

# TEST REPORT

FOR

## VIDEO RENTAL SYSTEM ( VERSION 1.2 )

---

TEAM:

PRANAYA CHOWDARY - 22CS10070

HARSHIT JAIN - 22CS10030

SHASHWAT SINGH RANKA - 22CS10071

CSE DEPT, IIT KHARAGPUR

DATE:

9 APRIL 2024

---

## Table of Contents

<b>Table of Contents</b>	<b>2</b>
<b>Frontend Feature Tests</b>	<b>3</b>
Customer Side	3
New User Registration	3
Existing User Login	3
Forgot Password	3
Movie Search Engine	4
Movie Categorisation	4
Movie Details Page	5
Get Recommendations	5
Add to Cart feature	5
Cart Page	6
Placing Orders	6
View & Edit Profile	7
Manager Side	7
Manager Login	7
Movie Search Engine	7
Disable/Enable Movie	8
Recruit Staff	8
Edit Movie Details	9
Add a Movie	9
View All Orders, Process Returns & Monitor Returns by Staff	10
Audit Movies	10
Staff Side	11
Staff Login	11
View and Edit Stock of Movies	11
View All Orders and Process Returns	12
Notification Alerts on Overdue Orders and Low Stock Movies	12
<b>Backend API Routes Tests</b>	<b>13</b>

## Frontend Feature Tests

### Customer Side

#### New User Registration

**Test Objective:** To verify that a new user can register successfully and add all their details.

**Test Steps:** Open the registration page, enter all details and click register.

Case 1: All required details not entered and tried to register.

Expected: User must be prompted to enter the missing details.

Case 2: All details entered but in incorrect format.

Expected: User must be prompted to enter the particular details in correct format.

Case 3: Tried to register with username or contact details that already exist in the database.

Expected: User must be prompted to enter different unique details.

Case 4: All details entered in proper format and clicked register.

Expected: User registration should be successful and the user must be redirected to the home page, allowing future logins using the given details.

**Test Result:** All test cases **PASSED**.

#### Existing User Login

**Test Objective:** To verify that an existing user can login successfully

**Test Steps:** Open the login page, enter username and password, and click login

Case 1: Username or password not entered and tried to login

Expected: User must be prompted to enter the missing details.

Case 2: Wrong username or password entered and tried to login

Expected: User must be prompted to enter correct credentials

Case 3: Correct username and corresponding password entered

Expected: User must be logged into the system and redirected to homepage.

**Test Result:** All test cases **PASSED**.

#### Forgot Password

**Test Objective:** To verify that a user can reset his/her password via email.

**Test Steps:** Open the login page, click on Forgot Password, enter email id and request reset link

Case 1: Email entered doesn't exist in the database

Expected: User must be prompted to enter correct email ID.

Case 2: Correct email ID entered and reset link requested

Expected: User must get a reset link on the given email ID; User must be able to reset password using the given link,

**Test Result:** All test cases **PASSED**.

## Movie Search Engine

**Test Objective:** To verify that users can search for movies by their names, and view results real time.

**Test Steps:** On the home page, click on the search bar and start entering the movie name.

Case 1: Nothing entered in the search bar.

Expected: The usual home page is visible and search results row does not appear.

Case 2: Text in the search bar does not correspond to any movie in the database.

Expected: User must be informed that no such movie exists.

Case 3: Text in the search bar matches with some movies within the database

Expected: Search results row appears with the specific movies, updating dynamically as the user is typing.

**Test Result:** All test cases **PASSED**.

## Movie Categorisation

**Test Objective:** To verify that users can filter movies by their genre.

**Test Steps:** Click on the desired category from Categories section or from a movie page

Case 1: Category is selected from the Categories section in Navbar.

Expected: User must be redirected to a page listing movies of the selected category

Case 2: Category is selected from the genre section on a movie page

Expected: User must be redirected to a page listing movies of the selected category

**Test Result:** All test cases **PASSED**.

## Movie Details Page

**Test Objective:** To verify that clicking a movie from the home page opens its detail's page containing all relevant information.

**Test Steps:** On the home page, or from the search results or from the categories section, the user can click on a movie to be redirected to its dedicated page. The page must contain the title, description, cast, director, price and rent/buy options along with the movie's poster.

**Test Result:** Test case **PASSED**.

## Get Recommendations

**Test Objective:** To verify that a registered user with past orders receives recommendations on their home page based on their past orders.

**Test Steps:** A user that has logged in and has a previous purchase history within the database, must be able to view relevant recommendations of movies that are similar to their watch history in terms of cast, directors or plot.

**Test Result:** Test case **PASSED**.

## Add to Cart feature

**Test Objective:** To verify that users can add movies to cart

**Test Steps:** Click on the "Add to cart" button on a movie page; select quantity and duration

Case 1: User is not logged in

Expected: User is redirected to the login page.

