

KOHA UPGRADE AND FUNCTIONAL ENHANCEMENT REQUIREMENTS

System: Koha

Current version: 21.11.04.000

Requested Upgrade: Version 24.11 (Stable Release)

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Last updated: 25 March 2026



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1. System upgrade and overall review

The current Koha installation requires upgrading to version 24.11 (stable). The upgrade should not only update the software version but also include a full review of system configuration, modules, and performance settings.

The process should ensure complete preservation of all bibliographic records, item records, patron data, circulation history, fines, and reports.

At present, the system performance is inconsistent. On certain days, Koha becomes extremely slow, with pages continuously loading and overall system lag affecting both staff operations and OPAC access.

A full performance review should therefore be conducted during the upgrade to ensure stable and efficient system performance.



2. Duplicate / Unexplained Fine Generation

Identified Date: 24 May 2023

[illegible]

Details of the issue:

Fine (accruing) MVR 94.00 is a normal incrementing overdue fine amount generated for the checked-out (borrowed) books by the system.

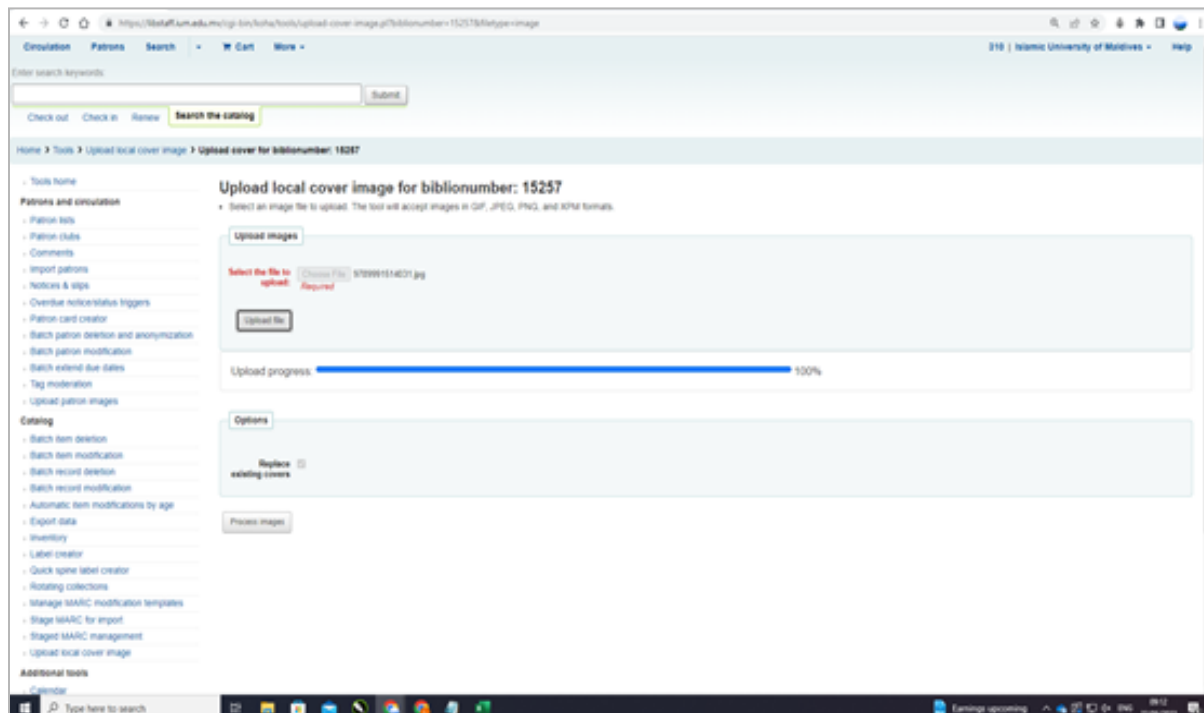
Fine (returned) MVR 45.00 is a normal overdue fine amount generated by the system for the returned books.

Fine MVR 16.00 is also generated by the system. No idea why this fine is created for the same book. Need to identify why system generates this. Note that this is the second case we have identified.



3. Cover Image Replacement Issue

Identified Date: 22 June 2023



Koha automatically retrieves and displays book cover images from Amazon.com based on the ISBN entered in the bibliographic record. However, in several instances, the cover image retrieved from Amazon does not match the actual physical book held in our collection.

When attempting to upload the correct cover image manually, the system does not allow the existing Amazon cover to be replaced. Instead, the newly uploaded image appears as an additional cover rather than replacing the incorrect one. Even users with SuperAdmin privileges are unable to delete or remove the automatically retrieved Amazon cover.

