

PROJECT ABSTRACT

Community Book Donation and Exchange Portal

A web portal for neighbourhood book circulation: donate finished books, request needed ones, volunteer pickups, condition grading and karma-based priority. Delivered built-to-order with the full web application, database, report, PPT and viva kit.

01. Title

Community Book Donation and Exchange Portal.

02. Introduction / Background

Millions of readable books sit idle on shelves while other readers buy new copies — a waste of money and paper. Informal giveaways (society WhatsApp groups) don't scale: no catalog, no condition info, no logistics. A community book-circulation portal formalizes giving: a searchable catalog of donated books, condition grading, volunteer pickup logistics, and a karma system that rewards donors with priority access. This project builds that portal.

03. Problem Statement

Book donation today is ad hoc — donors don't know who needs their books, requesters can't discover what's available, and handover logistics fall through. Without condition grading, requesters are disappointed; without incentives, donation dries up. The project provides a complete circulation system: 60-second donation listing, volunteer pickup scheduling, hub-based quality checks, a searchable request catalog, 30-day lending cycles, and karma points that give active donors priority on popular titles — keeping books moving instead of gathering dust.

04. Objectives

- Implement fast donation listing with title, author, genre and condition grading.
- Build a searchable catalog with genre/condition/area filters.
- Manage volunteer pickup scheduling and hub quality checks.
- Track lending cycles: issue, due date, return and overdue handling.
- Implement karma points rewarding donors with request priority.

05. Proposed Methodology

The portal models a circular library. (1) Donation flow: member lists a book; the system matches a nearby volunteer for pickup within 48 hours; the hub grades condition on receipt. (2) Catalog: graded books become requestable; search covers title, author and genre. (3) Lending: approved requests create a 30-day loan with due-date reminders; returns re-enter the catalog. (4) Karma: donations and on-time returns earn points; points determine priority queues for popular titles and unlock badges. (5) Roles: member, volunteer, hub coordinator and admin.

06. System Architecture / Working

A donor fills a short form (title, author, genre, condition, pickup address) and the volunteer-matching service assigns the nearest available volunteer. After hub verification, the book appears in the catalog with its condition badge. Requesters browse or search; requesting a book creates a loan record with a 30-day due date. Volunteers handle both pickup and delivery legs.

Karma accrues on donation (+10), on-time return (+5), and volunteering (+15); the request queue for popular titles sorts by karma, and dashboards show personal impact stats (books rehomed, paper saved estimate).

07. Software Requirements

- Backend: Python (Django/Flask) or Node.js web application
- Database: MySQL/PostgreSQL for books, members, loans, karma ledger
- Frontend: HTML5, CSS3, JavaScript (mobile-friendly)
- Maps integration for volunteer-to-donor matching
- Email/SMS reminders for pickups, due dates and overdues

08. Expected Outcomes

A working circulation portal: donation listing, volunteer pickup flow, searchable catalog, lending lifecycle and karma incentives. The circular-economy workflow design is the key viva narrative.

09. Applications

- Housing societies and resident communities
- College and school book banks
- NGOs running community libraries

10. Future Scope

- Inter-hub book transfer network across cities
- ISBN barcode scanning for instant book details
- Reading-club features: reviews and discussion threads