

LIBRARY MANAGEMENT APP USING KODULAR
MINI PROJECT REPORT

Submitted by

SUBASH K (714020104092)
VIGNESHWAR (714020104101)
PRAMOTH V (714020104062)
SUNEETI PN (714020104095)

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COIMBATORE 641 062

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BONAFIDE CERTIFICATE

Certified that this project report “LIBRARY MANAGEMENT USING KODULAR” is the bonafide work of SUBASH K (7140201092), VIGNESHWAR (714020104101), PRAMOTH V(714020104062), SUNEETI PN(714020104095) who carried out the project work under my supervision.

SIGNATURE

MRS. MAHALAKSHMI A

Assistant Professor, SUPERVISOR

Computer Science &Engineering,

Sri Shakthi Institute of Engineering &
Technology,

Coimbatore - 641062.

SIGNATURE

DR.K.E KANNAMMAL

PROFESSOR &HEAD

Computer Science &Engineering,

Sri Shakthi Institute of Engineering &
Technology,

Coimbatore - 641062.

Submitted for the University Project Viva Voce conducted on.....

INTERNAL EXAMINER

EXTERNAL EXAMINER

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ABSTRACT

Online Library Management Application is a system which maintains the information about the books present in the library, the students of college to whom books are issued, library staff and all. This is very difficult to organize manually. Maintenance of all this information manually is a very complex task. Owing to the advancement of technology, organization of an Online Library becomes much simple. The Online Library Management has been designed to computerize and automate the operations performed over the information about the members, book issues and returns and all other operations. This computerization of library helps in many instances of its maintenances. It reduces the workload of management as most of the manual work done is reduced.

INTRODUCTION:

1.1 PROJECT AIMS AND OBJECTIVES

The project aims and objectives that will be achieved after completion of this project are discussed here. The aims and objectives are as follows:

- Easier management of the book issue and return.
- Easy tracking of Book status
- Efficient management of student records

1.2 BACKGROUND OF PROJECT

E-Library Management System is an application which refers to library systems which are generally small or medium in size. It is used by librarian to manage the library using a computerized system where he/she can maintain the issue and return records.

Books and student maintenance modules are included in this system which would keep track of the students using the library and also a detailed description about the books a library contains. With this computerized system there will be no loss of book record or member record which generally happens when a non computerized system is used.

All these modules are able to help librarian to manage the library with more convenience and in a more efficient way as compared to library systems which are not computerized.

PROCESSOR	Snapdragon or Mediatek Processor
OPERATING SYSTEM	Android
MEMORY	Basic RAM size is enough
HARD DISK SPACE	200MB for future usage
DATABASE	KODULAR

SYSTEM ANALYSIS

We will discuss and analyze about the developing process of Library Management System including software requirement specification (SRS) and comparison between existing and proposed system . The functional and non functional requirements are included in SRS part to provide complete description and overview of system requirement before the developing process is carried out. Besides that, existing vs proposed provides a view of how the proposed system will be more efficient than the existing one.

2.1 SOFTWARE REQUIREMENT SPECIFICATION

2.1.1 GENERAL DESCRIPTION

PRODUCT DESCRIPTION:

Library Management System is a computerized system which helps user(librarian) to manage the library daily activity in electronic format. It reduces the risk of paper work such as file lost, file damaged and time consuming. It can help user to manage the transaction or record more effectively and time saving.

PROBLEM STATEMENT:

The problem occurred before having computerized system includes:

➤ File lost

When computerized system is not implemented file is always lost because of human environment. Some times due to some human error there may be a loss of records.

➤ File damaged

When a computerized system is not there file is always lost due to some accident like spilling of water by some member on file accidentally. Besides some natural disaster like floods or fires may also damage the files.

➤ Difficult to search record

When there is no computerized system there is always a difficulty in searching of records if the records are large in number.

➤ Space consuming

After the number of records become large the space for physical storage of file and records also increases if no computerized system is implemented.

➤ Cost consuming

As there is no computerized system the to add each record paper will be needed which will increase the cost for the management of library.

2.1.2 SYSTEM OBJECTIVES

➤ Improvement in control and performance

The system is developed to cope up with the current issues and problems of library.