The option “Replace existing covers” is currently disabled, as shown in the referenced screenshot. This prevents proper correction of inaccurate cover images within the catalog.

Example records where this issue has occurred include:

- Barcode: X016758
- Barcode: X016759

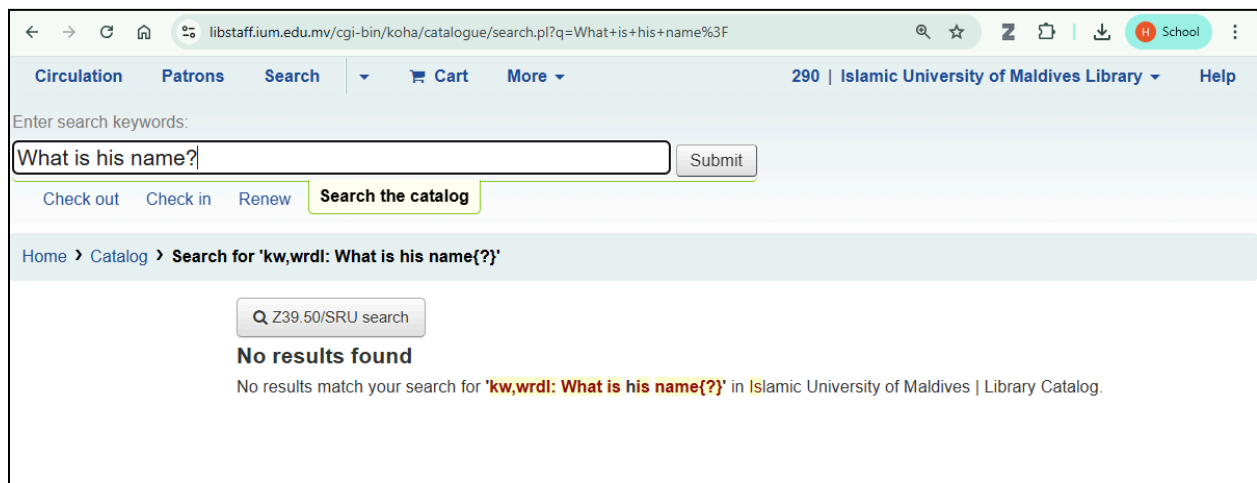


4. Search Function Not Recognizing Special Characters ("?.")

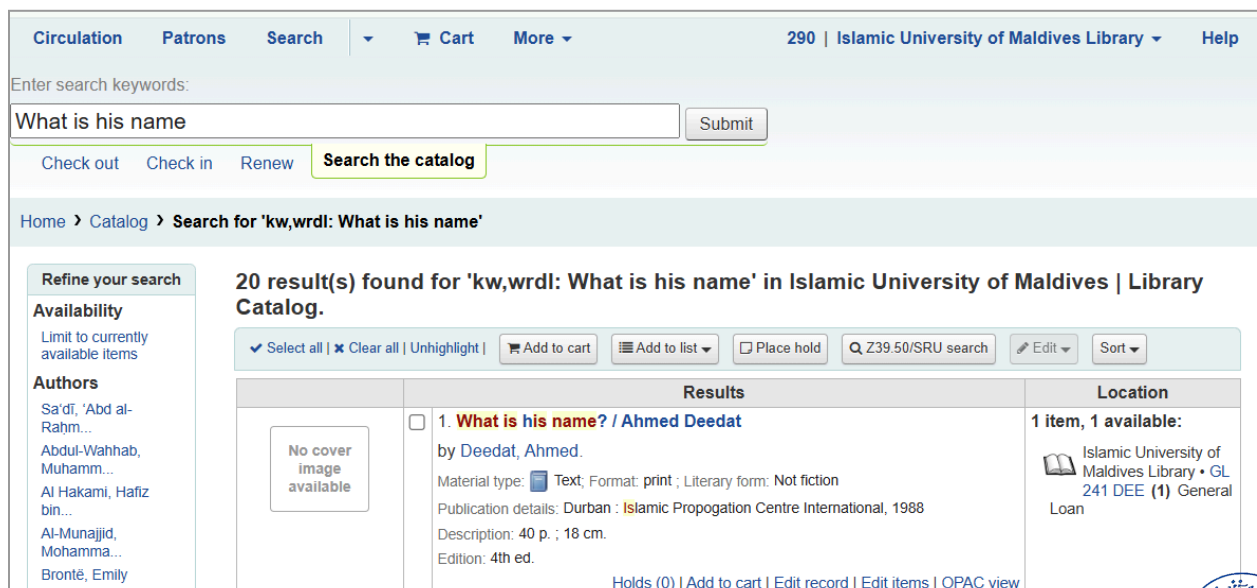
Identified Date: 09 July 2023

When searching for a bibliographic record in Koha, the system does not return results if the search query includes a question mark ("?."), even when the question mark is part of the book title. However, when the same title is searched without the question mark, the system successfully retrieves the relevant record.