Case 2: "Add to cart" button is clicked; quantity is selected; buy option or rent duration is selected

Expected: The movie with selected specifications must be added to the cart

Case 3: Remove button is clicked, or quantity of movie item is decreased from 1

Expected: The movie should be removed from the cart

**Test Result:** All test cases **PASSED**.

## Cart Page

**Test Objective:** To verify that users can view movies in their cart by opening the cart page, must be only visible to users that are logged in.

**Test Steps:** Click on the Cart icon on the home page.

Case 1: The user has movies in their cart.

Expected: All movies must be displayed along with their selected duration and rent/buy options.

Case 2: User wishes to edit the movies in their cart

Expected: The movie should be removed from the cart if the delete button is clicked, and edit quantity feature must allow them to increase or decrease quantity. They must also be able to change the rent duration.

Case 3: User does not have movies in their cart.

Expected: Empty cart page will be displayed.

**Test Result:** All test cases **PASSED**.

## Placing Orders

**Test Objective:** To verify that users can successfully place orders and get an invoice

**Test Steps:** Go to the cart, click on "Order" button, and pay at the payment gateway

Case 1: Any or some movies in the cart are out of stock

Expected: User must be informed about the stock of the movies in question.

Case 2: Payment at the payment gateway is not successful

Expected: User is informed that order was not placed

Case 3: Payment is successful and order is placed

Expected: User is informed order is placed, and redirected to an invoice page, containing all order details. Cart is emptied out.

**Test Result:** All test cases **PASSED**.

## View & Edit Profile

**Test Objective:** To verify that users can view and edit their profile by opening the profile page, which must be only visible to users who are logged in. The profile must have a list of the user's previous orders.

**Test Steps:** Click on the Profile icon on the home page.

Case 1: The User has some previous orders

Expected: All previous orders are displayed in the order: RENTED, BOUGHT, RETURNED; with movie details and timestamps.

Case 2: The User tries to edit profile details (name and address)

Expected: Profile must be updated accordingly and user must be informed of that.

**Test Result:** All test cases **PASSED**.

## Manager Side

### Manager Login

**Test Objective:** To verify that the manager can login successfully

**Test Steps:** Open the login page, enter username and password, and click login

Case 1: Username or password not entered and tried to login

Expected: Manager must be prompted to enter the missing details.

Case 2: Wrong username or password entered and tried to login

Expected: Manager must be prompted to enter correct credentials

Case 3: Correct username and corresponding password entered

Expected: Manager must be logged into the system and redirected to manager page.

**Test Result:** All test cases **PASSED**.

### Movie Search Engine

**Test Objective:** To verify that the manager can search for movies by their names, and view results real time.

**Test Steps:** On the manager page, click on the search bar and start entering the movie name.

Case 1: Nothing entered in the search bar.

Expected: The usual home page is visible.

Case 2: Text in the search bar does not correspond to any movie in the database.

Expected: Manager must be informed that no such movie exists.

Case 3: Text in the search bar matches with some movies within the database

Expected: Movies matching the search query are displayed and updated dynamically as the manager types.

**Test Result:** All test cases **PASSED**.

### Disable/Enable Movie

**Test Objective:** To verify that the manager can disable/enable a movie

**Test Steps:** On the manager page, search for the movie, click on Disable/Enable button.

Case 1: Movie is currently enabled

Expected: Disable button should be displayed in manager's dashboard. All enabled movies must be shown on customers' homepage

Case 2: Movie is currently disabled.

Expected: Enable button should be displayed in manager's dashboard. No disabled movies must be shown on customers' homepage.

Case 3: Manager tries to disable a movie

Expected: A confirmation popup is displayed; clicking on YES must successfully disable the movie, clicking on NO must not disable the movie.

Case 3: Manager tries to enable a movie

Expected: Movie must be enabled successfully.

**Test Result:** All test cases **PASSED**.

### Recruit Staff

**Test Objective:** To verify that the manager can recruit staff, add all their details and that staff can thereafter login using their credentials.



**Test Steps:** From the manager's dashboard, click on the recruit staff tab to be redirected to the recruit staff page.

Case 1: All required details not entered and tried to recruit.

Expected: Manager must be prompted to enter the missing details.

Case 2: All details entered but in incorrect format.

Expected: Manager must be prompted to enter the details in correct format.

Case 3: Tried to recruit with username or contact details that already exist in the database.

Expected: Manager must be prompted to enter different unique details.

Case 4: All details entered in proper format and clicked recruit.

Expected: Staff recruitment should be successful and the staff should be able to login using their credentials.

**Test Result:** All test cases **PASSED**.

## Edit Movie Details

**Test Objective:** To verify that the manager can edit details of a movie

**Test Steps:** On the manager page, search for the movie, click on Edit button, edit movie details and click on save changes.

