The importance of this project is in the development of library technologies. Even with digital information, libraries remain to be the primary source of information for thousands of people. The aim of the project is to create a smart and simple solution for managing libraries through a QR code system.

Through the QR code function, the users can use the application as a digital library with minimal to no employee assistance. This system simplifies library processes by keeping track of all records and making the library more directly accessible to its users. RFID and IoT are used in library systems but are not as feasible for small scale libraries because of being highly expensive.

This application provides an end to end solution for easy library book management, i.e. issue and return books, exploring books, and maintaining book records.

QR code is a matrix barcode readable by smartphones and mobile phones with cameras, developed in 1994 by Denso-Wave, a Toyota subsidiary. The QR code usually appears as a small white square with black geometric shapes, although some colored and even branded QR codes are now being used as well.

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The important features of this project are: 1) QR code, 2) User Authentication, 3) User Registration, 4) Password Reset, 5) Sign In/Sign Up, 6) Manage Books, 7) Search Books, 8) Issue Book, 9) Return Books.

The homepage is the main page of the application where the user has access to all the primary features of the application such as issuing a book, searching a book, finding the issuance status of a book, extending the lending time, and returning a book.

As the application is launched, the user is directed to the welcome page where they can login, sign up, or choose to reset the password of their application. New users can choose to sign up by providing information such as name, student ID and cell number. On successful registration, the user is redirected to the homepage.

Both the applications are developed using Android Studio which is the integrated development requirement for Google's android operating system. The development language is Java.

The information encoded in a QR code can be a URL, a phone number, a SMS message, a V-card, or any text. They are referred to as QR because they allow the content to be decoded at high speed.

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