Example: Book title: What is his name?



Screenshot below shows the book title searched without the question mark.



5. Hold / Reservation Functionality

In normal circulation workflow, the hold function is used when a book is currently borrowed by another patron. A hold allows the next patron who requires the book to reserve it in advance so that once the item is returned, the system notifies staff and identifies the patron who should receive the book next, instead of the item being renewed again to the same borrower.

At present, the hold or reservation feature is not functioning properly. Staff are unable to place holds directly under the patron's account in the system.

Due to this limitation, staff are currently required to place the hold under a staff name and manually enter the actual student's information in the notes section. This process is not efficient and creates errors in tracking reservations.

Home > Catalog > [ދިވެހިރާއްޖޭގެ ފޮތްތަކުގެ ފަތުރު](#) | [Keerithi Quraanu ge dhifaa'ugai](#) | Place a hold

Place a hold on [ދިވެހިރާއްޖޭގެ ފޮތްތަކުގެ ފަތުރު](#) | [Keerithi Quraanu ge dhifaa'ugai](#) |

Cannot place hold

- No holds allowed: Testing Student cannot place a hold on any of these items.

Hold details

Patron: Testing Student (student)

Estimated priority: 1

Notes:

Pickup at: Islamic University of Maldives Library

Hold expires on date: *

Hold next available item ☒

Non priority hold: ☐ A non priority hold doesn't prevent a current checkout from renewing

The above image shows that books cannot be placed on hold directly for patrons, while the below image shows that the hold is currently created under a staff account, with the patron's information manually added in the notes section.

Home > Catalog > [ދިވެހިރާއްޖޭގެ ފޮތްތަކުގެ ފަތުރު](#) | [Keerithi Quraanu ge dhifaa'ugai](#) | Place a hold

Place a hold on [ދިވެހިރާއްޖޭގެ ފޮތްތަކުގެ ފަތުރު](#) | [Keerithi Quraanu ge dhifaa'ugai](#) |

Hold details

Patron: Testing Library staff (library.staff)

Estimated priority: 1

Notes: This book is on hold for testing student

Pickup at: Islamic University of Maldives Library

Hold expires on date: *

Hold next available item ☒

Non priority hold: ☐ A non priority hold doesn't prevent a current checkout from renewing

Place hold



6. Invoice number generation for overdue fine

Currently, Koha does not generate invoice numbers automatically. Invoice numbers are assigned manually, and paid invoices are created in a Google Sheet.

The system should be configured to automatically calculate fines according to the circulation rules and generate invoice numbers upon fine payment.

The image below shows the screen that appears when clicking to pay an overdue fine. Currently, invoice numbers are manually entered in the notes field. We suggest placing the invoice Number in the position shown below.

Home > Patrons > Pay charges for Testing Admin Staff > Pay an amount toward all fines

Testing Admin Staff (admin.staff)

No address stored.
No city stored.
No phone stored.
No email stored.
No date of birth stored.
Category: Admin Staff (ADMIN)
Home library: Islamic University of Maldives Library
Borrowernumber: 4261
Updated on 03/24/2024 06:46

Check out
Details
Accounting
Routing lists
Circulation history
Holds history
Modification log
Notices
Statistics

Pay an amount toward all fines

Invoice Number

Total amount outstanding: 208.00

Amount being paid: 208.00

Amount tendered: 208.00

Change to give: 0.00

Payment type:

Note:

Confirm Cancel



7. Invoice Template Customization

The image below shows the template in Koha for overdue invoices. To maintain a clean accounting record in Koha, the Manual Invoice "Type" dropdown menu must be customized. Update the Koha configuration to ensure the Type dropdown is restricted to the following three categories only. All other options (such as "Manual fee," "New card," or "Processing Fee") must be removed.