Case 1: All required details not entered and tried to save changed.

Expected: Manager must be prompted to enter the missing details.

Case 2: Details entered in incorrect format.

Expected: Manager must be prompted to enter the details in correct format.

Case 3: All required details entered in proper format and clicked "save changes".

Expected: Movie details must be saved, and changes must be reflected on all different users' pages. Manager must be redirected to the corresponding movie page

**Test Result:** All test cases **PASSED**.

## Add a Movie

**Test Objective:** To verify that the manager can add new movies and that these movies must be reflected on all different users' pages.

**Test Steps:** From the manager's dashboard, click on the Add Movie tab to be redirected to the Add Movie page.

Case 1: All required details not entered and tried to add movie.

Expected: Manager must be prompted to enter the missing details.

Case 2: All details entered but in incorrect format.

Expected: Manager must be prompted to enter the details in correct format.

Case 3: All details entered in proper format and movie is added.

Expected: Movie must be added to the database and must be viewable on all users, staff and manager pages.

**Test Result:** All test cases **PASSED**.

### **View All Orders, Process Returns & Monitor Returns by Staff**

**Test Objective:** To verify that the manager can view all details of all orders, and can process returns for rented movies.

**Test Steps:** On the manager page, click on "All Orders" button

Case 1: Manager clicks on the "All Orders" button in navbar.

Expected: Manager must be redirected to a page, listing all order details including status, price, duration, movie details, customer details and information regarding who processed the return for a rented movie. Orders must be separated in sections: RENTED, BOUGHT, RETURNED.

Case 2: Manager clicks on "Mark as Returned" against a rented order

Expected: The order status must be changed to "RETURNED". This change must be reflected on the customer's profile page.

**Test Result:** All test cases **PASSED**.

### **Audit Movies**

**Test Objective:** To verify that the manager is able to view all orders placed on a movie and the total revenue generated for every movie.

**Test Steps:** Within every movie's page must be a section listing out audit details for the manager.

Case 1: Movie has orders placed on it.

Expected: Total revenue generated from that movie must be visible along with a list of all the orders and their status.

Case 2: Movie has no orders placed on it yet.

Expected: Order list is not visible and revenue is displayed as 0.

**Test Result:** All test cases **PASSED**.

## Staff Side

### Staff Login

**Test Objective:** To verify that a recruited staff can login successfully

**Test Steps:** Open the login page, enter username and password, and click login

Case 1: Username or password not entered and tried to login

Expected: Staff must be prompted to enter the missing details.

Case 2: Wrong username or password entered and tried to login

Expected: Staff must be prompted to enter correct credentials

Case 3: Correct username and corresponding password entered

Expected: Staff must be logged into the system and redirected to staff's dashboard.

**Test Result:** All test cases **PASSED**.

### View and Edit Stock of Movies

**Test Objective:** To verify that staff can view and edit stock of movies.

**Test Steps:** On the staff dashboard, staff can search for any movie and click on the edit stock button to manage stock.

Case 1: Staff increases or decreases stock

Expected: Stock must be changed accordingly and staff must be informed of the changes.

Case 2: Staff makes no changes in stock after clicking edit

Expected: Stock remains the same.

**Test Result:** All test cases **PASSED**.

## View All Orders and Process Returns

**Test Objective:** To verify that staff can view details of all orders along with customer information, and can process returns for rented movies.

**Test Steps:** On the staff dashboard, click on “All Orders” button to be redirected to the Orders page listing all order details including status, price, duration, movie details, and customer details. Orders must be separated in sections: RENTED, BOUGHT, RETURNED.

Case 1: Staff wants to access details of customers who placed orders

Expected: All relevant details of orders must be visible on the Orders page.

Case 2: Staff clicks on “Mark as Returned” against a rented order

Expected: The order status must be changed to “RETURNED”. This change must be reflected on the customer’s profile page.

**Test Result:** All test cases **PASSED**.

## Notification Alerts on Overdue Orders and Low Stock Movies

**Test Objective:** To verify that staff is alerted whenever a movie’s stock falls below the threshold or when a customer’s order goes over the due the date.

**Test Steps:** On the staff dashboard, click the notification icon to be redirected to the notifications page.

Case 1: There are notifications that need to be resolved.

Expected: The notification icon has a red circle over it to indicate that there are notifications that need attention, clicking which staff can view all notifications.

Case 2: Staff wishes to resolve the issue behind a notification

Expected: Notification page allows them to directly resolve the specific issues in the page itself ie., stock of low stock movies can be increased and overdue orders can be marked as returned along with accessing customer details.

Case 3: No notifications or alerts

Expected: Notification icon on the dashboard has no red circle indicating there’s no issues that need resolving.

