



Group#1

Okaz Library

Software Design Specification (SDS)

Version: 1.0

CM Identifier: G1_SE_SDS_Itr1_v1.0

Revision History

Sl. No.	Prepared/ Modified by	E-mail	Version	Date	Approved by	Descriptions/ Remarks
1.	Mohamed Mayla	mohamed.m ayla @gmail.co m	V1.0	April 15,2013	N/A	Design Models
2.	Eslam Hashem	eslam.hashe m7 @gmail.co m	V1.0	April 16,2013	Mohamed Mayla	Data Models and System Deployment
3.	Nada Karam	nada_karam 23 @yahoo.co m	V1.0	April 16,2013	Mohamed Mayla	Introduction
4.	Hagar Bedr	hagar.bedr @yahoo.co m	V1.0	April 17,2013	Mohamed Mayla	System Architecture and Traceability to Requirements

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1. Introduction

This SDS is for Okaz Library, which is a website for Okaz activity on Cairo University to let them easily manage the book shared with peoples (students)^[4].

1.1 Purpose of this Document

The purpose of this SDS is to give all the information needed about the design of Okaz library website such as the class diagrams, the sequence diagrams and the description for each, as the basic idea of the project is to manage sharing books between students and make it easy to be managed with Okaz library managers (activity).

The website provide users (students) who want to loan a book to the library, easily upload the book cover (to make sure he has the book) with his name and phone number, after that he/her should deliver the book to the library managers, after that the book will appear on the website that is available to borrow.

The users (students) who want to borrow a book, should send request to borrow selected book from the website with his/her name and phone number, and then go the receive the book from the library for a certain time.

The manager of the Okaz library will manage all the above activities^[4].

1.2 Scope

The scope of this SDS was discussed thoroughly by the team members developing this website with Okaz library activity managers. It's was agreed upon that in the version 1.0 will have the full functionality of the website.

The system will provide the “smart confirmation code” feature that let managing all the activity by the managers more easy and fast, and the system will save the data on an online server.

The website will be ready to be published on the internet and ready to be used by the users.

The application will support simple use cases such as upload cover book, borrow a book and request confirmation by the managers with some

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complex use cases such as the generation of the “smart confirmation code” , the admin activity like delete a book^[4] .

1.3 Table of Acronyms and Definitions

Term	Definition
ASP.NET	server-side Web application framework
HTML	Hyper Text Markup Language
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
IP	Internet Protocol
SDS	Software Design Specifications
SRS	Software Requirements Specifications

table 1 – Acronyms and definitions

1.4 References

- [1] Software Engineering Course Lecture Notes, Dr. El Sayed Hemayed.
- [2] www.asp.net
- [3] <http://www.w3schools.com>
- [4] The Software Requirements Specifications document (SRS).
- [5] <http://code.google.com/p/software-engineering-project-cufe-2015-group1>
- [6] www.facebook.com
- [7] <http://www.agilemodeling.com/artifacts>

1.5 Overview of Document

The rest of this document is going to specify the system architecture and the subsystems of the project in a way that will be very easy to understand, it will also describe the different subsystems of the project and the classes of each subsystem, also it will thoroughly describe the sequence diagram of every use case of the project, along with the ERD and the Relational modeling of the database.

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2. System Architecture

The system of this project is going to be decomposed into three subsystems, or layers;

- The User Application Layer.
- The Web Service Layer.
- The Database Layer.

Each layer has its own classes and methods of interacting with other layers, so the structural model we are going to use here is the layered model; the following figure shows the system architecture and its layers.