➤ Save cost

After computerized system is implemented less human force will be required to maintain the library thus reducing the overall cost.

➤ Save time

Librarian is able to search record by using few clicks of mouse and few search keywords thus saving his valuable time.

2.1.3 SOFTWARE AND HARDWARE REQUIREMENTS

This section describes the software and hardware requirements of the system

2.1.3.1 SOFTWARE REQUIREMENTS

Operating system- Android OS is used by overall population. So, we have decided to develop an application

Database Kodular - A developing android development Platform

2.1.3.2 HARDWARE REQUIREMENTS

- Snapdragon and Mediatek recent generation is used as a processor because it is fast than other processors and provide reliable and stable and we can run our mobile for longtime. By using this processor we can keep on developing our project without any worries.
- Ram 1 gb is used as it will provide fast reading and writing capabilities and will in turn support in processing.

Existing System:

- Early days Libraries are managed manually. It required lot of time to record or to retrieve the details. The employees who have to record the details must perform their job very carefully. Even a small mistake would create a lot of problems. Security of information is very less. Report generations of all the information is very tough task.
- Maintenance of Library catalogue and arrangement of the books to the catalogue is very complex task. In addition to its maintenance of member details, issue dates and return dates etc. manually is a complex task.
- All the operations must be performed in perfect manner for the maintenance of the library with out any degradation which may finally result in the failure of the entire system.

Proposed System:

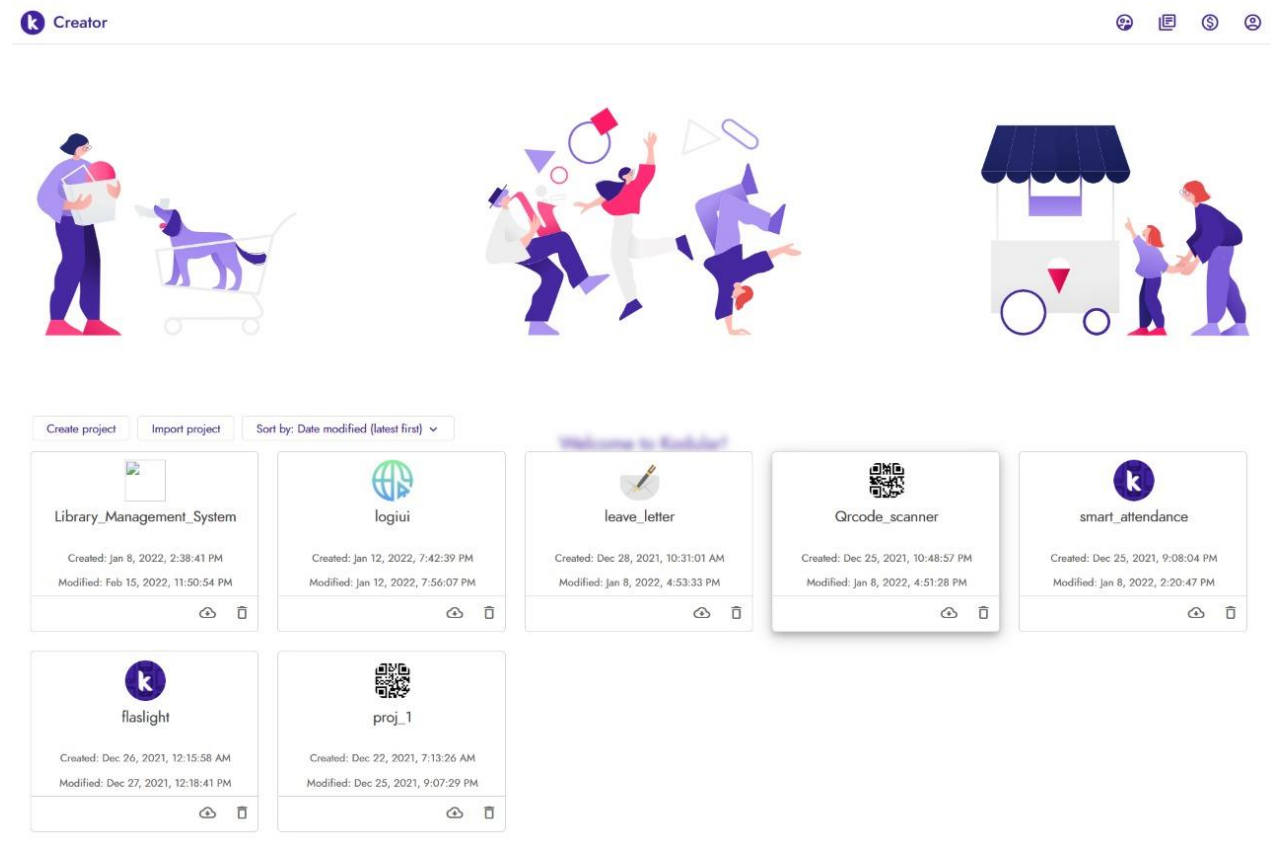
To solve the inconveniences as mentioned in the existing system, an Online Library is proposed. The proposed system contains the following features:

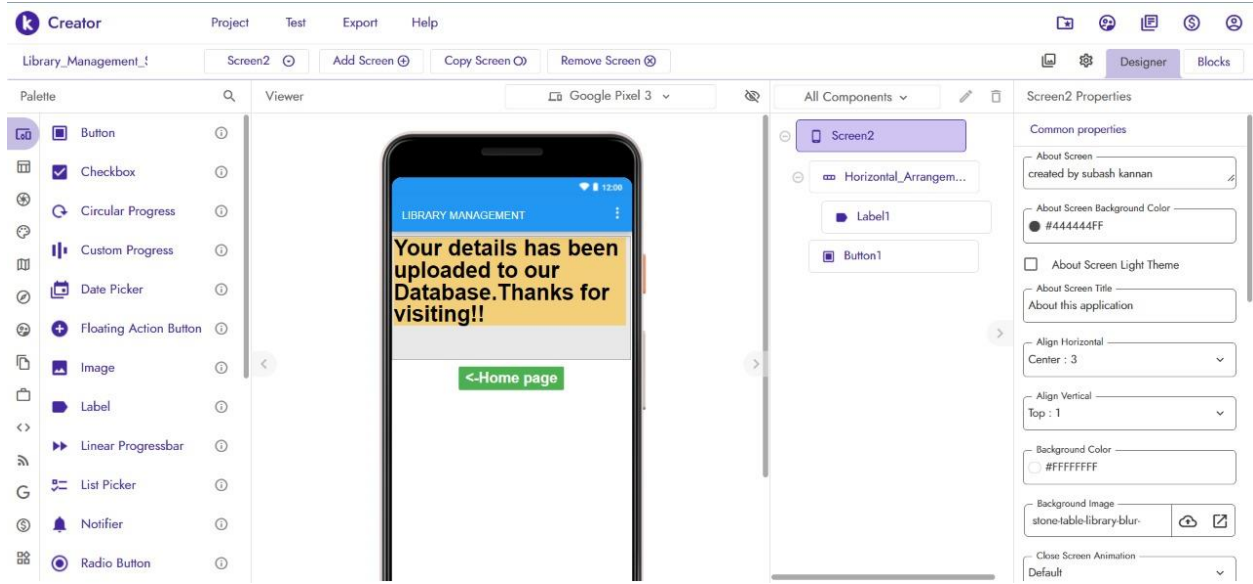
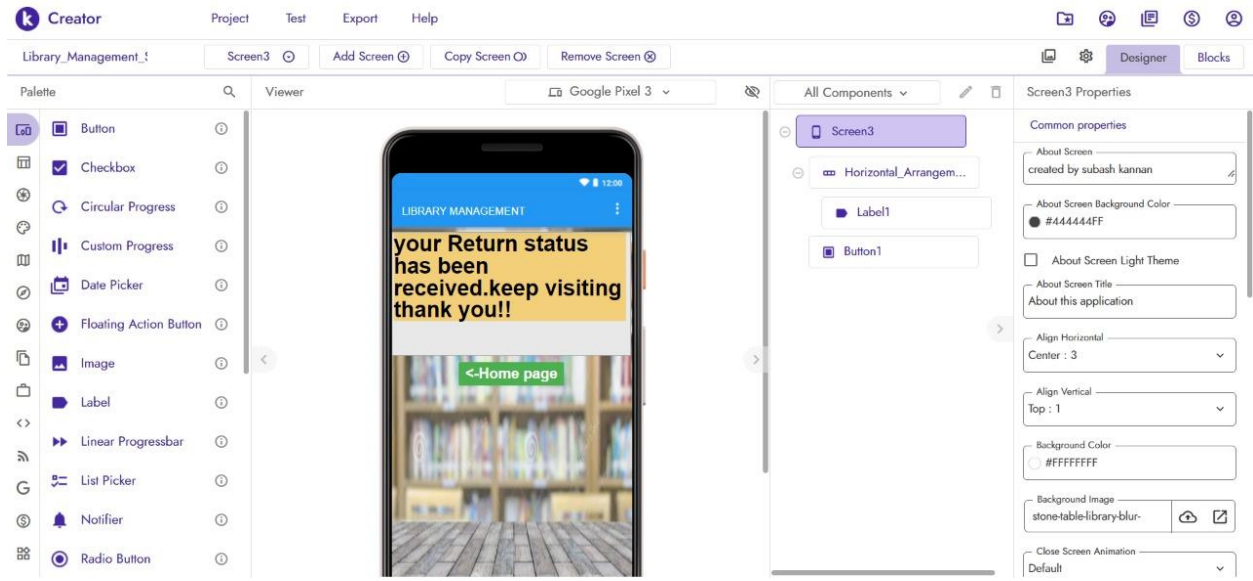
- The students will register them through Online
- Individually each member will have his account through which he can access the information he needs.
- Book details like authors, number of copies totally maintained by library, present available number of books, reference books, non-reference books etc. all this information can be made handy.
- Regarding the members designation, number of books was issued.
- Issue dates and returns of each member is maintained separately and fine charged if there is any delay in returning the book.
- Time consuming is low, gives accurate results, reliability can be improved with the help of security.