- Lost item
- Damaged item
- Overdue

The screenshot displays the Koha 'Manual invoice' form. On the left, a sidebar shows the patron's details for 'Testing Student (student)', including a placeholder profile picture and a list of missing information (address, city, phone, email, date of birth). Below this is a list of links for 'Accounting' (Routing lists, Circulation history, Holds history, Modification log, Notices, Statistics) and other actions (Check out, Details). The main form area has a top navigation bar with 'Circulation', 'Patrons', 'Search', 'Cart', and 'More'. Below this is a search bar for patron card numbers. The 'Manual invoice' form itself has a 'Type' dropdown menu currently set to 'Lost item'. Other fields include 'Barcode' (set to 'Lost item'), 'Description' (set to 'Manual fee'), 'Note' (set to 'Overdue Fines'), and 'Amount' (set to 'Processing Fee'). The form also includes buttons for 'Edit', 'Add guarantee', 'Change password', 'Duplicate', 'Print', 'Search to hold', 'Add message', and 'More'. At the bottom, there are 'Save', 'Save and pay', and 'Cancel' buttons.



7.1 Invoice for Overdue Fines

The existing invoice format contains limited information and does not meet operational needs. The image below shows the invoice is generated in koha. Below explains the guideline and sample template.

3/8/26, 12:05 PM Print receipt for admin.staff

INVOICE			
Bill to: Testing Admin Staff			
Card number: admin.staff			
Date	Description of charges	Note	Amount
03/24/2024	Fine (Refunded) , Approaches and methods in language teaching / 03/18/2024 23:59		8 . 00
Total outstanding dues as on date:			208 . 00

https://libstaff.iu.edu.my/cgi-bin/koha/members/printinvoice.pl?action=print&accountlines_id=4357 1/1



Guideline: Mandatory Fields for Overdue Invoices

To ensure an overdue invoice is valid and trackable, the following fields must be completed:

- Invoice Metadata: Unique Invoice Number (e.g., (I)IUM/LIB/2026/0001) and the Date of Issue.
- Patron Information: Full Name, Patron ID, and National ID (to ensure the fine is linked to the correct record).
- Item Specifics: The Barcode number and Title of the book to identify the specific asset.
- Timeline: The Due Date and the actual Returned Date (used to justify the late fee).
- The Calculation:
 - Item Type: (e.g., General Loan vs. Short Loan) as rates differ.
 - Daily Rate: The specific MVR charge per day (General Loan (MVR 3.00) vs. Short Loan (MVR 5.00))
 - Days Due: Total days late (excluding public holidays and government holidays).
- Official Validation: Payment method, name of the staff receiving payment, and an official library stamp/signature.



The Library Overdue Invoice template should be customized to as shown below template:

IUM Library library@ium.edu.mv 7733820 3022130		 ISLAMIC UNIVERSITY OF MALDIVES		
Library Overdue Invoice			(I)IUM/LIB/2026/0001	
			Date: 3-Mar-2026	
Full Name:	Testing Student			
Patron ID:	IUM000000			
National ID:	A000000			
Category:	Student			
#	Due Date	Returned Date	Description of Charges	Amount
1	1-Mar-2026	3-Mar-2026	Barcode: X025846	MVR 6.00
			Book: 'Ilmee Dhivehi	
			Item type: General Loan	
			MVR 3.00 per day	
			No. of days due (without counting holidays) 2	
2	1-Mar-2026	3-Mar-2026	Barcode: X007892	MVR 10.00
			Book: Dhiveheenge aadha kaadha	
			Item type: Short Loan	
			MVR 5.00 per day	
			No. of days due (without counting holidays) 2	
			Paid amount:	MVR 16.00
For Official Use only				
Payment Method	Payment received by:		Signature:	Date:
Cash	Ali Afaal Mohamed			3-Mar-2026
				



7.2 Invoice for Lost/Damaged items

An invoice template for lost or damaged items should be available for printing. This form is designed to be printed and issued to the patron for payment processing.

The invoice should include the following details:

- Unique Invoice Number (e.g., IUM/LIB/2026/0001) and Date of Issue
- Patron Information: Full Name, Patron ID, and National ID to ensure the fine is linked to the correct record
- Item Details: Barcode number and title of the book to clearly identify the specific item
- Fine Calculation: Amount charged for the lost or damaged item
- Official Validation: Payment method, name of the staff receiving the payment, and space for the official library stamp or signature



8. Lost and Damaged item processing

The functionality to mark items as lost or damaged is not properly enabled in the current system. The system does not update the item status when materials are reported lost, returned in damaged condition, or when a book is taken out of the shelf for mending. In such cases, the system still shows the item as available, which does not reflect the actual status of the material.

As shown below, the system currently displays a dropdown option with “Yes” or “No”; however, selecting “Yes” does not trigger any status change or action in the system.

The system should allow proper marking of items as lost or damaged and update the item status accordingly so that the availability of the material is accurately reflected in the system.

