

## CIRCULAR MANAGEMENT SYSTEM

### Problem Statement

In academic and administrative departments, the management of official circulars—whether incoming or outgoing—often lacks a structured and efficient system. This results in communication delays, lost records, and lack of accountability. To address these challenges, we propose the development of a **web-based Circular Management System (CMS)** that enables secure, role-based access for **Admin, Faculty, and Students**.

The system will streamline the creation, approval, distribution, and tracking of circulars. Each user type will have a dedicated portal:

- **Admin** can create and distribute circulars, approve those submitted by faculty, and monitor circular flow.
- **Faculty** can view relevant circulars and propose new ones via a form-based submission process requiring admin approval.
- **Students** can access circulars intended for them through a personalized portal.

The system will also support features such as:

- Dashboard with categorized circular timelines (upcoming, ongoing, completed)
- Advanced filtering and search by department, date, and ID
- Predefined circular formatting with PDF export
- Secure login and role-based redirection
- Event management for upcoming and ongoing events

### Existing solutions

YouTube –

- <https://youtu.be/ZlghQ1nUuw>

Not much information on Google or any other platforms.

### Key Functionalities



#### 1. Authentication & Authorization

- 1.1: The system shall provide **login functionality** for Admin, Faculty, and Student users.
- 1.2: The system shall **redirect users** to role-specific portals after successful login.
- 1.3: The system shall **restrict access** to functionalities based on user roles.



#### 2. Admin Portal

- 2.1: Admin shall be able to **create circulars** using a form-based interface.
  - 2.2: Admin shall be able to **view, edit, or delete** circulars.
  - 2.3: Admin shall be able to **approve or reject** circulars submitted by faculty.
  - 2.4: Admin shall be able to **send circulars** to faculty, students, or both.
  - 2.5: Admin shall be able to **view circular status** (e.g., pending, sent, completed).
  - 2.6: Admin shall be able to **view a dashboard** with circulars categorized as:
    - Upcoming
    - Ongoing
    - Completed
  - 2.7: Admin shall be able to **manage upcoming/ongoing events**.
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### 3. Faculty Portal

- 3.1: Faculty shall be able to **view circulars** intended for faculty.
  - 3.2: Faculty shall be able to **create draft circulars** via a form and submit them for admin approval.
  - 3.3: Faculty shall be able to **track the status** of submitted circulars.
  - 3.4: Faculty shall have access to a **dashboard** showing categorized circulars and events.
  - 3.5: Faculty shall be able to **search/filter circulars** by department, date, or reference ID.
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### 4. Student Portal

- 4.1: Students shall be able to **view circulars** intended for students.
  - 4.2: Students shall be able to access a **dashboard** with categorized circulars (upcoming, ongoing, completed).
  - 4.3: Students shall be able to **search/filter circulars** by department, date, or reference ID.
  - 4.4: Students shall be able to **view upcoming and ongoing events**.
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### 5. Circular Creation & Display

- 5.1: The circular form shall include fields for:
  - Title/Subject
  - Issue Date / Receive Date
  - Type (Incoming / Outgoing)

- Concerned Department/Unit
    - Reference Number/Unique ID
    - File Attachment (PDF, Image)
  - 5.2: The system shall generate a **predefined circular format** (PDF or HTML preview) after form submission.
  - 5.3: The system shall **store circulars** for future access and audit.
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## 6. Filtering and Search

- 6.1: The system shall allow users to **search circulars** by:
    - Department
    - Date
    - Reference ID
  - 6.2: The system shall provide **filters** to sort circulars by type or status.
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## 7. Security

- 7.1: All data and circulars shall be securely stored.
- 7.2: Unauthorized access to portals or features shall be restricted.

### Tech Stack –

 **Frontend** React.js

 **Backend** Node.js + Express.js

 **Database** MongoDB

 **Files** Multer + pdfkit

 **Auth** JWT

## Modules in Circular Management system



### 1. Authentication Module

- User registration (optional, or pre-created accounts)
  - Login for Admin, Faculty, and Student
  - JWT-based role authentication
  - Role-based access control & route protection
- 



### 2. User Management Module

- Create/update/delete users (admin only)
  - View list of users by role
  - Assign departments/roles (admin only)
- 



### 3. Circular Management Module

Handles creation, approval, tracking, and display of circulars.