2.3 SOFTWARE TOOLS USED

The whole Project is developed in Kodular and QR code generator.

SYSTEM DESIGN





Airtable

Bases

Templates

Marketplace

Universe

HELP

Join the thousands of teams using Airtable's advanced features

Get the power you need to manage complex workflows, run reports, and more with tools like:

✓ Multiple apps per base

✓ More sync integrations to quickly bring in outside data

✓ More record limits and attachment space

✓ Team permissions

Upgrade now

subash kannan

Free plan

SHARE

Im

Imported Base

Pr

Present

Emplinfo

Ca

Cab

Im

Imported Base

Sw

Swastik

De

Demo1

Pa

Parking

LIBRARY MANAGEMENT SYSTEM

+

Add a base

Find a base or interface

Interfaces

WORKSPACES

My First Workspace

subash kannan

+ Add a workspace

Trash

LEARNING AND RESOURCES

Interfaces

NEW

LIBRARY MANAGEMENT SYSTEM

SHARE

HELP

Details

Add or import

VIEWS

Grid view

Hide fields

Filter

Group

Sort

Color

Share view

Find a view

Grid view

Create...

Grid

Form

Calendar

Gallery

Kanban

Timeline

Gantt

New section

	Name	Book_no	Date	Return_status	
1	subash k / CSE-B / 2nd-year	5012345678900	Jan 8, 2022		
2	Suneeti PN / CSE-B / 2nd-year	036000291452	Jan 9, 2022		
3	pramoth	523154896635	29-01-22		
4	Mr.subramanian / Faculty / CSE	705632441947	Jan 29, 2022		
5	Vigneshwar N / CSE B / 2nd yr	705632441947	Jan 29, 2022		
6	Mr.subramanian / Faculty / CSE	705632441947	Jan 29, 2022	Returned	
7	Mr.subramanian / Faculty / CSE	705632441947	Jan 29, 2022	Returned	
8	Vigneshwar N / CSE B / 2nd yr		01/29/2022 03:28:37 PM		
9	Vigneshwar N / CSE B / 2nd yr		01/29/2022 03:29:31 PM	Returned	
				Returned	
11 records					

Creator Project Test Export Help

Library_Management_S Screen1 Add Screen Copy Screen Remove Screen Designer Blocks