Edit item #6836 / Barcode X007634

0 - Withdrawn status	
1 - Lost status	
4 - Damaged status	
5 - Use restrictions	
7 - Not for loan	No
8 - Koha collection	Yes
a - Home Branch	Islamic University of Maldives Library
b - Holding Branch	Islamic University of Maldives Library
c - Shelving location	
d - Date acquired	2017-04-17
e - Source	
g - Cost	
i - Inventory number	X007634
l - Koha issues (times borrowed)	7
m - Koha renewals	
n - Koha reserves (requests)	
o - Koha full call number	GL 297.1229 KAT
p - Piece designation (barcode)	X007634
q - Koha out on loan	
r - Koha date last seen	2023-07-23
s - Koha date last borrowed	2023-07-06
t - Copy number	
u - Uniform Resource Identifier	
v - Cost, replacement price	
w - Price effective from	2017-04-17
x - Nonpublic note (lost item payment)	
y - Koha item type	General Loan
z - Public note	

Save changes Add a new item Cancel



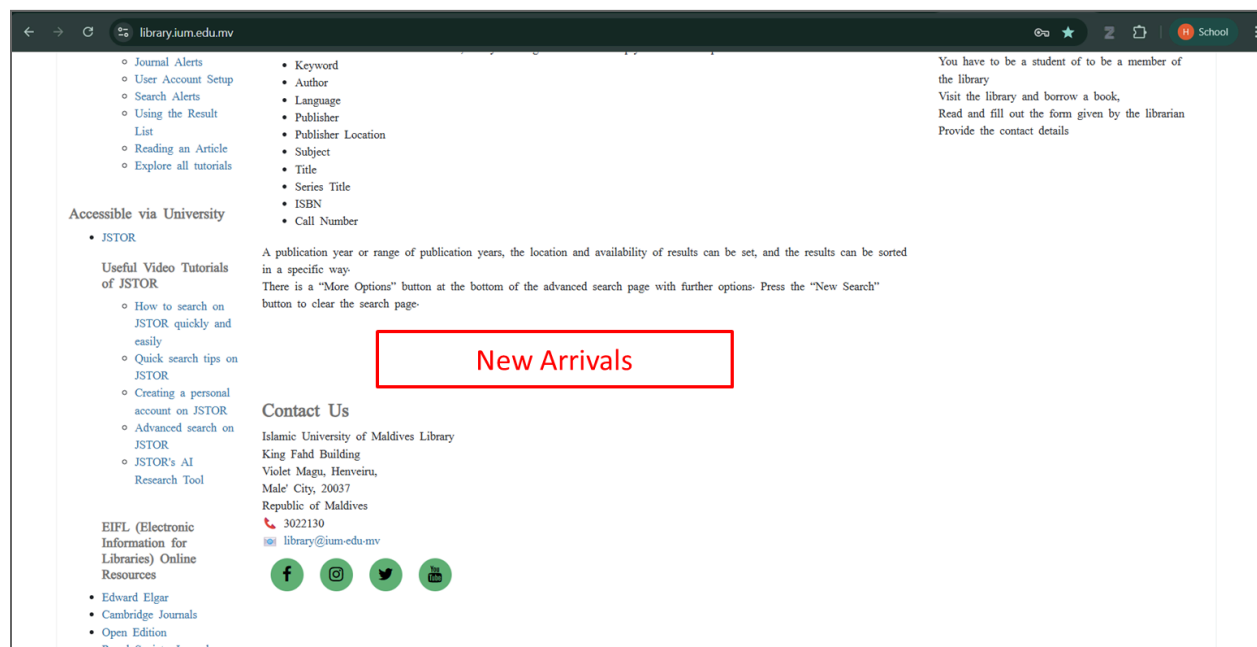
9. OPAC Customization and Enhancement

OPAC link: library.iu.edu.mv

The OPAC interface requires functional and visual enhancement. The homepage should be redesigned to improve usability and accessibility.

9.1 Display the scrolling list of New Arrivals in library OPAC

A dynamic “New Arrivals” section should be incorporated so users can view recently added materials. Integrating a New Arrivals 3D Cover Flow Display feature in OPAC will showcase the latest library collection additions, allowing users to explore new resources conveniently.