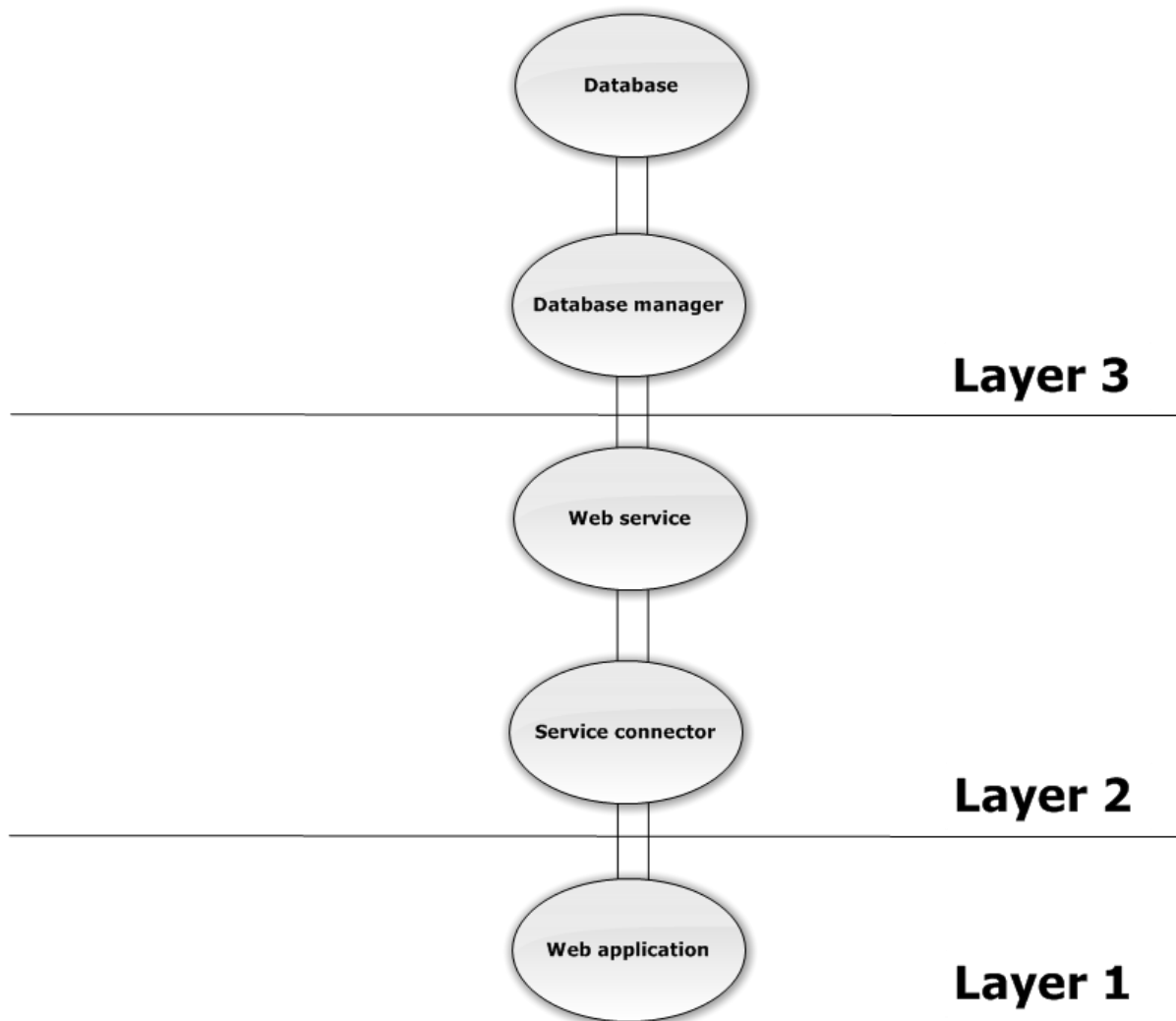


Figure 1 – System Architecture

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3. Design Models

3.1 Class Diagrams

3.1.1 CD1

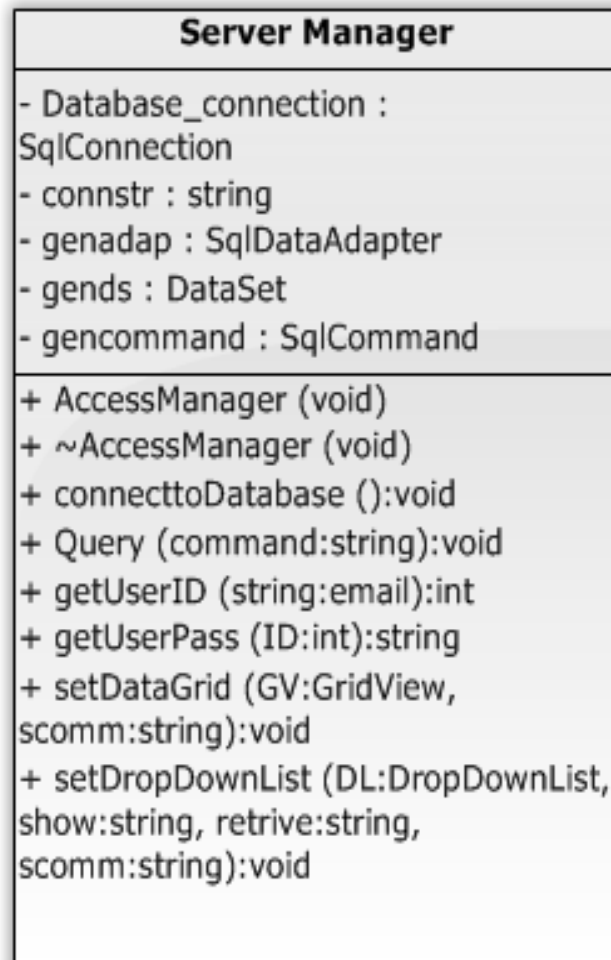