Blocks

- Built-in
 - Control
 - Logic
 - Math
 - Text
 - Lists
 - Dictionaries
 - Colors
 - Variables
 - Procedures
- Screen1
 - Horizontal_Arrangem...
 - qr_scan
 - barcode_scan
 - Label1

Viewer

```

    when qr_scan Click
    do
      call Barcode_Scanner1 Do Scan

    when Barcode_Scanner1 After Scan
    result
    do
      set student_detail = Text to get result
      set date = Text to get result
      call Clock1 Format Date Time
      instant pattern MM/dd/yyyy hh:mm:ss a
      call Clock1 Format Date
      instant pattern MMM d, yyyy
      Book_no
    end

    when Barcode_Scanner2 Click
    do
      call Barcode_Scanner2 Do Scan
      result
      do
        set book_no = Text to get result
      end

    when Button2 Click
    do
      call Spreadsheet1 Create Row
      column Names
      make a list
      Name
      Book_no
      Date
      Return_status
      student_detail
      book_no
      date
      Returned
      values
      make a list
      student_detail
      book_no
      date
      Returned
      open another screen screenName Screen2

    when Button3 Click
    do
      call Spreadsheet1 Create Row
      column Names
      make a list
      Name
      Book_no
      Date
      Return_status
      student_detail
      book_no
      date
      Returned
      values
      make a list
      student_detail
      book_no
      date
      Returned
      open another screen screenName Screen3
  
```

Creator Project Test Export Help

Library_Management_S Screen1 Add Screen Copy Screen Remove Screen Designer Blocks

Palette

- Button
- Checkbox
- Circular Progress
- Custom Progress
- Date Picker
- Floating Action Button
- Image
- Label
- Linear Progressbar
- List Picker
- Notifier
- Radio Button
- Rating Bar
- Slider
- Snackbar
- Spinner

