Test Case ID	Test Category	Test Description	Preconditions	Test Steps	Expected Results
TC-U-001	Unit	Verify Movie Search Function	Movie database loaded.	1. Enter a movie title in the search field. 2. Click "Se	List of matching movies displayed.
TC-U-002	Unit	Verify User Login Function	User account exists.	1. Enter valid username and password. 2. Click "Lo	User logged in successfully.
TC-F-001	Functional	Rent a Movie	User logged in, movie available.	1. Select a movie. 2. Click "Rent." 3. Confirm rental.	Movie rented, rental confirmation displayed.
TC-F-002	Functional	Return a Movie	User has a rented movie.	1. Select the rented movie. 2. Click "Return."	Movie returned, confirmation displayed.
TC-S-001	System	Simultaneous User Access	Multiple users accessing the system.	1. Multiple users perform movie searches and rent	System responds without errors or delays.
TC-S-002	System	Database Recovery	Simulate database failure.	1. Simulate a database crash. 2. Restart the system	System recovers, data is intact.
TC-U-003	Unit	Verify Movie details display	Movie is selected	1. Select a movie from the search results. 2. click "	Correct movie details are displayed.
TC-U-004	Unit	Verify password encryption	user creates account	1. user creates account. 2. check database.	password is encrypted in database.
TC-F-003	Functional	Verify late return fee calculation	Movie is returned late.	1. rent a movie. 2. return the movie after due date.	Late fee is calculated and displayed.
TC-F-004	Functional	Verify payment processing	user rents movie.	1. user selects a movie. 2. user enters payment inf	payment is processed successfully.