

# **LIBRARY OPAC WITH MOBILE RENEWAL AND CLOUD BASED NOTIFICATIONS**

**A PROJECT REPORT**

*Submitted by*

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*in partial fulfilment for the award of the degree*

*of*

**BACHELOR OF TECHNOLOGY**

*in*

**COMPUTER SCIENCE AND ENGINEERING**



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## **BONAFIDE CERTIFICATE**

Certified that this report titled **“LIBRARY OPAC WITH MOBILE RENEWAL AND CLOUD BASED NOTIFICATIONS”**, is the bonafide work of **NINAD JADHAV (1031020018), JOTISH SUTHAR (1031020022)** who carried out the work under my supervision, for the partial fulfilment of the requirements for the award of the degree of **Bachelor of Technology in Computer Science and Engineering.**

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## **DECLARATION**

I hereby declare that the entire work contained in this project report entitled **“LIBRARY OPAC WITH MOBILE RENEWAL AND CLOUD BASED NOTIFICATIONS”** has been carried out by me at SRM University, Ramapuram Campus, Chennai, under the efficient guidance of **Mr DOJOHN LOYD M.Tech., Asst. Prof [O.G]**, Department of Computer Science and Engineering.

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## **VIVA – VOCE EXAMINATION**

The viva – voce examination of the project work submitted by **NINAD JADHAV Register Number: 1031020018, JOTISH SUTHAR Register Number: 1031020022**, was held on \_\_\_\_\_

**INTERNAL EXAMINER**

**EXTERNAL EXAMINER**

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## **ABSTRACT**

Books in college libraries have a barcode that is scanned each time a book is issued or renewed. This method uses a static scanner for performing the task. We propose a real-time application based on android platform that makes use of smartphones to bring required mobility to the task of book renewal. Smartphones can use its camera to scan barcodes.

A barcode reader developed using free open source ZXing library for android application, scans barcodes of books and student IDs. A student first registers to the application using credentials assigned to him by SRM University for student web portal. Once the authentication is carried out using CURL, student can now login in the application. The application implements REST architecture i.e. it sends information using a GET or POST request to PHP scripts running on the library server, with the data required to renew a book encoded in JSON format. The PHP script then polls library's database to fetch relevant data which is then sent back to the application.

Cloud based notifications using GCM are used for generating reminders about renewing books. A scheduler is used to run the PHP script that sends necessary information to GCM which then sends corresponding notifications to registered devices.

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## **LIST OF ABBREVIATIONS**

1. ZXing	:	Zebra Crossing
2. REST	:	Representational State Transfer
3. JSON	:	JavaScript Object Notation
4. CURL	:	Client for URLs
5. GCM	:	Google Cloud Messenger
6. OS	:	Operating System
7. IP	:	Internet Protocol
8. VB	:	Visual Basic
9. ID	:	Identification
10. ISBN	:	International Standard Book Number
11. WAMP	:	Windows Apache MySQL PHP
12. API	:	Application Program Interface



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