📘 PROJECT DOCUMENTATION

Technosoft Laundry Management System

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Technosoft Laundry Management System

Professional Project Documentation

Version: TS 2.2.1 | Created by: Arjun Singh

1. Executive Summary

Project Overview

The Technosoft Laundry Management System is an enterprise-grade desktop application designed to revolutionize laundry business operations in India. Built with Microsoft Access and VBA, this sophisticated solution provides complete automation for order management, GST-compliant invoicing, membership programs, expense tracking, and comprehensive business analytics.

100%	90%	75%
GST Compliant	Error Reduction	Time Savings

40%
Retention Boost

Key Achievements

- ✓ Automated end-to-end laundry business operations from order booking to delivery
- ✓ Implemented GST-compliant invoicing system with automatic tax calculations
- ✓ Developed membership management system with KG-based benefit tracking
- ✓ Created real-time business analytics dashboard with performance KPIs
- ✓ Implemented secure licensing system with hardware fingerprinting

▶ 2. Core Features and Capabilities

🛍️ Smart Order Management

- Single-screen order entry with automatic price calculations
- GST invoice generation (Invoice format: TS000001INV)
- Order status workflow: Open → In Progress → Completed → Closed
- Dynamic pricing based on product categories and quantities
- Delivery date scheduling and tracking
- Payment mode integration (Google Pay, Cash, Card, UPI)
- PDF invoice generation with company branding

👥 Membership and Loyalty Program

- Multiple plan types (Wash Dry Fold, Premium, etc.)
- KG-based benefit system with prepaid packages
- Automatic benefit deduction during order booking
- Plan expiry management with auto-notifications
- Real-time remaining KG balance tracking
- Membership renewal and upgrade functionality
- Tax-exempt membership purchases

💰 Financial Management

- Comprehensive expense tracking by category (Detergent, Staff, Utilities)
- Expense invoice generation with reference numbers
- Revenue vs. Expenses analysis with graphical trends
- Period-wise financial reports (Daily, Weekly, Monthly, Quarterly, Yearly)
- Outstanding payment management and tracking
- Multi-payment mode support with transaction logging

📊 Business Analytics Dashboard

- Real-time KPI monitoring (28 overdue orders, ₹22,563 value displayed)
- Today's performance metrics (bookings, completions, cancellations)
- Membership statistics and expiry alerts
- Top performing products analysis
- Top 50 customers by revenue contribution
- Growth trend analysis and forecasting
- Auto-refresh dashboard (5-minute intervals)

👤 Customer Intelligence (360° View)

- Complete customer profile with personal details
- Revenue analytics: Total revenue, average order value
- Order history tracking (Total 10 orders, ₹13,222)
- Membership status and benefit tracking (54 KG remaining)
- Email verification with OTP system
- Birthday and anniversary tracking for marketing
- Customer value scoring (Premium Customer classification)

▶ 3. Installation & System Requirements

⚙️ System Requirements

Software Requirements

- Microsoft Access 2016 or later (64-bit must)
- Windows 10/11 (64-bit must)
- Microsoft Excel 2016+ (for export features)
- PDF Reader for invoice printing
- Outlook with app password (for email notifications)

Hardware Requirements

- D: Drive with 500MB free space
- 4GB RAM (8GB recommended)
- Screen Resolution: 1366x768 or higher
- Stable system for hardware fingerprinting

📦 Installation Steps

1. **Download & Extract:** Download Technosoft_LMS.zip and extract directly to **D:\ drive root** (mandatory location)
2. **Verify Folders:** Extraction automatically creates 6 specialized folders on D: drive
3. **Launch Application:** Navigate to D:\Laundry_Management_App\ and double-click Technosoft_Laundry.accde
4. **Create Account:** Click "Create Account?" on login screen and set up your credentials
5. **Activate License:** Complete online or offline license activation process
6. **Configure System:** Set up company details, products, and begin operations

📁 Folder Structure (Auto-Created on D: Drive)

```
D:\
   ├── Laundry_Management_App\ [Main Application Files]
      └── Technosoft_Laundry.accde [Launch this file]
   ├── Laundry_BE_Main_DB_Dont_Touch\ [Database - Do Not Modify]
      └── Laundry_Managment_Backend_Database.accdb
   ├── Laundry_BE_Backup_DB_Dont_Touch\ [Automated Backups]
   ├── Laundry_Excel_Template\ [Import/Export Templates]
   ├── Laundry_Output_Invoice\ [Generated PDF Invoices]
   └── Laundry_Output_Reports\ [Business Reports]
```

> ⚠️ **Important:** Do NOT modify or delete files in folders marked "Dont_Touch" - these contain critical database files with automated backup systems.