#### a. For Admin:

- Create circulars (via form)
- Approve/reject circulars from faculty
- Send circulars to students, faculty, or both
- View circular history and status

#### b. For Faculty:

- Create circulars (drafts)
- Submit to admin for approval
- View approval status

#### c. For Students:

- View student-relevant circulars only
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### 4. File Upload & PDF Generation Module

- Upload attachments (PDFs, images)
- Generate a standardized circular format as PDF
- Preview/download circular

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## 5. Events Module

- Admin/Faculty can create events (seminars, workshops)
- Events displayed on all dashboards
- Status: upcoming, ongoing, completed

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## 6. Dashboard Module

Each role sees a custom dashboard:

- **Admin:** Stats (circulars, users, pending approvals), recent activity
- **Faculty:** Circular status, submitted drafts, upcoming events
- **Student:** Recent circulars, upcoming/ongoing events

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## 7. Search & Filter Module

- Filter circulars by:
  - Department
  - Date
  - Type (incoming/outgoing)
  - Circular ID
- Search by title or keywords

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## 8. Timeline & Status Tracking Module

- Display circulars in timeline form:
  - Upcoming
  - Ongoing
  - Completed
- Useful for tracking deadlines or scheduled actions

# Database Schema Design

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## 1. Users Collection

Stores all user information: Admin, Faculty, Student.

Field	Type	Description
_id	ObjectId	Unique user ID
name	String	Full name
email	String	Unique email for login
password	String	Hashed password
role	String	'admin', 'faculty', or 'student'
department	String	Department name (e.g. "Physics")
createdAt	Date	Account creation timestamp

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## 2. Circulars Collection

Stores official circulars created by Admin or Faculty.

Field	Type	Description
_id	ObjectId	Unique circular ID
title	String	Circular title or subject
type	String	'incoming' or 'outgoing'
issuedBy	ObjectId	Reference to User (_id) who created the circular
department	String	Department related to circular
targetAudience	Array[String]	Array containing 'faculty', 'student', or both
status	String	'pending', 'approved', 'rejected', 'published'
issueDate	Date	Date when circular is issued
receiveDate	Date	Date when circular is received
referenceId	String	Unique circular reference number
attachmentUrl	String	URL/path to uploaded attachment (PDF/image)
createdAt	Date	Timestamp of circular creation

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### 3. Events Collection

Stores academic/departmental events.

Field	Type	Description
_id	ObjectId	Unique event ID
title	String	Event title
description	String	Details about the event
department	String	Department hosting the event
eventDate	Date	Date of the event
status	String	'upcoming', 'ongoing', 'completed'
createdBy	ObjectId	Reference to User (_id) who created event

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### 4. Drafts Collection

If you want to keep faculty-submitted circular drafts before approval.

Field	Type	Description
_id	ObjectId	Unique draft ID
createdBy	ObjectId	Reference to User (_id) who created
title	String	Draft circular title
type	String	'incoming' or 'outgoing'
department	String	Related department
content	String/Text	Circular content/body (optional)
attachmentUrl	String	Draft attachment URL (optional)
status	String	'draft', 'submitted', 'approved'
submittedAt	Date	Date draft submitted to admin
createdAt	Date	Draft creation date

## DESIGN PROTOTYPE:

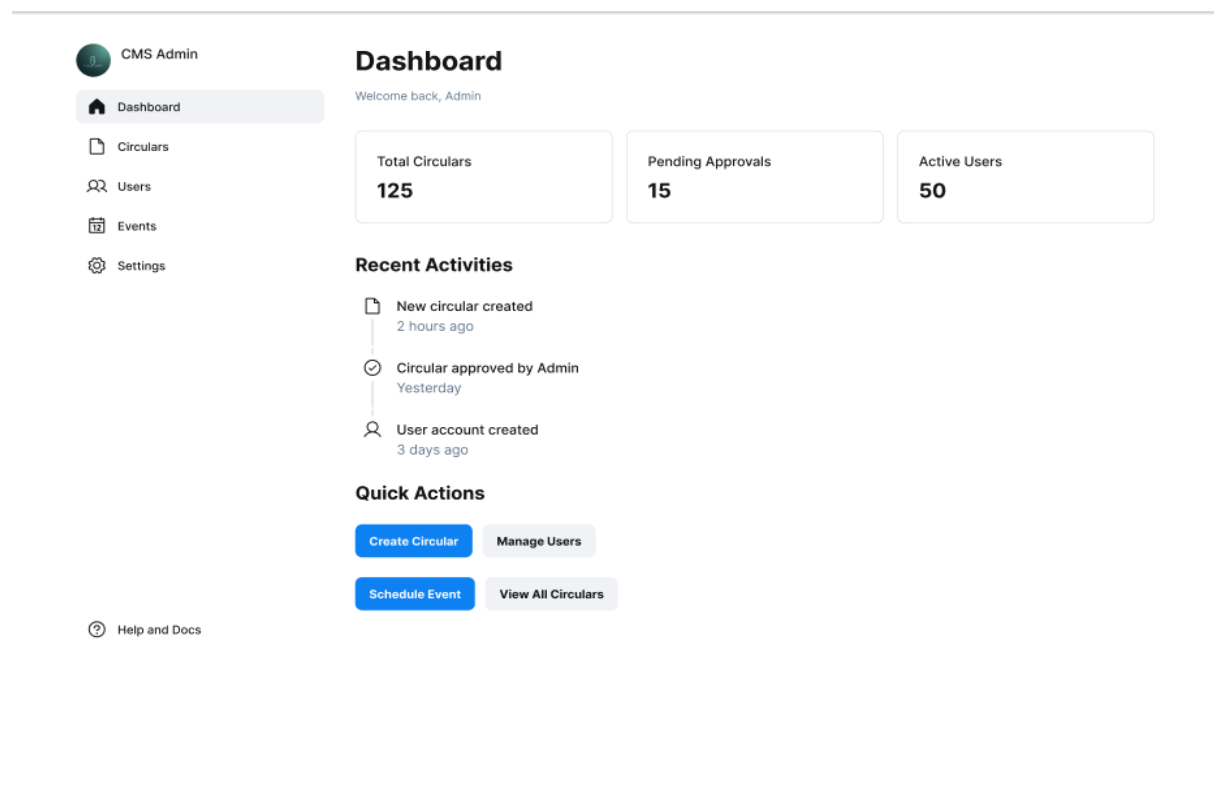
The interactive design prototype for the Circular Management System has been created using Figma. It provides a visual representation of the user interface and overall flow of the system.