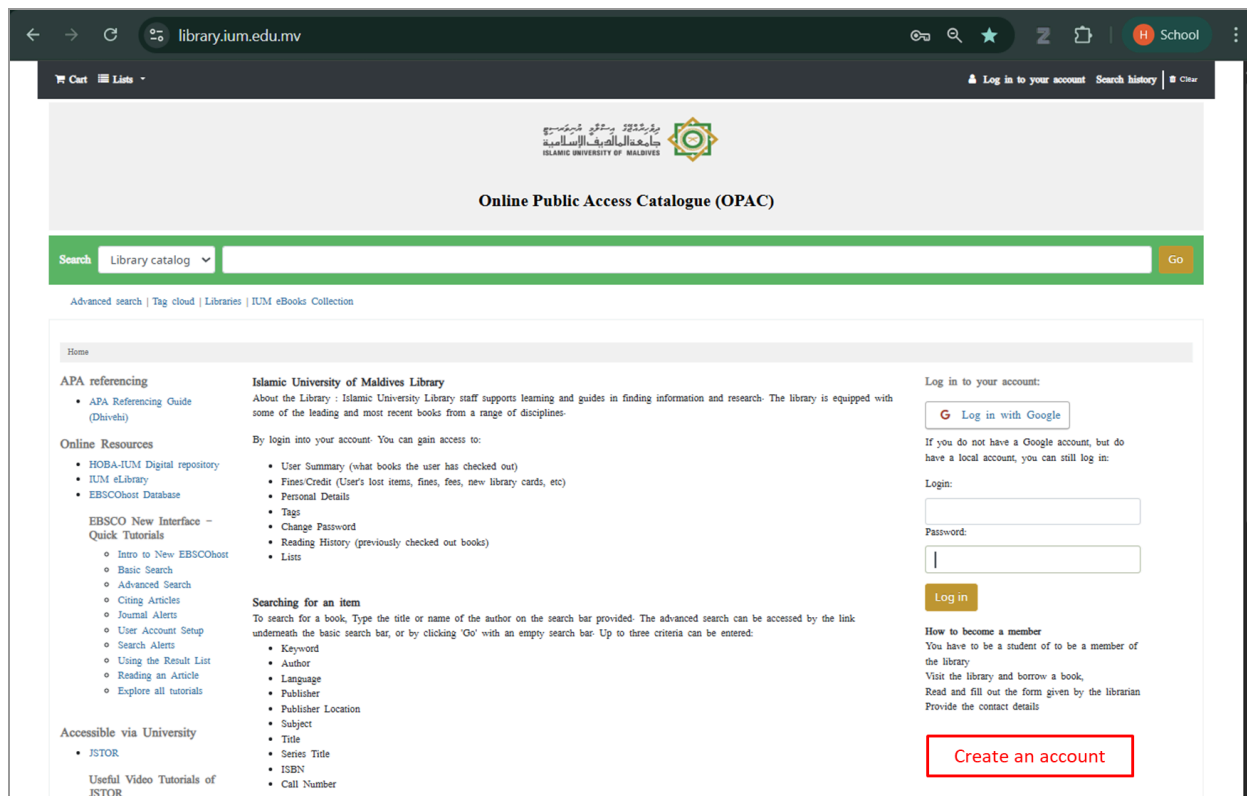
The image above shows the position for this new arrival. It should be visually appealing and interactive.



9.2 Online Patron Self-Registration

At present, patron membership is created manually by library staff within the system. We request enabling the online patron self-registration feature in Koha so that users can create their own library accounts through the OPAC interface.

When this feature is enabled, a “Create an Account” or registration option should appear on the OPAC page, positioned as shown in the image below.



Through this option, users will be able to submit their personal details through an online registration form. Once the form is completed, the system may generate login credentials automatically or send an email verification link depending on the configuration.

For our implementation, self-registration should be restricted to users with an **official IUM email address**, ensuring that only institutional members are able to register for library services. The system should require email verification so that users must confirm their account through a confirmation link sent to their email before accessing library services. The email field should be mandatory and validated to prevent duplicate registrations or invalid email entries. In addition, notifications of new registrations



should be automatically sent to the library so that staff can review and approve the account before granting full access.

9.3 Room Booking Integration

Room reservations are currently managed manually using Google Sheets. The library manages one group study room and five individual study cabins.

We would like to explore integrating a room booking feature within Koha, either through existing functionality or plugin/custom development. The system should allow patrons to reserve rooms by selecting time slots, with administrative oversight and booking history tracking to prevent scheduling conflicts.

A sample room booking can be viewed [here](#)

The system should also generate room usage statistics and reports, allowing library staff to monitor how frequently each room is used, peak booking times, and overall utilization of study spaces.