🔧 Troubleshooting Common Issues

Application won't start: Ensure extraction to D: drive root (not D:\Downloads or subfolders)

Database errors: Do not modify files in *_Dont_Touch folders; restore from backup if needed

Invoice printing issues: Verify PDF reader installation and default printer settings

Performance slowdown: Regular database maintenance recommended; contact support for optimization

Data export failures: Check Microsoft Excel installation (2016 or later required)

License activation issues: Use offline activation method if online fails; contact support with hardware ID

▶ 4. Technical Architecture

Technology Stack

Frontend Layer

- MS Access Forms (.accde compiled format)
- Custom VBA form controls and events
- Responsive UI with dynamic data binding
- Professional color schemes and branding

Backend Layer

- MS Access Database Engine (ACE)
- VBA business logic implementation
- Stored procedures and queries
- Data validation and integrity constraints

Database Schema

tbl_Customers

Customer profiles, contact information, membership status, revenue analytics

tbl_Orders

Order details, invoice numbers, status tracking, payment information, delivery dates

tbl_Memberships

Subscription plans, KG benefits, purchase dates, expiry dates, benefit utilization

tbl_Products

Service catalog, product categories, pricing, units, GST classifications

tbl_Expenses

Expense transactions, categories, amounts, payment modes, reference numbers

tbl_Employees

Staff management, access control, login credentials, role-based permissions

▶ 5. Module-wise Functionality

Order Management Module

New Order Entry: Quick order booking with automatic calculations, customer search, product selection

Order Details: View/update order status, print invoices, track delivery dates, manage payments

Status Updates: Change status from Open → Closed, record payments, update delivery dates

Invoice Export: PDF generation, email sending, Excel export for bulk analysis

Membership Management Module

Plan Purchase: Buy new plans (WASH DRY FOLD: ₹6000 for 70 KG), tax-exempt purchases

Benefit Tracking: Real-time KG balance updates, automatic deduction during orders

Expiry Alerts: Dashboard alerts for plans expiring in 7 days

Plan Changes: Warning system for plan type changes with balance carryforward rules

Expense Management Module

Expense Entry: Record expenses by category (Detergent, Staff, Utilities), payment modes

Invoice Generation: Create expense invoices (TS161120253556 format) with full details

Analytics: Revenue vs. Expenses comparison graphs, monthly trend analysis

Reports: Period-wise expense summaries, category breakdowns, cost optimization insights

Analytics and Reporting Module

Dashboard View: Real-time KPIs with auto-refresh (5-minute intervals), key business metrics

Performance Data: Today ₹35,574 (74.72% orders, 25.28% membership, 5.32% expenses)

Product Analysis: Top products: DRY CLEANING ₹11.3L, Express Service ₹10.4L

Customer Ranking: Top 50 customers by revenue (Arjun Singh: ₹39,096 as #1)

▶ 6. User Guide and Workflows

Order Booking Workflow

1. **Search Customer:** Enter mobile number (8149090364) and click Search
2. **Select Products:** Choose category (BAGS), product (BACKPACK MEDIUM), quantity (1)
3. **Add Items:** Click "Add" button to add to order, repeat for multiple items
4. **Review Details:** Check subtotal (₹1,450), GST 18% (₹252), total (₹1,652)
5. **Apply Benefits:** System auto-applies membership benefits if available (54 KG remaining)
6. **Book Order:** Click "Book Order" to generate invoice (TS00008IINV)

Payment Collection Workflow

1. **Open Order Details:** Search customer and click "Update" on pending order
2. **Update Status:** Change invoice status from "Open" to "Closed"
3. **Enter Payment:** Enter paid amount (₹11000), select payment mode (Google Pay)
4. **Add Reference:** Optional payment reference number and notes
5. **Save Transaction:** Click "Save" to record payment and update status