**Test Result:** All test cases **PASSED**.

## Backend API Routes Tests

This test report was generated using a test suite that is automated by Mocha, a JavaScript testing framework. The final result was that every route in the backend works as expected.

```
> vrs@1.0.0 test
> mocha -r esm --timeout 10000 tests/movies.test.mjs
tests/customers.test.mjs tests/management.test.mjs --exit

connected to db & listening to port 9000

Movies
/api/movies GET
    ✓ should return 200 and list all movies in the database (5000ms)
/api/movies/invalid-id GET
    ✓ should return 404 and an error message for an invalid id
/api/movies/66143471b5faf0047f700cb8 GET
    ✓ should return 404 and an error message for a non-existent id (60ms)
/api/movies/6607cbf909986a6dbf5bcb0b GET
    ✓ should return 200 and movie details for a valid existent id (56ms)
/api/movies/genre/sci-fi GET
    ✓ should return 200 and list all movies in the database by genre
(572ms)
/api/movies/recommend/Inception GET
    ✓ should return 200 and list recommended movies for a valid movie
title (1541ms)
/api/movies/recommend/testTitle GET
    ✓ should return 500 and an error message when Python API request
fails

Customers
  signup
/api/customers/signup POST
    ✓ should return 201 and a token (292ms)
/api/customers/signup POST
    ✓ should return 400 and an error message when sign up fails (52ms)
  login
/api/password/forgot POST
```

```
    ✓ should send a reset password mail to the customer (3524ms)
/api/customers/login POST
    ✓ should return 200 and a token (118ms)
/api/customers/login POST
    ✓ should return 401 and an error message for wrong password (115ms)
    auth
/api/customers/auth GET
    ✓ should return 200 and a message for authorized user (63ms)
/api/customers/auth GET
    ✓ should return 401 for unauthorized user
    profile
/api/customers/profile GET
    ✓ should return 200 and the customer profile (93ms)
    cart
/api/customers/cart GET
    ✓ should return 200 and the customer's cart (113ms)
/api/customers/cart PUT
    ✓ should return 200 and the updated cart (161ms)
    orders
/api/customers/order GET
    ✓ should return 200 and the customer's orders (102ms)
/api/payment/checkout POST
    ✓ should return 200 and the transaction details (952ms)
/api/payment/success PUT
    ✓ should return 200 and the payment success message (64ms)
/api/payment/success PUT
    ✓ should return 400 and an error message for invalid transaction
(49ms)
/api/customers/order POST
    ✓ should return 200 and the new order (303ms)

Management
Manager
login
/api/managers/login POST
    ✓ should return 200 and a token (121ms)
/api/managers/login POST
    ✓ should return 401 and an error message for wrong password (115ms)
    auth
/api/managers/auth GET
    ✓ should return 200 and a message for authorized user (50ms)
/api/managers/auth GET
```

```
    ✓ should return 401 for unauthorized user
    manage staffs
/api/managers/staffs GET
    ✓ should return 200 and an array of staffs (98ms)
/api/managers/createstaff POST
    ✓ should return 200 and recruited staff details (332ms)
    manage customers
/api/managers/customers GET
    ✓ should return 200 and an array of customers (215ms)
    manage movies
/api/managers/movies GET
    ✓ should return 200 and an array of movies (4845ms)
/api/managers/movie/6607cbf909986a6dbf5bcb0b GET
    ✓ should return 200 and the movie with specified id (153ms)
/api/managers/movie/disable/6607cbf909986a6dbf5bcb0b PUT
    ✓ should return 200 and the disabled movie (281ms)
/api/managers/movie/6607cbf909986a6dbf5bcb0b PUT
    ✓ should return 200 and the updated movie (107ms)
/api/managers/movie POST
    ✓ should return 200 and the added movie (108ms)
    manage orders
/api/managers/orders GET
    ✓ should return 200 and an array of orders (207ms)
    Staff
    login
/api/staffs/login POST
    ✓ should return 200 and a token (116ms)
/api/staffs/login POST
    ✓ should return 401 and an error message for wrong password (120ms)
    auth
/api/staffs/auth GET
    ✓ should return 200 and a message for authorized user (48ms)
/api/staffs/auth GET
    ✓ should return 401 for unauthorized user
    return order
/api/staffs/orders/66143479b5faf0047f700cdb PUT
    ✓ should return 200 and the updated order (277ms)
    change stock
/api/staffs/movie/6607cbf909986a6dbf5bcb0b PUT
    ✓ should return 200 and the updated movie (104ms)
    notifications
/api/staffs/notifs GET
```

```
✓ should return 200 and relevant notifications (218ms)
```

```
Cleaning up test data
```

```
Deleted test staff
```

```
Deleted test customer
```

```
Deleted test order
```

```
Deleted test movie
```

```
42 passing (22s)
```