction confirmations and updated balances are shown to customers. Admins receive notifications of new messages. Bank statements and transaction reports are provided as downloadable PDFs.

4. FORESEEN DEFICIENCIES IN THE PROJECT

4.1. List of modules planned to be done in the project plan but missing
Loan management (apply for loan, loan status, loan repayment)

4.2. List of modules that will enrich the content by adding them to the project
ATM App (Withdraw, Deposit)

5. PROJECT DELIVERY

https://github.com/umawi1427/Umawi-Bank

6. RESULT

➤ General evaluation of the project (pros, cons, reason for preference)

Pros:

Easy-to-use interface (thanks to DevExpress).

Handles basic banking operations like deposits, withdrawals, and transfers well.

Structured code that's easy to maintain.

Cons:

Some features like notifications and advanced reporting were not added.

Not tested with many users, so scalability is unknown.

➢ What is the contribution of the project to you during the development period?

Improved my skills in C# and working with databases.

I learned how to design clean and user-friendly interfaces.

Got better at solving real coding problems and managing a full project.

7. RESOURCES

youtube - Cem Baydogan - DevExpress tutorial [1- Visual Studio ve DevExpress Kurulumu](#)