Membership Purchase Workflow

1. **Search Customer:** Enter mobile number and click Search
2. **Select Plan:** Choose plan (WASH DRY FOLD - 1 Year - ₹6000 - 70 KG)
3. **Review Warning:** Check for plan type change warning (balance carryforward rules)
4. **Select Payment:** Choose payment mode (Google Pay) and add optional reference
5. **Complete Purchase:** Click "Buy Plan" to activate membership

▶ 7. Pricing & Licensing

💰 Pricing Plans

Free Version

₹0

3 Months Trial

Features:

- ✓ All core features included
- ✓ GST invoicing enabled
- ✓ Basic analytics dashboard
- ✓ Customer management
- ⚠️ Maximum 100 total records
- (Orders + Membership + Expenses combined)

Perfect for testing & evaluation

RECOMMENDED

Premium Version

₹11,800

₹10,000 + 18% GST

Lifetime License

Features:

- ✓ **Unlimited records** - no restrictions
- ✓ All advanced features unlocked
- ✓ Full business analytics suite
- ✓ Priority technical support
- ✓ Free lifetime updates
- ✓ Online or offline activation
- ✓ One-time payment, lifetime use
- ✓ Hardware-locked license

Best for serious laundry businesses

🔑 License Activation Process

Online Activation (Instant)

1. Purchase license key from official website
2. Launch application and click "Activate now"
3. Enter company details and license key
4. Click "Save Information" for instant activation
5. System binds license to hardware fingerprint

Offline Activation (24-48 hours)

1. Click "Offline License Key Activation"
2. Fill company details and click "Save Information"
3. System generates WIN.ZIP file with hardware data
4. Email WIN.ZIP to contact@arjunsingh.org
5. Receive license file via email within 24-48 hours

🔒 Hardware Fingerprinting Security

Each license is securely bound to your specific computer system. The system captures hardware identifiers during activation to ensure your license is protected and cannot be used on unauthorized systems.

📜 End User License Agreement (EULA) - Key Terms

1. Grant of License

Non-exclusive, non-transferable license for **one single computer system only**. Each license key is hardware-locked and will not work on multiple systems simultaneously.

2. License Transfer Policy

- **Single System Use:** One license valid for one computer only
- **System Transfer:** Must deactivate license on original system first
- **Transfer Process:** Contact support at contact@arjunsingh.org to initiate transfer
- **No Concurrent Use:** Same license cannot be active on multiple systems

3. Restrictions

You shall NOT:

- Copy, reproduce, modify, or create derivative works
- Reverse engineer, decompile, or disassemble the software
- Rent, lease, loan, sell, distribute, or sublicense to third parties
- Remove proprietary notices or labels
- Use same license on multiple computer systems
- Bypass or circumvent license activation mechanism

4. Intellectual Property

All rights, ownership, and intellectual property belong to Technosoft Laundry. Software is protected by copyright laws and international treaty provisions.

5. Warranty Disclaimer

Software provided "AS IS" without warranty of any kind, express or implied. No guarantee of uninterrupted or error-free operation.

6. Governing Law

This agreement is governed by laws of India. Legal disputes subject to exclusive jurisdiction of courts in **Pune, Maharashtra, India 411015**.

📞 **License Support:** For license transfers, technical support, or EULA queries, contact: **contact@arjunsingh.org**

💳 Payment & Purchase Information

Premium License Price: ₹10,000 + 18% GST = **₹11,800**

Payment Methods Accepted:

- Bank Transfer / NEFT / RTGS
- UPI Payment (Google Pay, PhonePe, Paytm)
- Online Payment Gateway

What You Get:

- Lifetime license key (no recurring fees)
- Instant online activation OR offline activation within 24-48 hours
- Free lifetime software updates
- Priority technical support
- GST invoice for your purchase

▶ 8. Security and Data Privacy

🔒 License Management

- Hardware fingerprinting for secure system-bound licensing
- Online and offline activation processes
- Lifetime premium license with one-time purchase
- Anti-piracy protection with automated system validation
- License expiry date: Lifetime (31-Dec-2099)

🛡️ Data Security

- Local database storage for complete data privacy and control
- Role-based access control: Employee vs. Administrator privileges
- Data export controls for business intelligence
- Automated backup capabilities for data protection
- Secure password management with change/reset features

▶ 9. Business Impact and ROI

📈 Operational Efficiency

- 90% reduction in manual calculation errors
- 75% time savings in order processing
- 100% accuracy in tax compliance
- Instant invoice generation