You can access the design through the following link:

- <https://www.figma.com/design/BnJeJfj05nHDpwsHeA1q5/CMS?node-id=0-1&p=f&t=VaDqr4GFe4QTZVzA-0>

## Screenshots:

## ADMIN PORTAL:





## Create New Circular

Title

Enter

circularTitle

Subject

Enter

subject

Issue Date

Select

issueDate

Receive Date

Select

receiveDate

Type

Department

Reference ID

Enter

referenceID

### Upload Attachments

Drag and drop files here or click to browse

Browse Files

Create Circular

Users

New User

Search

Name	Email	Role	Department	Status	Actions
Name1	demo@email.com	Admin	Computer Science	Active	Edit
Name2	demo@email.com	Faculty	Mathematics	Active	Edit
Name3	demo@email.com	Student	Physics	Active	Edit
Name4	demo@email.com	Faculty	Chemistry	Active	Edit
Name5	demo@email.com	Student	Biology	Active	Edit
Name6	demo@email.com	Faculty	Engineering	Active	Edit
Name7	demo@email.com	Student	History	Active	Edit
Name8	demo@email.com	Faculty	Literature	Active	Edit
Name9	demo@email.com	Student	Economics	Active	Edit
Name10	demo@email.com	Faculty	Psychology	Active	Edit

Circular Management

Pending Approval

Circular Title	Department	Submission Date	Status	Actions
Academic Calendar 2024-2025	Department of Computer Science	2024-07-26	Pending	View
Faculty Meeting Schedule - August 2024	Department of Mathematics	2024-07-25	Pending	View
Research Grant Application Guidelines	Department of Physics	2024-07-24	Pending	View
New Course Proposal - Fall Semester	Department of Chemistry	2024-07-23	Pending	View
Student Feedback Survey - Spring 2024	Department of Biology	2024-07-22	Pending	View

## Circulars

Track and manage all circulars across departments.

Search by keywords or reference ID

DepartmentTypeDateStatus

Reference ID	Department	Type	Subject	Date	Status
CIRC-2024-001	Academic Affairs	General	Academic Calendar for Fall 2024	2024-07-20	Published
CIRC-2024-002	Human Resources	Policy	Updated Employee Handbook	2024-07-15	Published
CIRC-2024-003	Finance	Notice	Budget Allocation for Q3 2024	2024-07-10	Published
CIRC-2024-004	Student Services	Announcement	Orientation Schedule for New Students	2024-07-05	Published
CIRC-2024-005	IT Department	Update	System Maintenance on August 5th	2024-07-01	Published
CIRC-2024-006	Academic Affairs	General	Course Registration Guidelines	2024-06-25	Published
CIRC-2024-007	Human Resources	Policy	Remote Work Policy Update	2024-06-20	Published
CIRC-2024-008	Finance	Notice	Travel Expense Reimbursement Procedure	2024-06-15	Published
CIRC-2024-009	Student Services	Announcement	Career Fair 2024	2024-06-10	Published
CIRC-2024-010	IT Department	Update	Network Security Enhancement	2024-06-05	Published

# Events

Manage upcoming and ongoing events

Calendar

List

July 2024							August 2024						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30						29	30					

## Upcoming Events

July 15, 2024

### Department Meeting

Discuss upcoming initiatives and departmental goals.



July 20, 2024

### Faculty Workshop

Professional development workshop for faculty members.



August 5, 2024

### Student Orientation

Welcome new students to the university and provide essential information.



New Event

Help and feedback

# FACULTY PORTAL

Faculty Portal

Faculty Login

Username

Password

Login

Forgot Password?

