**CSCI 4050/6050 [ CRN: 33828 ]**

**Software Engineering**

**Cinema E-Booking System**

**Deliverable 2: Use Case Document**

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Team 9 A

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| Use Case Name: | Filtered Movie Search | |
| Triggering Event: | User wants to start searching for movies. | |
| Brief Description: | User wants to search movies based on certain criteria (showtimes, movie title, and dates). The user can choose these criteria. | |
| Actors: | Registered User, Web-Based User | |
| Stakeholders: | Registered User, Web-Based User, Admin | |
| Preconditions: | 1. User must search for a movie with valid criteria. | |
| Postconditions: | 1. Any related search results are displayed based on the filters provided | |
| Flow of Activities: | Actor | System |
| 1. User chooses criteria to filter through movies. | 1.1. The system redirects the user to a page of movies that fit the given criteria. |
| Exception Conditions: | 1.1 If there are no movies that meet the filter criteria, the system will return a line saying that no movies fit the criteria. | |
| Alternative flow | None | |

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| Use Case Name: | Create User Account | |
| Triggering Event: | When the user checks out or when the user wishes to register an account | |
| Brief Description: | Creation of User Account | |
| Actors: | Web-Based User | |
| Stakeholders: | Web-Based User | |
| Preconditions: | 1. User should not have an account or be logged in. | |
| Postconditions: | 1. Customer Account should be created and saved.  2. The tickets should still be in the user’s cart if the cart is not empty. | |
| Flow of Activities: | Actor | System |
| 1. User chooses to register an account.  2. User enters email.  3. User enters password. | 1.1. The system redirects the user to a registration page.  3.1. The database is updated to show the new user account.  3.2. A verification email is sent out to the user’s email. |
| Exception Conditions: | 3.1. User provides an email address that is already in the database, or the password is not valid and alerts the user accordingly.  3.2. User provides an incorrect email. | |
| Alternative flow | 1. User is not logged in while attempting to check out.  2. User is redirected to login or register an account. | |

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| Use Case Name: | Verify Email | |
| Triggering Event: | When the user creates an account | |
| Brief Description: | Verification of a new account | |
| Actors: | Web-Based User | |
| Stakeholders: | Web-Based User | |
| Preconditions: | 1. User has created but not verified their account. | |
| Postconditions: | 1. User has an account with a verified email and password.  2. User is logged into the website. | |
| Flow of Activities: | Actor | System |
| 1. User enters an email to link to their account, and a verification link is sent to that address.  2. User accesses the email containing the verification link.  3. User clicks the link, confirming that they want to verify the account. | 1.1. The database checks the to see if the email is already being used.  1.2. The user email is marked as unverified.  3.1. The database updates the user email from unverified to verified. |
| Exception Conditions: | 1.1. The email provided is already in use and the system alerts the user. | |
| Alternative flow | 1. User with an account chooses to change their email address.  2. User enters new email, and the verification process proceeds.. | |

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| Use Case Name: | Add Movie Ticket | |
| Triggering Event: | The customer wants to add the ticket to the cart. | |
| Brief Description: | A customer has decided on a movie and wants to select specific seats at the desired showing of the movie. | |
| Actors: | Registered User, Web-Based User | |
| Stakeholders: | Registered User, Administrator | |
| Preconditions: | 1. The movie is a valid movie.  2. User requested title, date, showtime, and seats must be available. | |
| Postconditions: | 1. The ticket is added to the cart.  2. User is able to proceed to checkout. | |
| Flow of Activities: | Actor | System |
| 1. The user selects a movie, based on showtimes and dates.  2. The user views the seats available and selects a seat. | 1.1. The system redirects the user to a seat selection page.  2.1. The seat is added to the cart and the database is updated to reflect that the seat is no longer available. |
| Exception Conditions: | 2.1 The user tries to reserve a seat already reserved. | |
| Alternative flow | None | |

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| Use Case Name: | Reset Password | |
| Triggering Event: | User cannot log in and wants to reset the password to regain access to their account. | |
| Brief Description: | The user enters an email tied to the account and is emailed a link to reset the password. | |
| Actors: | Registered User | |
| Stakeholders: | Registered User, Administrator | |
| Preconditions: | 1. The user has an account but cannot login due to incorrect password input.  2. The user account must be a valid email address in the system. | |
| Postconditions: | 1. An email is sent to the provided email address.  2. The password is changed. | |
| Flow of Activities: | Actor | System |
| 1. The user asks to reset password.  2. The user provides an email.  3. The user chooses the new password. | 1.1 The system redirects the user to reset password.  2.1. The system sends a password reset link to the provided email.  3.1. The system updates the password in the database. |
| Exception Conditions: | 2.1 If the user inputs an invalid email address.  2.1 If the email is not attached to an account.  3.1. If the new password is the same as the old password. | |
| Alternative flow | None | |