😊 Customer Experience

- Instant professional invoicing
- Transparent pricing breakdowns
- 40% increase in customer retention
- Automated communication

💼 Financial Control

- Real-time revenue tracking
- 25% reduction in operational costs
- 30% improvement in cash flow
- Better decision making with analytics

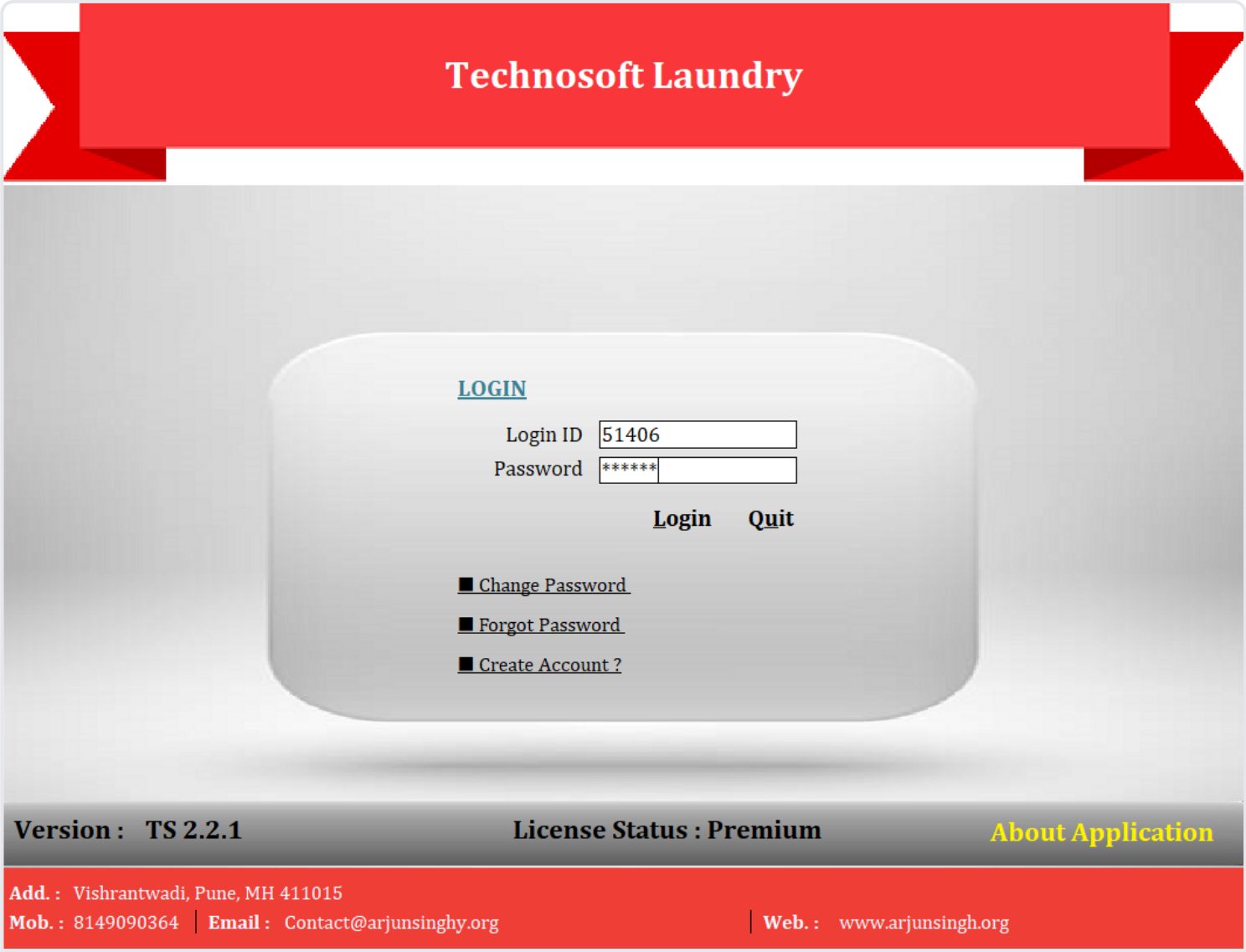
📊 Key Performance Metrics (Based on Dashboard)

Annual Performance: ₹72.28 Lakhs total revenue (₹63.91L orders + ₹11.98L memberships - ₹3.60L expenses)
Revenue Mix: 84.21% from orders, 15.79% from memberships, 4.76% expense ratio
Customer Base: 5,722 total customers with 17 new customers added recently
Peak Performance: Best day generated ₹48.7K revenue (06-Jun-25)
Growth Trend: Monthly trend showing -60% (indicating seasonal variation)

▼ 10. System Walkthrough (Screenshots)

📸 Visual System Documentation

Below are the actual screenshots of the Technosoft Laundry Management System showcasing various modules and features in action. All images should be placed in the same folder as this HTML file.

