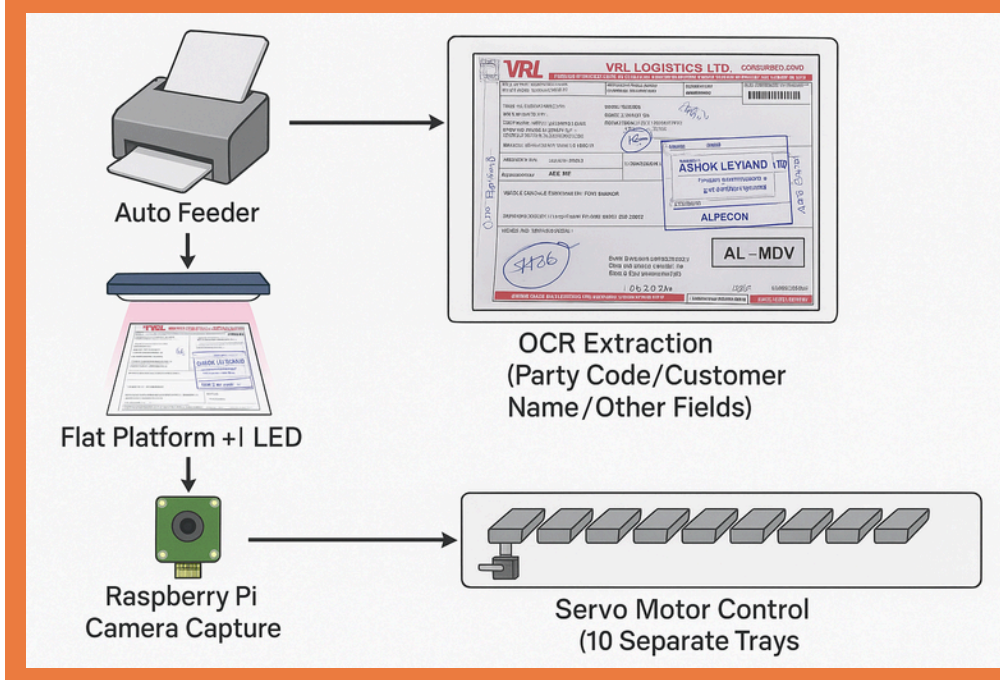


GC AUTOSORT SYSTEM

At VRL Logistics, we propose an OCR-based machine using Raspberry Pi to automate GC slip handling. It captures slips, extracts the LR number for tray sorting, and classifies party codes digitally. This reduces manual errors, saves time, and improves document accuracy.



WHY IT IS USED

Manual sorting of physical GC slips and cross-checking party codes is time-consuming and error-prone.

- Digitize LR numbers and party codes using OCR
- Automatically route GC slips to the correct tray
- Classify party data without manual lookup
- Improve document accuracy, traceability, and processing speed

BENEFITS TO VRL LOGISTICS

- Reduces labor-intensive work for slip sorting and code checking
- Centralizes processing to VRL HQ for better control
- Speeds up operations with minimal human intervention
- Ensures consistent data capture using customer-specific unique party codes
- Lays foundation for future digital archiving and ERP integration

REAL-TIME OCR-BASED PROCESS FLOW

PART 1: GC SLIP SORTING BY LR NUMBER








- Auto Feeder inserts slip
- Platform with LED ensures uniform lighting
- Raspberry Pi Camera captures the image
- OCR extracts valid LR number (10+ digits starting with 1 or 9)
- Last digit of LR number determines the tray (0-9)
- Slip is routed by servo motor to correct tray

PART 2: PARTY CODE DIGITAL CLASSIFICATION

- OCR reads scanned image containing customer party codes
- Extracted 5-6 digit codes matched with categories (Filled party code in the csv) using a CSV file
- Codes are grouped by customer type and displayed or logged
- No physical trays involved – this is purely a digital classification system
- Ensures traceability and faster customer-level verification



Key Components & Costs:

Part	Description	Approx. Cost (₹)	Link
 Auto-Feeder Scanner	Fast scanning of GC receipts	₹32000	Click
 Raspberry Pi 4	Runs OCR and logic script	₹6,000	Click
 LED Light Panel	Provides clean, shadow-free scans	₹1,000	-
 OCR + Detection Software	Identifies Party Code presence	₹0 (Free)	-
 2-Tray Servo Mechanism	Sorts slips by LR number and party code	₹4,000	-
 Basic Enclosure & 10 Trays	Houses the system and holds 10 sorting	₹4,000	-
 Miscellaneous (wiring, fittings)	Motors, cables, mounts, etc.	₹3,000	-

Total Estimated Investment: ₹50,000 (One-Time Build)

To Access Code:

<https://github.com/Anitnashi/GC-sort-machine>