DashboardCircularsEvents

Faculty Portal

Inbox

Drafts

Submitted

Events

Notifications

Inbox

Today

Faculty Meeting

2024-01-20

Academic Calendar

2024-01-20

Yesterday

Research Opportunities

2024-01-19

Faculty Program

2024-01-19



## Circulars

Manage and view all circulars

Search

### Filters

Date

Department

Status

Title	Department	Date
Academic Calendar	Registrar's Office	2023-08-15
Faculty Meeting	Administration	2023-08-20
Research Grant Opportunities	Research Department	2023-08-25
Student Orientation	Student Affairs	2023-09-01
Course Registration	Academic Affairs	2023-09-05



Circulars / Circular Details

## Circular Details

View the details of the selected circular.

### Important Notice: Campus Closure

Due to unforeseen circumstances, the campus will be closed for all activities on July 15, 2024. All classes and events are canceled. Please stay tuned for further updates.

### Attachments

- Campus Closure Notice.pdf
- Event Cancellation List.pdf

### Status

Published on July 10, 2024  
Last updated on July 12, 2024

EditDelete

## Create Circular

Title

Enter

title

Department

Select

Type

Select

Date

Select

date

Reference ID

Enter

referenceID

Attachments

Upload

files

Create

## Circulars

New Circular

Title	Department	Date	Status
Faculty Meeting	Computer Science	2024-03-15	Approved
Research Grant Announcement	Research and Development	2024-03-10	Pending
Workshop on AI	Electrical Engineering	2024-03-05	Approved
New Course Offering	Mathematics	2024-02-28	Rejected
Faculty Awards Nomination	Humanities	2024-02-20	Approved

# STUDENT PORTAL

**Student Portal**

**Welcome back**

**Username**

Enter  
yourusername

**Password**

Enter  
yourpassword

Remember me

Log In

[Forgot password?](#)





## Welcome back

### Recent Circulars

Posted 2 days ago

#### Important Update: Changes to Exam Schedule

Please note that the final exam schedule has been updated. Check the revised dates and times for your courses.



Posted 1 week ago

#### Campus Safety Awareness

Review the latest safety guidelines and emergency procedures to ensure a secure campus environment.



### Upcoming Events

Next week

#### Career Fair 2024

Connect with top employers and explore internship and job opportunities at our annual career fair.



In 2 weeks

#### Student Leadership Workshop

Enhance your leadership skills and network with fellow student leaders at this interactive workshop.



### Announcements

Posted today

#### Library Hours Extended

The library will now be open until 10 PM on weekdays to support students during the exam period.



Posted 3 days ago

#### IT Maintenance Notice

Scheduled IT maintenance will occur on Saturday from 8 AM to 12 PM. Expect temporary disruptions to online services.





## Circulars

Search

Date

Department

Type

Title	Department	Date	Type
Academic Calendar 2024-2025	Registrar's Office	2024-07-20	Academic
Exam Schedule - Fall Semester	Examination Department	2024-07-15	Examination
Orientation Program for New Students	Student Affairs	2024-07-10	General
Holiday Notice - Independence Day	Administration	2024-07-05	General
Revised Course Syllabus - Computer Science	Computer Science Department	2024-07-01	Academic
Workshop on Research Methodology	Research and Development	2024-06-25	Workshop
Sports Event - Inter-Departmental Tournament	Sports Committee	2024-06-20	Event
Cultural Fest - 'Vibrance 2024'	Cultural Committee	2024-06-15	Event
Library Hours Extension during Exams	Library Services	2024-06-10	General
Placement Drive - Tech Solutions Inc.	Placement Cell	2024-06-05	Placement

DashboardAcademics

Circulars / Circular Details

# Important Announcement: Campus Safety Measures

Issued by: Campus Security Department

Subject

Campus Safety

Date

October 26, 2023

Expiry Date

November 26, 2023

Dear Students,

In light of recent events, we are implementing enhanced safety measures across campus. These include increased security patrols, improved lighting in common areas, and the installation of additional surveillance cameras. We urge all students to remain vigilant and report any suspicious activity to the Campus Security Department immediately. Your safety is our top priority, and we appreciate your cooperation in maintaining a secure environment for everyone.

Sincerely,  
Campus Security Department

Attachments

Campus Safety Guidelines.pdf

Download

DashboardMessagesSettings

Calendar

<

August 2024

September 2024

>

S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30						29	30					

Upcoming Events

Campus Orientation

August 20, 2024 - 10:00 AM - 11:00 AM

Welcome Mixer

August 22, 2024 - 2:00 PM - 3:00 PM

Club Fair

August 25, 2024 - 11:00 AM - 12:00 PM

Academic Advising

August 28, 2024 - 3:00 PM - 4:00 PM

Career Services Workshop

August 30, 2024 - 1:00 PM - 2:00 PM