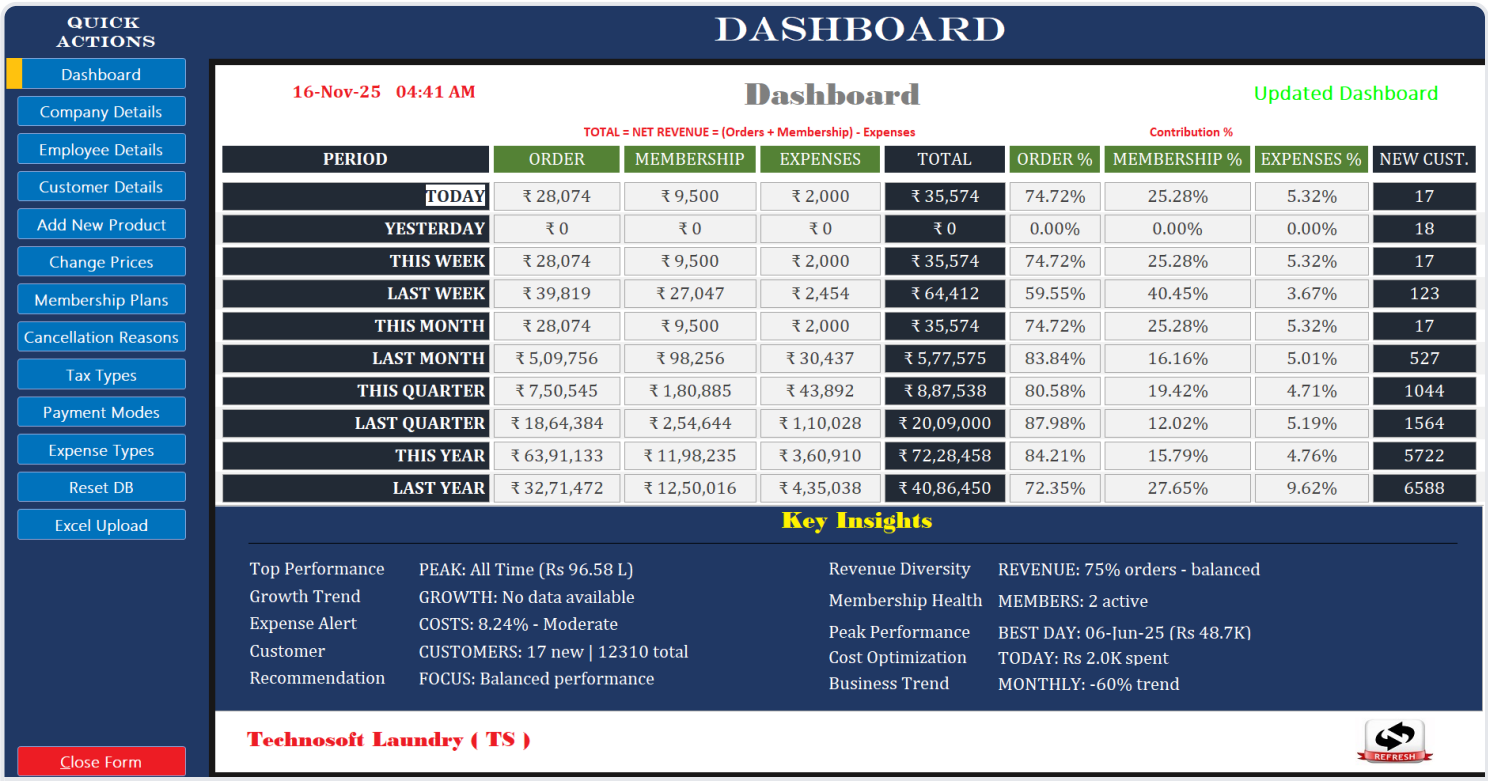


1. Login Screen

Secure authentication system with user credentials, password management, and license status display

