
Software Requirements Specification

for

Timetable Management System

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1. Introduction

1.1 Purpose

The Timetable Management System is a form based application developed in WinForms .NET Framework. The purpose of the application is to create and manage timetables seamlessly. This system is designed to make it easy for users to create and display timetables.

1.2 Project Scope

The Timetable Management System is a system designed to create and manage timetables for Bahria University H/11 Software Engineering department. The primary purpose is to enhance efficiency and promote a user-friendly system for creating timetables.

2. Overall Description

2.1 Product Features

The Timetable Management System has various features:

- First and foremost it has the ability to create clash-free timetables.
- Secondly, it can display timetables that have been created.
- Furthermore, users can add, remove and update entities such as Teachers, Courses, and Rooms.

3. System Features

<This template illustrates organizing the functional requirements for the product by system features, the major services provided by the product. You may prefer to organize this section by use case, mode of operation, user class, object class, functional hierarchy, or combinations of these, whatever makes the most logical sense for your product.>

3.1 Creating Clash-Free Timetables

3.1.1 Description and Priority

This feature allows admins to create a clash-free timetable. It is a high priority of this application.

3.1.2 Functional Requirements

REQ-1: The system shall allow admins to select a day, course, available room and timeslot.

REQ-2: The system shall allow admins to allocate a teacher.

REQ-3: The system checks for any conflicts or clashes and displays a warning message.

3.2 Display Timetable

3.2.1 Description and Priority

This feature allows admins to display a timetable. It is a high priority of this application

REQ-1: The system allows user to select a faculty member.

3.3 Add, Remove and Update of Entities

3.2.1 Description and Priority

This feature allows admins to add, remove, and update entities such as Teachers, Courses and rooms and stores the data in a database.

REQ-1: The system allows user to add Teacher, Course, and Room.

REQ-2: The system allows user to remove a Teacher, Course, or Room.

REQ-3: The system allows user to update the data of a Teacher, Course or room.

REQ-4: The system displays the data of Teachers, Courses, and Rooms

4. External Interface Requirements

4.1 User Interfaces

The user interface for the application is designed to be user friendly. It allows users to navigate easily and seamlessly. The design is consistent throughout the application.

4.2 Software Interfaces

The Timetable Management System interacts with software components to ensure seamless operation. It interacts with databases, framework and IDEs.

4.2.1 Database

The database used in this application is SQL and SQL Server Management System to allow the system to store and manipulate user data.

4.2.2 WinForm .NET Framework

This application is a Form-based application based on .NET Framework for the development of User-Interface(UI).

Appendix A: Glossary

- **Timetable:** A schedule of classes and events.
- **Admin:** A user with the highest level of access, responsible for managing the system.
- **Conflict:** A situation where two or more events are scheduled at the same time in the same location or with the same teacher.

Appendix B: Analysis Models

- Entity-Relationship Diagrams: Included to show the database schema and relationships.