9.4 Dedicated "New Arrivals" Navigation Tab

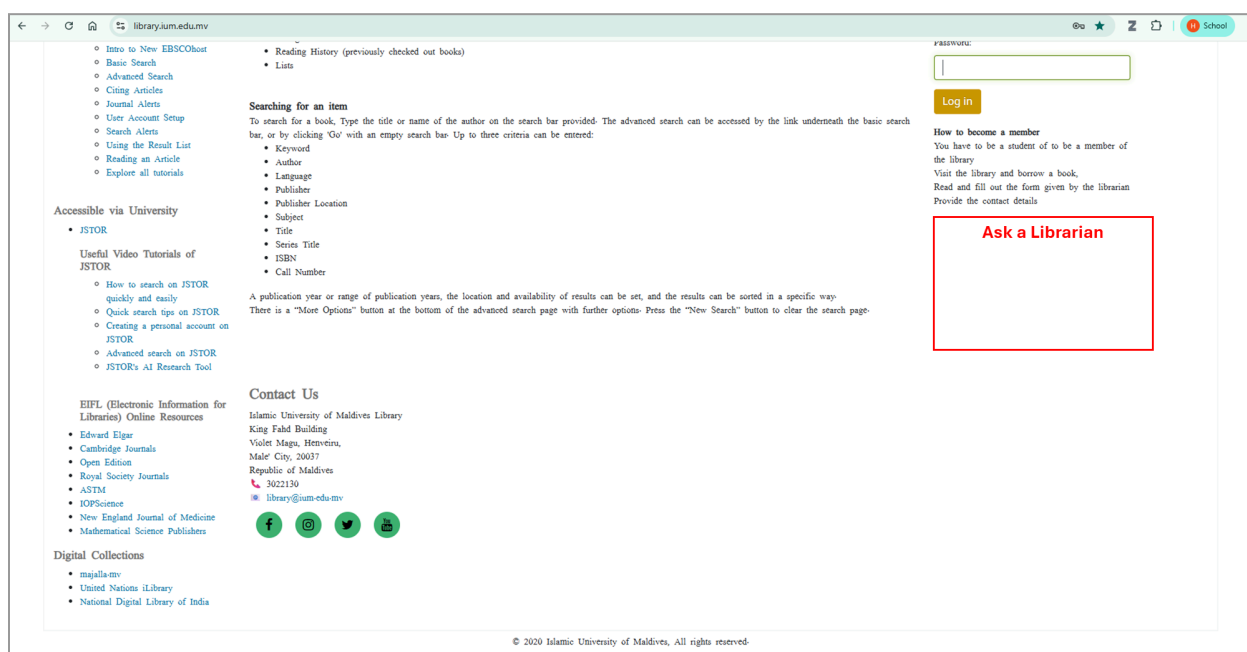
To complement the 3D scrolling display on the homepage (mentioned in 8.1), a permanent New Arrivals tab shall be integrated into the primary OPAC navigation menu. This ensures that patrons can access a full-page view of recent acquisitions at any time.



9.5 Ask a Librarian

The Ask a Librarian feature should be implemented through the OPAC interface to allow library users to directly contact library staff for assistance. This service will provide users with an easy and accessible way to submit queries related to library resources, research assistance, borrowing services, database access, or general library inquiries.

When this feature is enabled, a clearly visible “Ask a Librarian” link or button should be placed on the OPAC homepage (as shown in the image below). Users should be able to click this option and submit their questions through a simple online form. The form should collect basic information such as the user’s name, email address (required field), subject of the query, and the message or question.



10. Reporting Configuration

The reporting module must support high-frequency operational tracking and long-term collection analysis. These reports should be available as "saved reports" within the Koha interface and capable of being scheduled for automated delivery.

10.1 Daily Operational & Circulation reports

Daily Check-in Report: A detailed log of all items returned within a 24 hour.

Daily Check-out Report: A summary of all items issued to patrons daily.

Daily Renewal Report: Number of items renewed by patrons daily.

Daily Membership Registration: A report of new patron accounts created, categorized by patron category and home library.

Daily Overdue Paid: A reconciliation report showing all fine payments collected, including transaction IDs and total revenue.

10.2 Collection Development & Technical Analytics

The following reports must be dynamic, and the output must be filterable by the language of the material and the year.

Bibliographic Cataloging Report: A comprehensive report showing the number of new titles and items cataloged.

Acquisitions Analytics Report: A report identifying all new library materials acquired (via purchase or donation).

Serials Management Report: A report detailing the volume of serials (journals, magazines, and periodicals) added to the system.



11. Automated Email and SMS Notifications

The system should be configured to automatically send notifications to patrons regarding the status of their borrowed items.

Koha supports several types of automated notices, including reminders before the due date, notifications on the due date, and overdue notices when items are not returned on time. These notices should be configured so that reminders are automatically generated and delivered through both email and SMS where applicable.

The system should be configured to send:

- Courtesy reminder 2 days before the due date
- Courtesy reminder 1 day before the due date
- Notification on the due date
- Notification 1 day after the due date
- Notification 2 days after the due date

The following text should be included in the Email/SMS

Assalamu A'laikum

Greetings from The Islamic University of Maldives Library!