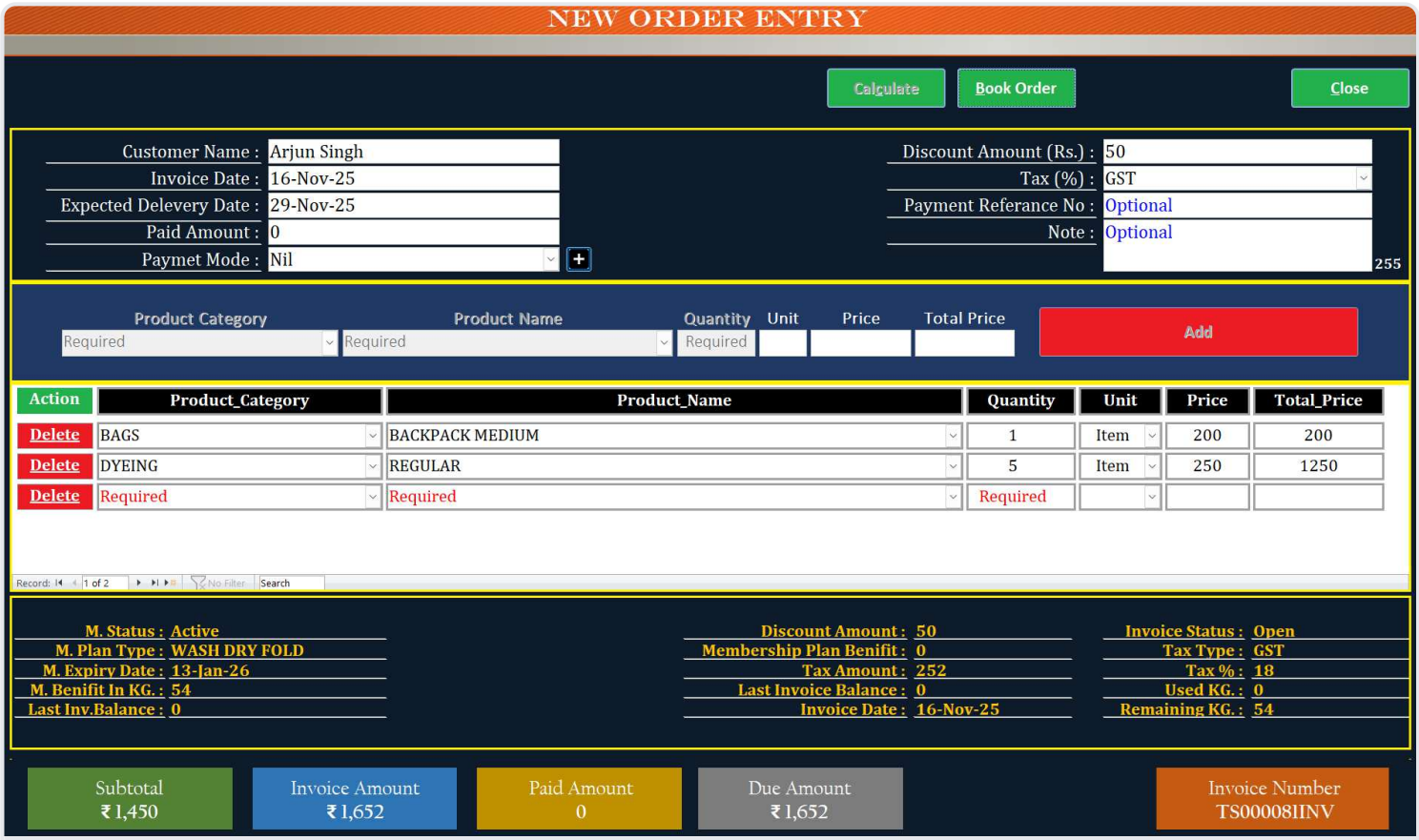
2. Main Dashboard

Real-time KPI dashboard showing overdue orders, today's performance, membership stats, and expense tracking