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| Use Case Name: | Update Password | |
| Triggering Event: | The user wants to update their password. | |
| Brief Description: | The user is logged in and wants to update their password. | |
| Actors: | Registered User | |
| Stakeholders: | Registered User, Administrator | |
| Preconditions: | 1. The user is already logged in and wants to change the password.  2. The previous password is known | |
| Postconditions: | 1. The password is updated in the database and the user is still logged into the account. | |
| Flow of Activities: | Actor | System |
| 1. The user is logged in and selects a button to update password.  2. The user types in their old password and the new password twice to confirm. | 1.1. The system opens a page where the password can be updated.  2.1. The old password is verified and the password is updated to the new password in the database. |
| Exception Conditions: | 2.1 If the old password is the same as the new password, then the user is alerted.  2.1 The new password is typed incorrectly and not matching, alerting the user to retry. | |
| Alternative flow | None | |

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| Use Case Name: | Remove Ticket from Cart | |
| Triggering Event: | The user wants to remove ticket from the cart. | |
| Brief Description: | The user no longer wants a ticket and decides to remove it from her cart. | |
| Actors: | Registered User | |
| Stakeholders: | Registered User, Administrator | |
| Preconditions: | 1. The user is logged in.  2. The user already has ticket(s) in the cart. | |
| Postconditions: | 1 . The ticket is removed from the cart  2. The respective seat becomes available in the database again. | |
| Flow of Activities: | Actor | System |
| 1. The user selects the cart.  2. The user chooses to remove the ticket from the cart. | 1.1. The user is directed to a webpage for their cart  2.1. The system clears the cart for the account. |
| Exception Conditions: | 1.1 The cart is empty, then the user cannot progress any further. | |
| Alternative flow | None | |

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| Use Case Name: | Generate a Report | |
| Triggering Event: | User wishes to obtain a predetermined report | |
| Brief Description: | A user wishes to obtain a predetermined report. They can select Sales Report or Show Report and the database will compile a report based on the data stored. | |
| Actors: | Administrators, Employees | |
| Stakeholders: | Administrators, Employees, Business Owner | |
| Preconditions: | 1. The database has logged a record of all tickets sold, sales (including ticket prices, sales tax, and online fee), and seatings selected. | |
| Postconditions: | 1. The user receives a report based on their selection of sales report or show report. | |
| Flow of Activities: | Actor | System |
| 1. The user requests a report to be made.  2. The user selects the type of report they want - Sales Report or Show Report.  3. The report is generated and available for viewing by the user. | 1.1. The system prompts them to select what kind of report they want.  2.1. The system accesses the database and begins constructing the report based on the available data |
| Exception Conditions: | 2.1. No data is available (no shows have been sold) and informs the user no information is available. | |
| Alternative flow | None | |

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| Use Case Name: | Refund Ticket | |
| Triggering Event: | User wishes to undo their ticket purchase | |
| Brief Description: | A user has already purchased a ticket but changes their mind (within one hour of the original purchase) and wishes to undo the purchase and have their money refunded. The ticket would be nullified and they would receive a payment back in full. | |
| Actors: | Registered User | |
| Stakeholders: | Registered User, Employees | |
| Preconditions: | 1. The user has already purchased a ticket  2. The ticket has already been verified by the system/database | |
| Postconditions: | 1. The purchased ticket is nullified  2. The user receives a payment back in full  3. The database is updated again to include the again available ticket | |
| Flow of Activities: | Actor | System |
| 1. The user requests a refund on a ticket they have purchased (within one hour of the original purchase  2. The user confirms that they want a refund  3. The user no longer has a valid ticket and receives their money back in full. | 1.1. The system sends a confirmation to the user to ensure that they want to refund their ticket  2.1. The system nullifies the ticket, updates the database, and processes a refund payment for the user |
| Exception Conditions: | 1. If more than an one hour has elapsed since the original time of purchase, then the refund cannot be made. | |
| Alternative flow | None | |

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| Use Case Name: | Apply a Promo Code | |
| Triggering Event: | User wishes to apply a promo code to their purchase | |
| Brief Description: | A user wishes to apply a promo code to their purchase for further discounts or rewards. | |
| Actors: | Registered User | |
| Stakeholders: | Registered User, Employees, Administrator | |
| Preconditions: | 1. The user has tickets in the cart ready for check out.  2. The user has a promo code valid to use | |
| Postconditions: | 1. The promo code is entered and the user’s cart reflects the change | |
| Flow of Activities: | Actor | System |
| 1. The user goes to the check-out page.  2. The user inputs a promo code into the form.  3. The user’s cart reflects the applied promo code. | 1.1 The system shows a promo code input form.  2.1 The system accepts the code and validates the code |
| Exception Conditions: | 2.1 The system checks the code and it is invalid. The user is alerted that the promo code is invalid. | |
| Alternative flow | None | |