Figure 2 – CD1

3.1.2 CD2

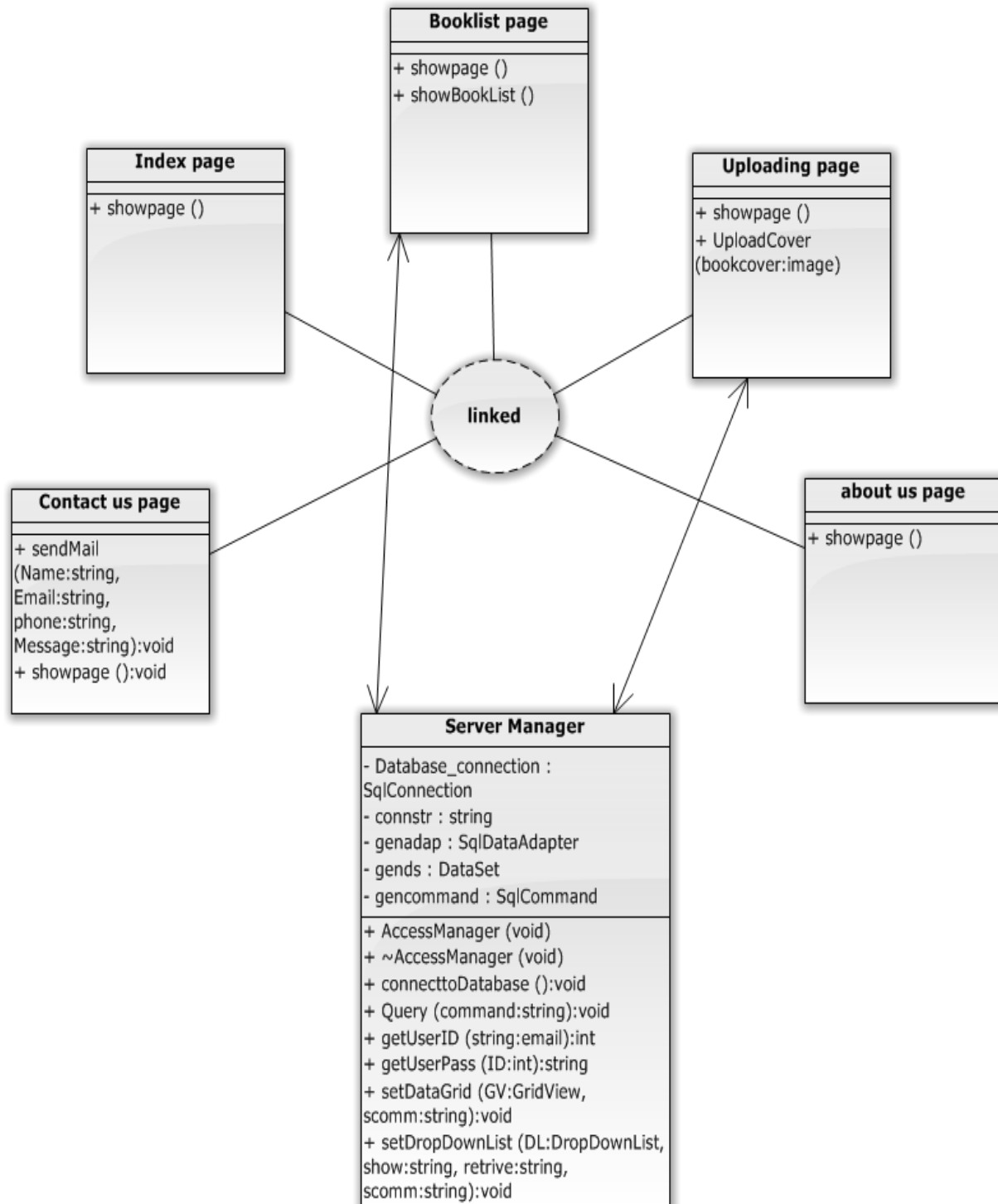


Figure 3 – CD2

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3.2 Interaction Diagrams

3.2.1 SD1

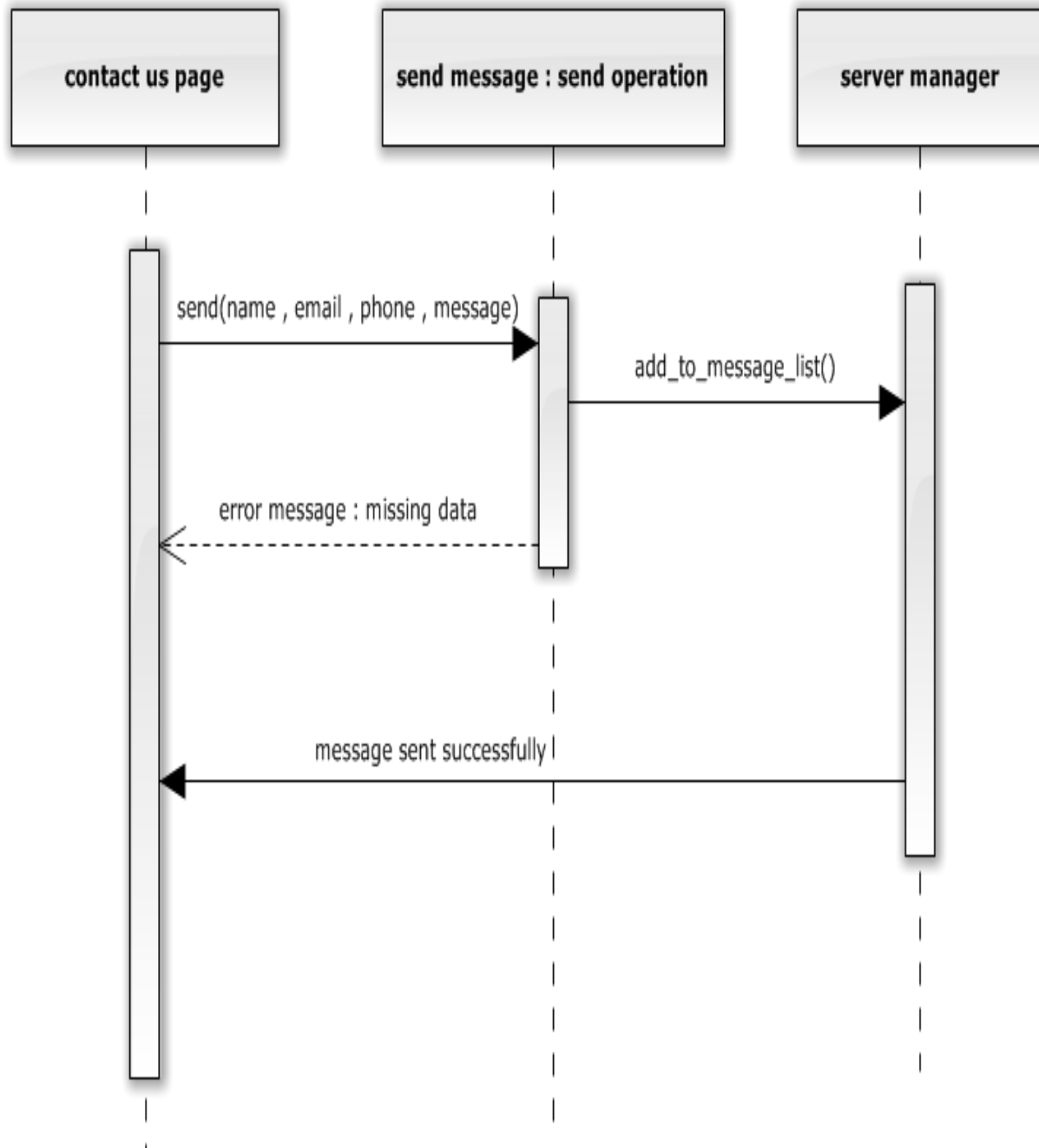