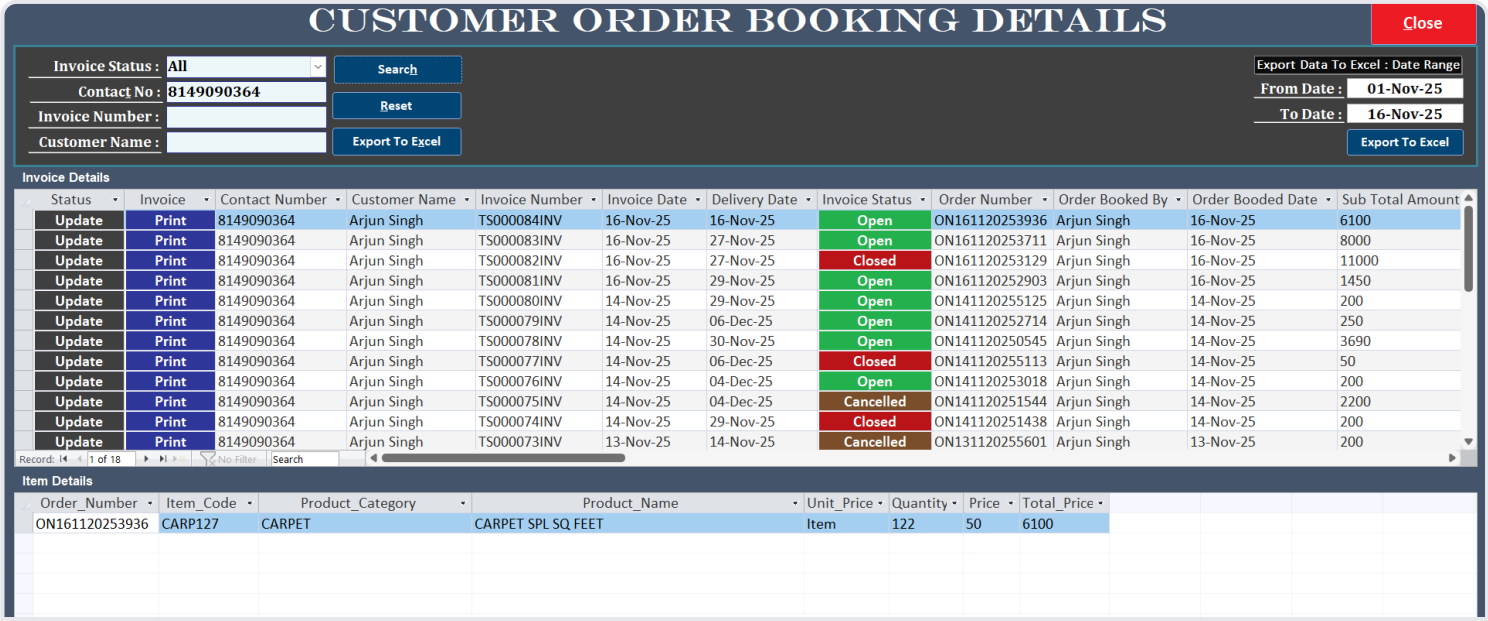
3. Analytics Dashboard

Comprehensive business analytics with period-wise revenue breakdown and contribution percentages