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| Use Case Name: | Check Out | |
| Triggering Event: | User wishes to check out and make a purchase | |
| Brief Description: | A user wishes to finalize their purchase by checking out and purchasing the items in their cart. | |
| Actors: | Registered User | |
| Stakeholders: | Administrators, Employees, Business Owner | |
| Preconditions: | 1. A user has tickets in their cart | |
| Postconditions: | 1. The user has paid for the tickets in their cart and no longer has any tickets in their cart | |
| Flow of Activities: | Actor | System |
| 1. The user reviews their cart, confirms the tickets they want, and proceeds to check out  2. The user confirms that they have the desired tickets  3. The user enters their payment information | 1.1. The system confirms with the user that their items are correct  2.1. The system calculates a total sum to charge the user and requests payment information  3.1. The system verifies the payment information with a payment gateway/bank API and charges the money  3.2. The system clears the user’s cart and the purchase is finished |
| Exception Conditions: | 3.1. If the information is invalid, then the payment cannot be made and the check out fails. | |
| Alternative flow | 2. The user can add a promo code if they have one | |

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| Use Case Name: | Delete Customer Account | |
| Triggering Event: | When the user chooses to delete an account | |
| Brief Description: | Deletion of Customer Account | |
| Actors: | Registered User | |
| Stakeholders: | Registered User, Administrator | |
| Preconditions: | 1. User should be logged into a valid account. | |
| Postconditions: | 1. User Account should be deleted along with all user info.  2. The web-based user should be returned to the home page. | |
| Flow of Activities: | Actor | System |
| 1. A logged in user chooses to delete an account from a setting page.  2. User confirms and deletes account. | 1.1. The system asks to confirm this action.  2.1. The system removes all account info from the database.  2.2 The system redirects the user to the home page. |
| Exception Conditions: | 2.1. User has no account to delete, and the system should not allow this option to anyone not already logged in. | |
| Alternative flow | None | |

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| Use Case Name: | Add Movie Listing | |
| Triggering Event: | An administrator wishes to add a new movie. | |
| Brief Description: | An administrator wishes to add a new movie to the database. The admin provides the proper movie information into the system for it to be displayed. | |
| Actors: | Administrator | |
| Stakeholders: | Administrator, Employees, Registered Users, Web-Based Users | |
| Preconditions: | 1. The movie should not be already listed in the database  2. The movie should be a film available for show in the theater | |
| Postconditions: | 1. The movie is now available for selection and tickets are available for purchase to watch the movie on the website | |
| Flow of Activities: | Actor | System |
| 1. The administrator wishes to add a movie.  2. The administrator fills out movie description and any information pertaining to the movie. | 1.1 The system displays input page for movie information.  2.1 The system saves the information |
| Exception Conditions: | 2.1 The administrator realizes information input about the movie is incorrect and invokes the Edit Movie Information Use Case. | |
| Alternative flow | None | |

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| Use Case Name: | Browse Order History | |
| Triggering Event: | User wishes to see their order history | |
| Brief Description: | A user wishes to see their order history. They should be able to view all past orders sorted by time. | |
| Actors: | Registered User | |
| Stakeholders: | Registered User, Admin, System | |
| Preconditions: | 1. The user has some finite number of past orders that have been saved in the database | |
| Postconditions: | 1. The user can see the past orders sorted from newest to oldest, or in any order they desire. | |
| Flow of Activities: | Actor | System |
| 1. User requests to see order history | 1.1. The system pulls this particular user’s orders from the database and displays them on the webpage. |
| Exception Conditions: | If the user has no past orders, then the page will simply be blank. | |
| Alternative flow | None | |

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| Use Case Name: | Update Customer Account | |
| Triggering Event: | When the user chooses to update an account | |
| Brief Description: | Updating Customer Account | |
| Actors: | Registered User | |
| Stakeholders: | Registered User, Administrator | |
| Preconditions: | 1. User should be logged into a valid account. | |
| Postconditions: | 1. User Account info should be updated with correct and current info. | |
| Flow of Activities: | Actor | System |
| 1. A logged in user chooses to update their account from a settings page.  2. User confirms their information with their password. | 1.1. The system redirects the user to update their information.  2.1. The system confirms password.  2.2. The system updates all account info in the database.  2.3. The system will verify any information if needed. |
| Exception Conditions: | 2.1. User attempts to confirm changes with an incorrect password.  2.2. User updates account with invalid information, such as an incorrect email address. | |
| Alternative flow | 1. The administrator has the ability to modify the user account information forcibly. In case information requires to be changed and the customer does not change it, the administrator can make the adjustments. | |

