Film Rental Store

To be developed

**Schema Location:** [**https://www.jooq.org/sakila**](https://www.jooq.org/sakila)

**Step1:**

1. All Rest API request and response format must be in JSON.
2. 200, 201, 400, 404, 401, 500, 505 – use appropriate http status code in your response object.
3. Handle the Rest exceptions globally using Rest exception handler for all endpoints.
4. Sample Error Responses are shown in below table, participants to identify error paths for all the Endpoints.
5. Test your Rest Api using Junit and Mockito.
6. Participants should not alter database schema under any circumstances except wherever changes are mentioned explicitly.
7. All GET and POST requests for customer are secured
8. Alter Picture column of Staff to URL
9. Remove username & password columns of Staff table instead use separate table for security

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| Endpoints | HTTP Verb/Method | Description | Success Response | Error Response |
| /api/actors/post | POST | Add new Actor object in DB | String: Record Created Successfully | {"timeStamp":"2023-06-08", "message": "Validation failed …”} |
| /api/actors/lastname/{ln} | GET | Search Actors by Last Name | Collection of Actors |  |
| /api/actors/firstname/{fn} | GET | Search Actors by First Name | Collection of Actors |  |
| /api/actors/update/lastname/{id} | PUT | Update Last Name of an Actor | Actor | {"timeStamp":"2023-06-08", "message": "Validation failed …”} |
| /api/actors/update/firstname/{id} | PUT | Update First Name of an Actor | Actor |  |
| /api/actors/{id}/films | GET | Search Films of an Actor by Actor id | Collection of Films | {"timeStamp": "2023-06-08", "message": "id: 13556 Not Found", "details": "uri=/actors/13556"} |
| /api/actors/{id}/film | PUT | Assign Film to an Actor | Collection of Films |  |
| /api/actors/toptenbyfilmcount | GET | Find top 10 Actors by Film Count | Id & Name of Actors with Number of Films |  |

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| Endpoints | HTTP Verb/Method | Description | Success Response | Error Response |
| /api/films/post | POST | Add new Film object in DB | String: Record Created Successfully |  |
| /api/films/title/{title} | GET | Search Films by Title | Collection of Films |  |
| /api/films/year/{year} | GET | Search Films by Release Year | Collection of Films |  |
| /api/films/duration/gt/{rd} | GET | Search Films where Rental Duration is greater than {rd} | Collection of Films |  |
| /api/films/rate/gt/{rate} | GET | Search Films where Rental Rate is greater than {rate} | Collection of Films |  |
| /api/films/length/gt/{length} | GET | Search Films where Length is greater than {length} | Collection of Films |  |
| /api/films/duration/lt/{rd} | GET | Search Films where Rental Duration is lower than {rd} | Collection of Films |  |
| /api/films/rate/lt/{rate} | GET | Search Films where Rental Rate is lower than {rate} | Collection of Films |  |
| /api/films/length/lt/{length} | GET | Search Films where Length is lower than {length} | Collection of Films |  |
| /api/films/betweenyear/{from}/{to} | GET | Search Films which are Released between {from} and {to} | Collection of Films |  |
| /api/films/rating/lt/{rating} | GET | Search Films where Rating is lower than {rating} | Collection of Films |  |
| /api/films/rating/gt/{rating} | GET | Search Films where Rating is greater than {rating} | Collection of Films |  |
| /api/films/language/{lang} | GET | Search Films where Language is {lang} | Collection of Films |  |
| /api/films/countbyyear | GET | Display number of Films released by each Year | Year & Count of Films |  |
| /api/films/{id}/actors | GET | Find all Actors of a Film by Film id | Collection of Actors |  |
| /api/films/category/{category} | GET | Find all Films of specified {category} | Collection of Films |  |
| /api/films/{id}/actor | PUT | Assign Actor to a Film | Collection of Actors |  |
| /api/films/update/title/{id} | PUT | Update Title of a Film | Film |  |
| /api/films/update/releaseyear/{id} | PUT | Update Release Year of a Film | Film |  |
| /api/films/update/rentaldurtion/{id} | PUT | Update Rental Duration of a Film | Film |  |
| /api/films/update/rentalrate/{id} | PUT | Update Rental Rate of a Film | Film |  |
| /api/films/update/rating/{id} | PUT | Update Rating of a Film | Film |  |
| /api/films/update/language/{id} | PUT | Update Language of a Film | Film |  |
| /api/films/update/category/{id} | PUT | Update Category of a Film | Film |  |

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| Endpoints | HTTP Verb/Method | Description | Success Response | Error Response |
| /api/customers/post | POST | Add new Customer Object in DB | String: Record Created Successfully |  |
| /api/customers/lastname/{ln} | GET | Search Customers by last name | Collection of Customers |  |
| /api/customers/firstname/{fn} | GET | Search Customers by first name | Collection of Customers |  |
| /api/customers/email/{email} | GET | Search Customers by email | Customer |  |
| /api/customers/{id}/address | PUT | Assign Address to a Customer | Customer & Address details |  |
| /api/customers/city/{city} | GET | Search Customers by City | Collection of Customers with Address |  |
| /api/customers/country/{country} | GET | Search Customers by Country | Collection of Customers with Address |  |
| /api/customers/active | GET | Search all active Customers | Collection of Customers |  |
| /api/customers/inactive | GET | Search all inactive Customers | Collection of Customers |  |
| /api/customers/phone/{phone} | GET | Search Customers by phone number | Customer with Address |  |
| /api/customers/update/fn/{id} | PUT | Update first name of Customer | Customer |  |
| /api/customers/update/ln/{id} | PUT | Update last name of Customer | Customer |  |
| /api/customers/update/email/{id} | PUT | Update email of Customer | Customer |  |
| /api/customers/update/store/{id} | PUT | Assign Store to a Customer | Customer |  |
| /api/customers/update/phone/{id} | PUT | Update phone number of a Customer | Customer |  |

