

**Cinema city**





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## Introduction

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| № | Introduction |
| 1 | ***The idea:***  The project is a console-based movie ticket booking system. It allows users to search for movies based on various criteria such as title, language, genre, and release date. Users can browse available showtimes in cinemas located in different cities and select available seats for a chosen screening. Once seats are selected, the reservation is completed through a payment process that confirms the booking. The system simulates a real-world scenario, incorporating core functionalities such as seat selection, transaction-safe payment handling, and administrative control over movie and showtime management. |
| 2 | **Where is it available?**  The project is implemented as a console application developed in C++ using Visual Studio 2022. It is publicly available on GitHub, where the repository can be cloned for demonstration, review, or further development. Link- [***https://github.com/codingburgas/movie-ticket-booking-system-10th-grade-TDSkulieva22.git***](https://github.com/codingburgas/movie-ticket-booking-system-10th-grade-TDSkulieva22.git) . All data is managed through Microsoft SQL Server, providing a robust and reliable backend for data storage and retrieval. |
| 3 | **What Technologies Are Used?**   * ***Programming Language:*** C++ * ***Development Environment:*** Visual Studio 2022 * ***Database:*** Microsoft SQL Server * ***Version Control:*** Git and GitHub * ***Key Concepts:*** Object-oriented programming, transaction control, data validation, user-driven menu navigation, reservation system logic, and administrative functionality |

## Stages of work

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| № | Stages of work |
| 1 | ***February:***  At the beginning of the project, I came up with the main idea and started working on the functionality for user registration and login. I also created the core menus that would be used throughout the system. |
| 2 | ***March:***  During this month, I separated the functionalities for the administrator account into individual modules and developed the logic for managing movie schedules in different cities (Sofia, Varna, Burgas, and Plovdiv). |
| 3 | ***April:***  I finalized all administrative features, including adding, editing, and deleting movies and showtimes. I also changed the data storage method — instead of using JSON files, I switched to working with a relational database. By the end of the month, I had successfully established a stable connection with Microsoft SQL Server |
| 4 | ***May:***  I refactored the main user and admin functionalities to work entirely with the database. This included changes to the search logic, data display, and input validation. |
| 5 | ***June:***  I implemented the complete logic for seat reservations, seat selection, and payment processing. I finalized all user-facing features. At the end of the month, I completed the project documentation, resolved the remaining bugs, and added color formatting to the console interface to make the application more visually appealing and user-friendly**.** |
| 6 | ***July:***  On this date, I will present my project to the evaluation committee, demonstrating its full functionality and discussing the development process and the skills I gained throughout the project***.*** |

## App organization

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| № | App organization |
| 1 | ***Main Window***  This is the main dashboard window that acts as the entry point of the application, linking to other sections like- admin and user. |
| 2 | ***Admin***  “Admin” is one of the options accessible from the main menu. This type of account can only be accessed by someone who has the appropriate rights, as they have control over adding, deleting, and modifying information within the application. A special administrative username and password are required to access this profile. |
| 3 | ***User***  „User“ is the other available option from the main menu. This type of account can be accessed by anyone. With this profile, you can view all programs in Sofia, Varna, Plovdiv and Burgas. In addition, every user can buy a ticket and reserve a seat in different cinema halls. |
| 4 | ***Login as USER***  Allows users to log in to the application using their credentials. |
| 5 | ***Login as ADMIN***  Allows admin to log in to the application using his credentials. |
| 6 | ***Register as USER***  Allows new users to register an account for the application. |

## Block Diagram

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