**QA Documentation**

**Cinema Booking System**

1. **Overview**

The purpose of this QA documentation is to demonstrate the functionality of the **Ticket Booking System Application** — a program designed for quickly finding movies showing across city cinemas and booking tickets for the desired screening.

1. **Scope of testing**

The testing covers:

* Searching specific movie (by title, language, genre or date of release)
* Booking specific seat for specific show in selected hall in the cinema (silver, gold or platinum)
* Selection of the payment method for the ticket booking
* Adding a new movie to the movie list
* Adding a new show to the show list
* Deleting an existing movie and show
* Updating an existing show

1. **Testing strategy**
2. Types of testing

* Unit testing

Tests **individual components** or functions of the application in isolation.

**Goal:** Ensure each function (e.g., addShow(), printallshows()) works correctly.

* Integration Testing

Tests how **different modules interact** with each other.

**Goal:** Identify issues in data flow or dependencies between components.

* System Testing

Tests the **entire application** as a whole in a complete environment.

**Goal:** Validate the full system against the specified requirements.

* Boundary testing

Tests how the application handles **input values at the edges of valid ranges**, as well as just outside those boundaries.

**Goal:** Ensure the system correctly processes the **minimum and maximum valid inputs and** properly handles **slightly invalid values** just beyond those limits.

1. Testing Tools

* Text editor: Visual Studio
* Compiler: g++

1. **Test cases**

|  |  |  |  |
| --- | --- | --- | --- |
| **№** | **Description** | **Steps** | **Expected result** |
| 1 | Check seat reservation | Check all the seats for the selected show | The program will display the list of seats and their status (reserved or available) |
| 2 | Reserve a seat | Try to reserve an available seat | If the seat is not reserved, the program will reserve it |
| 3 | Add movie | Try to add a selected movie as an admin | The movie will be successfully added to the movie list |
| 4 | Add show | Try to add a selected show as an admin | The show will be successfully added to the show list |
| 5 | Delete movie | Try to delete a selected movie as an admin | The movie will be marked as "DELETED" |
| 6 | Delete show | Try to delete a selected show as an admin | The show will be deleted from the show list |
| 7. | Update show | Select the show you want to update and enter new information | The show title/time will be successfully updated |
| 8 | Admin login check | Try to log in with the right login and password | The program will allow access to admin functions |
| 9 | Search movie by title | Type the title of the movie you want to find (e.g. Coraline) | The program will display the shows for the selected movie |
| 10 | Search movie by language | Type the language you want to find movies in (e.g.bulGarian) | The program will display the list of shows in the selected language |
| 11 | Search movie by genre | Enter the genre you want to search for (e.g. comedy) | The program will display the list of shows with the selected genre |
| 12 | Search movie by release date | Type the release year of the movie you want to find (e.g. 2013) | The program will display the list of movies released on the selected date |
| 13 | Empty list operation | Try to delete a movie or a show from an empty list | The program will display an error message |

1. **Success Criteria**

* Correct display of information regarding seats, movies, showtimes, auditoriums, and related entities.
* Accurate indication of available and reserved seats.
* Successful execution of user-intended movie search functionality.
* Successful utilization of administrator functionalities.
* Successful seat reservation and ticket payment processing.