Viewer

Screen1 Properties

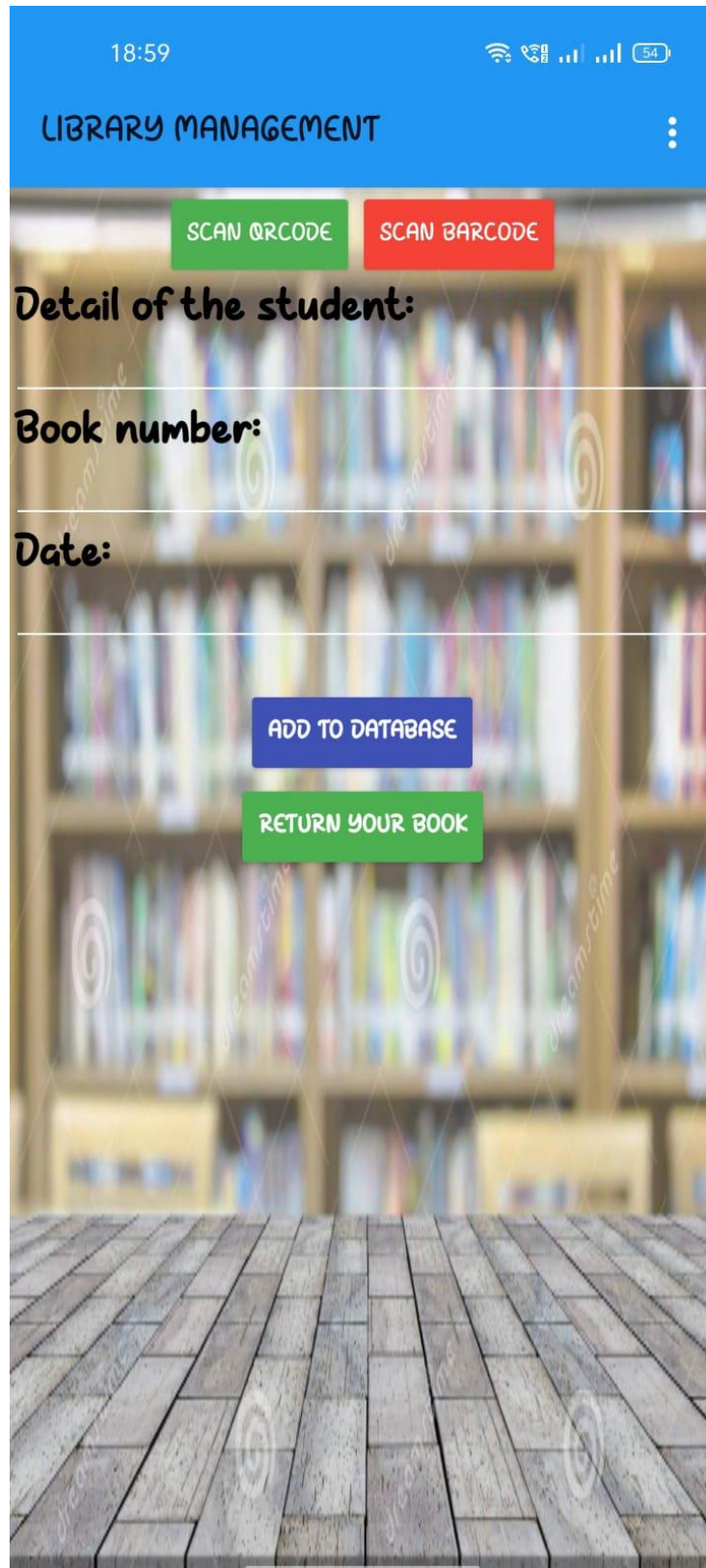
Common properties

- About Screen
 - created by subash kannan
- About Screen Background Color
 - #444444ff
- About Screen Light Theme
 - ☐
- About Screen Title
 - About this application
- Align Horizontal
 - Center : 3
- Align Vertical
 - Top : 1
- Background Color
 - #FFFFFF
- Background Image
 - stone-table-library-blur
- Close Screen Animation
 - Default
- Navigation Bar Color
 - #000000ff
- Open Screen Animation
 - Default
- Screen Orientation
 -

SAMPLE QR AND BAR CODES



SYSTEM IMPLEMENTATION



The screenshot shows a mobile application interface for library management. At the top, a blue header bar contains the title "LIBRARY MANAGEMENT" and a menu icon. Below the header, there are two buttons: "SCAN QR CODE" (green) and "SCAN BARCODE" (red). The main content area has a background image of a library with bookshelves and a wooden floor. It includes three input fields with labels: "Detail of the student:", "Book number:", and "Date:". Below these fields are two buttons: "ADD TO DATABASE" (blue) and "RETURN YOUR BOOK" (green).

18:59

LIBRARY MANAGEMENT

SCAN QR CODE

SCAN BARCODE

Detail of the student:

Book number:

Date:

ADD TO DATABASE

RETURN YOUR BOOK

18:59



LIBRARY MANAGEMENT



SCAN QR CODE

SCAN BARCODE

Detail of the student:

faculty MR.subramanian / CSE

Book number:

Date:

02/16/2022 06:59:34 pm

ADD TO DATABASE

RETURN YOUR BOOK

18:59



LIBRARY MANAGEMENT



SCAN QR CODE

SCAN BARCODE

Detail of the student:

faculty MR.subramanian / CSE

Book number:

9781911223139

Date:

02/16/2022 06:59:34 pm

ADD TO DATABASE

RETURN YOUR BOOK

19:00



LIBRARY MANAGEMENT



**your Return status has been
received. keep visiting thank
you!!**

[←Home page](#)



18:59



LIBRARY MANAGEMENT



**Your details has been uploaded
to our Database.Thanks for
visiting!!**

[←Home page](#)



CONCLUSION & FUTURE SCOPE

This website provides a computerized version of library management system which will benefit the students as well as the staff of the library.

It makes entire process online where student can search books, staff can generate reports and do book transactions. It also has a facility seeing status of books issued as well request for book or give some suggestions. It has a facility of teacher's login where teachers can add lectures notes and also give necessary suggestion to library and also add info about workshops or events happening in our college or nearby college in the online notice board.

There is a future scope of this facility that many more features such as online lectures video tutorials can be added by teachers as well as online assignments submission facility , a feature of group chat where students can discuss various issues of engineering can be added to this project thus making it more interactive more user friendly and project which fulfills each users need in the best way possible.