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| Endpoints | HTTP Verb/Method | Description | Success Response | Error Response |
| /api/staff/post | POST | Add new Staff object to DB | String: Record Created Successfully |  |
| /api/staff/lastname/{ln} | GET | Search Staff by last name | Collection of Staff |  |
| /api/staff/firstname/{fn} | GET | Search Staff by first name | Collection of Staff |  |
| /api/staff/email/{email} | GET | Search Staff by email | Staff |  |
| /api/Staff/{id}/address | PUT | Assign Address to a Staff | Staff & Address details |  |
| /api/staff/city/{city} | GET | Search Staff by City | Collection of Staff with Address |  |
| /api/staff/country/{country} | GET | Search Customers by Country | Collection of Staff with Address |  |
| /api/staff/phone/{phone} | GET | Search Staff by phone number | Staff with Address |  |
| /api/staff/update/fn/{id} | PUT | Update first name of Staff | Staff |  |
| /api/staff/update/ln/{id} | PUT | Update last name of Staff | Staff |  |
| /api/staff/update/email/{id} | PUT | Update email of Staff | Staff |  |
| /api/staff/update/store/{id} | PUT | Assign Store to a Staff | Staff |  |
| /api/staff/update/phone/{id} | PUT | Update phone number of a Staff | Staff |  |

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| Endpoints | HTTP Verb/Method | Description | Success Response | Error Response |
| /api/store/post | POST | Add new Store object to DB | String: Record Created Successfully |  |
| /api/store/{id}/address | PUT | Assign Address to a Store | Store & Address details |  |
| /api/store/city/{city} | GET | Search Store by City | Collection of Store with Address |  |
| /api/store/country/{country} | GET | Search Store by Country | Collection of Store with Address |  |
| /api/store/phone/{phone} | GET | Search Store by phone number | Store with Address |  |
| /api/store/update/phone/{id} | PUT | Update phone number of a Store | Store |  |
| /api/store/{id}/manager | PUT | Assign manager to a Store | Store & Address details |  |
| /api/store/staff/{id} | GET | Display all Staff of a Store | Collection of Staff |  |
| /api/store/customer/{id} | GET | Display all Customers of a Store | Collection of Customers |  |
| /api/store/manager/{id} | GET | Display Manager Details of a Store | Staff |  |
| /api/store/managers | GET | Display Manager details (first name, last name, email, phone) and Store details (Address, City, Phone) of all stores | Custom Object |  |

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| Endpoints | HTTP Verb/Method | Description | Success Response | Error Response |
| /api/inventory/add | POST | Add one more Film to a Store | String: Record Created Successfully |  |
| /api/inventory/films | GET | Display inventory(count) of all Films in all Stores | Collection of  Film title, no. of copies |  |
| /api/inventory/store/{id} | GET | Display inventory of all Films by a Store | Collection of  Film title, no. of copies |  |
| /api/inventory/film/{id} | GET | Display inventory(count) of a Film in all Stores | Collection of Store address, no. of copies |  |
| /api/inventory/film/{id}/store/{id} | GET | Display inventory(count) of a Film in a Store | Store Address, no. of copies |  |

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| Endpoints | HTTP Verb/Method | Description | Success Response | Error Response |
| /api/rental/add | POST | Rent a Film | String: Record Created Successfully |  |
| /api/rental/customer/{id} | GET | Display all Films rented to a customer | Collection of Films |  |
| /api/rental/toptenfilms | GET | Display top 10 most rented Films | Collection of Films |  |
| /api/rental/toptenfilms/store/{id} | GET | Display top 10 most rented Films of a Store | Collection of Films |  |
| /api/rental/due/store/{id} | GET | Display list of Customers who have not yet returned the Film | Collection of Customers |  |
| /api/rental/update/returndate/{id} | POST | Update return date | Rental |  |

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| Endpoints | HTTP Verb/Method | Description | Success Response | Error Response |
| /api/payment/add | PUT | Make one Payment entry | String: Record Created Successfully |  |
| /api/payment/revenue/datewise | GET | Calculate Cumulative revenue of all Stores | Collection of payment\_date, amount |  |
| /api/payment/revenue/datewise/store/{id} | GET | Calculate Cumulative revenue of a Store | Collection of payment\_date, amount |  |
| /api/payment/revenue/filmwise | GET | Calculate Cumulative revenue of all Films (across all stores) | Collection of Film title, amount |  |
| /api/payment/revenue/film/{id} | GET | Calculate Cumulative revenue of a Film Store wise | Collection of Store address, amount |  |
| /api/payment/revenue/films/store/{id} | GET | Calculate Cumulative revenue of all Films by Store | Collection Film title, amount |  |