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1. Introduction

1.1 Purpose

The purpose of this document is to define the software requirements for the Online Movie Ticket Booking System. It provides a detailed description of the system's features, interfaces, and requirements to guide the development and testing processes.

1.2 Scope

The Online Movie Ticket Booking System is a desktop application designed to manage movie information for a theater or cinema. It allows users to add, view, update, and delete movie records, including details such as movie ID, name, release date, director, cast, budget, duration, and rating.

1.3 References

- Python 3.x Documentation

- SQLite Documentation

- Tkinter Documentation

1.4 Overview

The system consists of two main components: a backend that manages the database operations and a frontend that provides a graphical user interface for interaction. The remaining sections of this document will detail the external interface requirements, system features, and specific functional and non-functional requirements.

2. External Interface Requirements

2.1 User Interfaces

The system provides a graphical user interface with the following elements:

- Input fields for movie information (ID, Name, Release Date, Director, Cast, Budget, Duration, Rating)

- Buttons for operations (Add New, Display, Clear, Search, Delete, Update, Exit)

- A listbox to display movie records

- Labels for each input field

- Scrollbar for the listbox

2.2 Hardware Interfaces

The system requires:

- A display capable of rendering the GUI (minimum resolution: 1350x750)

- Standard input devices (keyboard and mouse)

2.3 Software Interfaces

The system interacts with:

- SQLite database (movie1.db)

- Python 3.x runtime environment

- Tkinter library for GUI rendering

3. System Features

The main features of the Online Movie Ticket Booking System include:

- Adding new movie records

- Displaying existing movie records

- Searching for specific movie records

- Updating movie information

- Deleting movie records

- Clearing input fields

- Exiting the application

4. Specific Requirements

4.1 Functional Requirements

FR1: Add New Movie

- The system shall allow users to input movie details (ID, Name, Release Date, Director, Cast, Budget, Duration, Rating).

- The system shall validate that the Movie ID is unique before adding a new record.

- The system shall store the new movie record in the database.

FR2: Display Movies

- The system shall retrieve all movie records from the database.

- The system shall display the movie records in the listbox.

FR3: Clear Input Fields

- The system shall provide a function to clear all input fields.

FR4: Search Movies

- The system shall allow users to search for movies based on any of the movie details.

- The system shall display the search results in the listbox.

FR5: Delete Movie

- The system shall allow users to select a movie from the listbox and delete it from the database.

FR6: Update Movie

- The system shall allow users to select a movie from the listbox and update its information.

- The system shall save the updated information to the database.

FR7: Exit Application

- The system shall provide a function to exit the application.

- The system shall prompt for confirmation before exiting.

4.2 Non-functional Requirements

NFR1: Performance

- The system shall handle at least 1000 movie records without significant performance degradation.

- Search operations shall complete within 2 seconds.

NFR2: Usability

- The user interface shall use a consistent color scheme (black background with orange and white text).

- The system shall provide clear labels for all input fields and buttons.

NFR3: Reliability

- The system shall handle database connection errors gracefully.

- The system shall validate user inputs to prevent data inconsistencies.

NFR4: Security

- The system shall implement basic measures to prevent SQL injection attacks.

NFR5: Maintainability

- The code shall be well-commented and follow PEP 8 style guidelines for Python code.

- The system shall use modular design, separating the backend and frontend components.

NFR6: Portability

- The system shall run on any platform that supports Python 3.x and SQLite.

This SRS document provides a comprehensive overview of the Online Movie Ticket Booking System, detailing its purpose, features, and requirements. It serves as a guide for development and can be used as a basis for system testing and validation.