Figure 4– SD1

4. Data Models



Figure 5– database model

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5. System Deployment

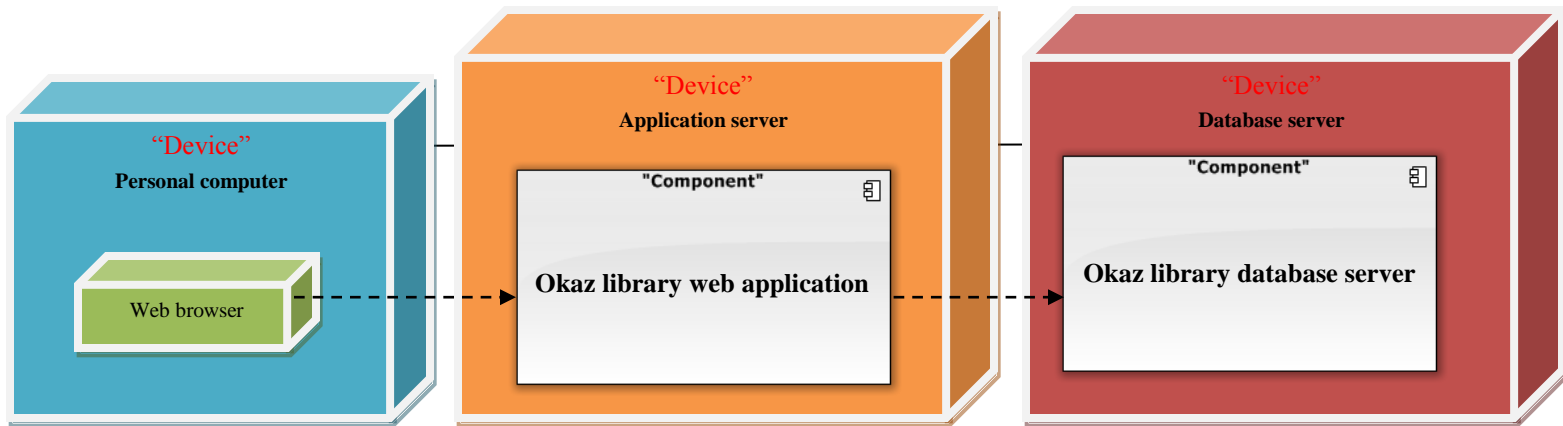


Figure 6– system deployment

6. Traceability to Requirements

	<i>CD_1</i>	<i>CD_2</i>	<i>SD_1</i>
<i>US01</i>	✓	✓	
<i>US02</i>	✓	✓	
<i>US03</i>	✓		
<i>US04</i>	✓		
<i>US05</i>	✓		
<i>US06</i>	✓	✓	✓
<i>US07</i>	✓		
<i>US08</i>	✓		

Table 2 – traceability to requirements