This is a reminder that your library book is due on [Due Date]. Please return or renew the book by the due date to avoid overdue fines.

Library opening hours

Sunday to Thursday, 9:00 am to 9:00 pm

Saturday, 9:00 am to 6:00 pm

**Counter will be closed 15 mins prior closing time*

IUM library

3022130

***If you've already returned it, please disregard this message.*



The system should also allow library staff to verify that notifications have been successfully generated and sent. Staff should be able to view the notice history within each patron's account, where records of sent messages such as overdue reminders, due date notices, and other communications are logged. This will allow staff to confirm whether an email or SMS notification has been issued to the patron and monitor the communication history when handling overdue items.

In addition, the system should provide notification statistics and reports, enabling library staff to view the number of reminders sent, overdue notices issued, and delivery status of email and SMS messages over a selected period.

Proper configuration of this feature will help improve circulation management and reduce the number of overdue materials.



12. Dhivehi and Arabic Data Entry Issues

We are experiencing technical issues when cataloging in Dhivehi and Arabic. During data entry, text occasionally disappears, requiring the record to be edited and saved again. This creates inefficiency and risk of data inconsistency.

Multilingual cataloging must function reliably without data loss.



13. Label Generation

Koha includes a built-in Label Creator tool which allows libraries to generate and print customized labels for library materials.

The system should allow the generation of **barcode labels** for library items using the item barcode stored in the system. These barcode labels should be customizable to match the library's existing label format and printing requirements as shown below.

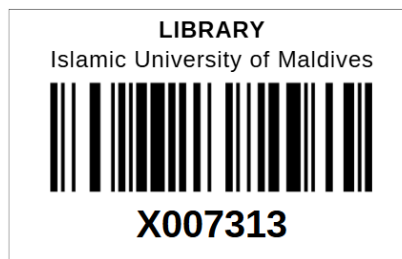
Barcode label specifications:

Font: Arial

University Name Font Size: 6 pt

Barcode Number Font Size: 10 pt

Label Size: 2.5 cm × 4 cm



In addition, the system should support the creation of **spine labels** for books. Spine labels help identify the call number and shelving location of items and should be customized as shown below.

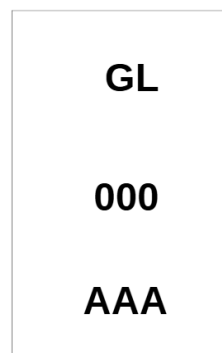
Spine label specifications:

Font: Arial

University Name Font Size: 6 pt

Spine Number Font Size: 12 pt

Label Size: 4 cm × 2.5 cm



14. Serials Module Implementation

Currently, serial publications such as journals and magazines are not managed in Koha, and subscriptions and issue tracking are handled manually. To address this, a new MARC framework named "Serials" should be created, or the existing framework modified, to fully support serial cataloguing.

The following MARC fields will be necessary:

000 (Leader / Control): System-defined, automatic

082 (Classification number): subfields \$a (DDC number)

022 (ISSN): International Standard Serial Number for identification

100 (Main entry-personal name): subfields \$a (Author name)

110 (Main entry-corporate name): subfields \$a (Corporate name or jurisdiction name as entry element)

111 (Main entry-meeting name): subfields \$a (Meeting name or jurisdiction name as entry element)

245 (Title Statement): \$a (Title), \$b (Subtitle), \$c (Statement of responsibility)

246 (Varying form of title): Other title

260 (Publication Details): Includes Publication Details; subfields \$a (Place of publication), \$b (Name of publisher), \$c (Date of publication)

300 (Physical Description): subfields \$a (Pagination), \$b (Illustration details), \$c (Dimensions), \$d (Accompanying materials)

310 (Current Publication Frequency): subfields \$a (Current publication frequency)

362 (Dates Of Publication And/Or Sequential Designation) subfields \$a (Dates Of Publication And/Or Sequential Designation)

440 (Series statement/added entry): subfields \$a (Title)

500 (General Note): subfields \$a (Contents and other notes)

520 (Summary): subfields \$a (Summary, etc.)



546 (Language Note): subfields \$a (Language note)

780 (Preceding Entry): Links to the previous title if the serial changed its name

785 (Succeeding Entry): Links to the later title if the serial continues under a different name.

856 (Electronic Location And Access): subfields \$u (Uniform Resource Identifier)

942 (Added Entry Elements): subfields \$2 (Source of classification or shelving scheme),
\$c (Koha item type)

952 (Item Information)