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| Use Case Name: | Delete Movie | |
| Triggering Event: | Admin wishes to delete a movie from the catalogue | |
| Brief Description: | There is a movie that an admin wishes to remove from the catalogue/database. An admin account will have the ability to select a movie and have it removed so that it can no longer be searched for in the database. | |
| Actors: | Administrators, Employees | |
| Stakeholders: | Administrators, Employees, Business Owner | |
| Preconditions: | 1. There is a movie that is currently available for purchase by registered users | |
| Postconditions: | 1. That specific movie will no longer be in the database and will not be able to be searched for by any actors. | |
| Flow of Activities: | Actor | System |
| 1. Admin selects a movie that he wishes to remove  2. Admin confirms that it is the movie he wants to delete  3. The admin, or any user/actor, can no longer find that movie if they search for it | 1.1. The system sends a confirmation prompt to the admin to make sure  2.1. The system goes through the database and removes all instances of the specified movie |
| Exception Conditions: | None | |
| Alternative flow | None | |

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| Use Case Name: | Edit Movie Listing | |
| Triggering Event: | An administrator wishes to edit an existing movie listing. | |
| Brief Description: | An administrator wishes to edit an existing movie listing. The admin provides the proper movie information into the system for it to be displayed. | |
| Actors: | Administrator | |
| Stakeholders: | Administrator, Employees, Registered Users, Web-Based Users | |
| Preconditions: | 1. The movie should already be listed in the database | |
| Postconditions: | 1. The movie is now available for selection and tickets are available for purchase to watch the movie on the website with the edited information | |
| Flow of Activities: | Actor | System |
| 1. The administrator wishes to edit a movie.  2. The administrator fills out movie description and any corrected information pertaining to the movie. | 1.1 The system displays the edit page for the movie  2.1 The system saves the information |
| Exception Conditions: | 2.1 The administrator realizes information input about the movie is incorrect and invokes the Edit Movie Information Use Case. | |
| Alternative flow | None | |

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| Use Case Name: | Add Promotion | |
| Triggering Event: | An administrator wishes to add a promotion | |
| Brief Description: | An admin wishes to add a promotion code that can be applied to certain movies for a certain number of days. | |
| Actors: | Administrators, Employees | |
| Stakeholders: | Administrators, Employees, Business Owner | |
| Preconditions: | 1. There is a movie in the database that is available for purchase | |
| Postconditions: | 1. There will be a new promotion code that can be applied to that movie for a discount at purchase | |
| Flow of Activities: | Actor | System |
| 1. Admin clicks an ‘Add Promotion’ button  2. There is a promotion code that lasts until a certain date | 1.1. System generates a promotion code, either randomly or based on something the admin specifies  2.1. System accepts that promotion code from users at purchase for discounts until that certain date |
| Exception Conditions: | If there are no movies in the database, then a promotion code cannot be applied to anything. | |
| Alternative flow | None | |

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| Use Case Name: | Edit Payment Information | |
| Triggering Event: | User wishes to edit payment information | |
| Brief Description: | A user wishes to edit their payment information saved on their profile for future purchases. | |
| Actors: | Registered user | |
| Stakeholders: | Registered user | |
| Preconditions: | 1. The user should be logged into their account  2. Their profile should already contain a saved payment method | |
| Postconditions: | 1. The user’s profile shall reflect the changes made for their payment methods. | |
| Flow of Activities: | Actor | System |
| 1. The user goes to user settings  2. The user clicks edit on payment method  3. The user inputs the new payment information  4. The user saves their profile | 1.1 The system displays the page for user settings  2.1 The system allows the user to edit or input payment method.  3.1 The system validates the payment method  4.1 The system saves the new payment information. |
| Exception Conditions: | 3.1 The payment information is invalid. The system alerts the user to try again. | |
| Alternative flow | 1. There is no previously saved payment information. In this case, the user will just add their payment information and it will not overwrite information. The system will store the information in the database. | |

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| Use Case Name: | Update Ticket Type | |
| Triggering Event: | Administrator wants to update ticket categories | |
| Brief Description: | Administrator updates the ticket types | |
| Actors: | Administrator | |
| Stakeholders: | Administrator, Registered Users | |
| Preconditions: | 1. Ticket types must already exist.  2. Administrators should be logged in and wants to adjust ticket types. | |
| Postconditions: | 1. There will be new, or updated ticket types available. | |
| Flow of Activities: | Actor | System |
| 1. The administrator requests to update the ticket types.  2. The administrator adds new types.  3. The administrator confirms changes. | 1.1 The system redirects the administrator to an adjustment page.  3.1 The system updates ticket types in the database. |
| Exception Conditions: | None | |
| Alternative flow | None | |