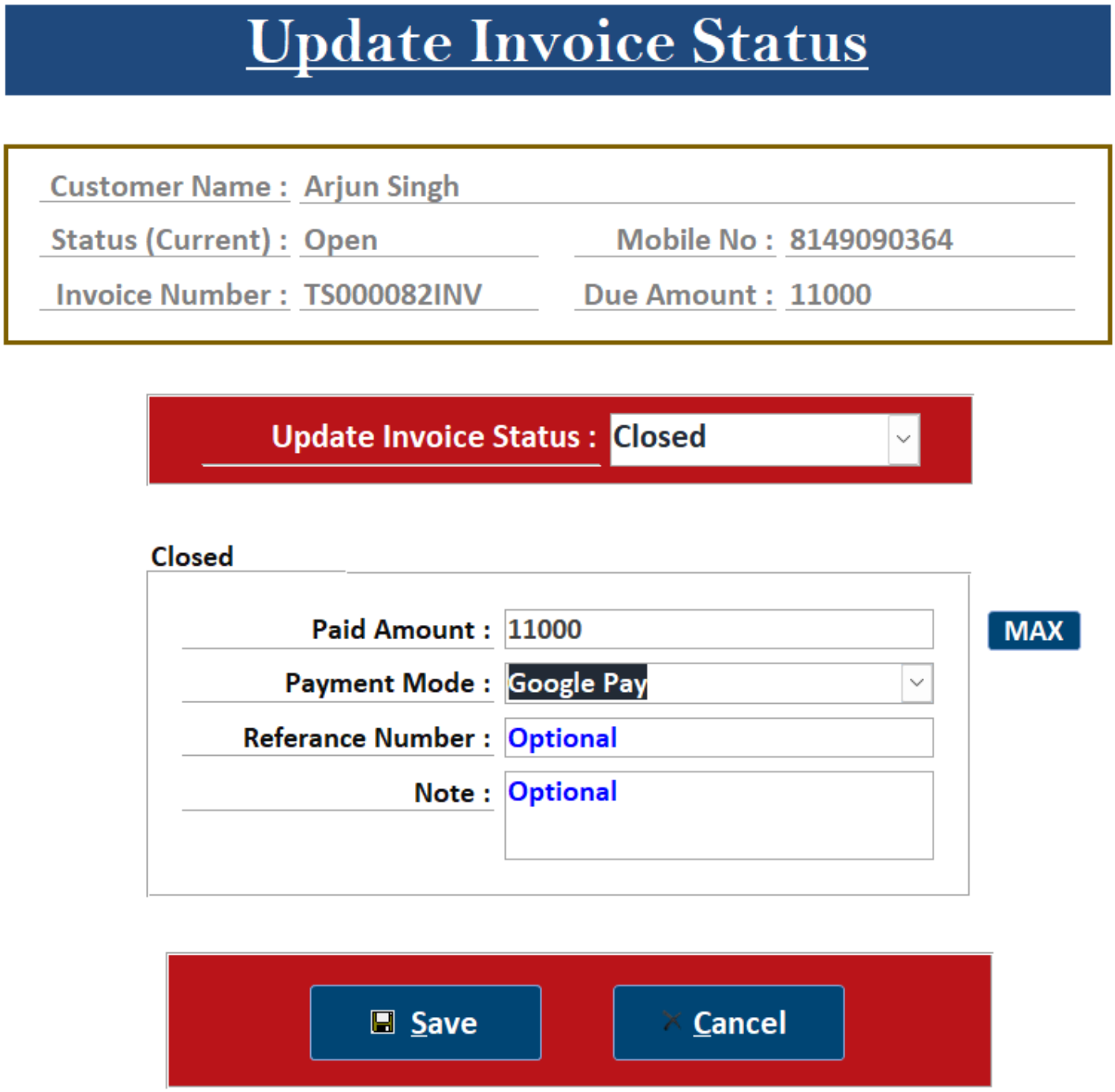
4. New Order Entry

Single-screen order booking interface with product selection, automatic calculations, and membership benefits



5. Order Details View

Complete order listing with search filters, status tracking, and item-level details for each customer



6. Update Order Status

Payment collection interface with status change from Open to Closed, payment mode selection, and reference tracking

TECHNOSOFT LAUNDRY

Vishrantwadi, Pune, MH 411015
8149090364
Contact@arjunsinghy.org
www.arjunsingh.org

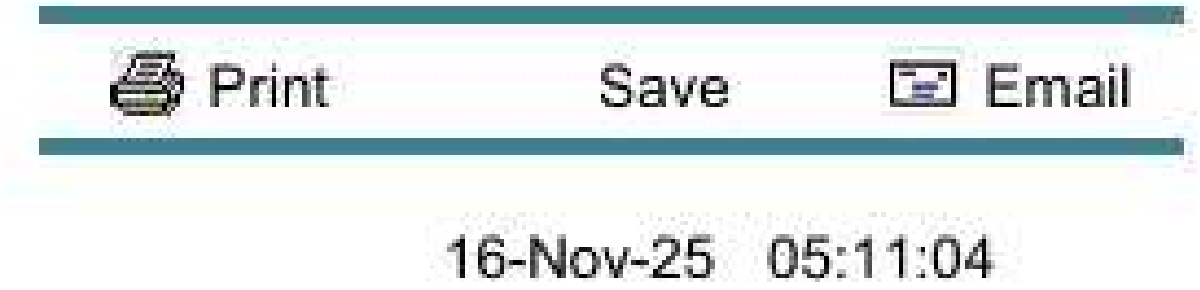
Order Booking Invoice. (TS)

Cust. Name :	Arjun Singh
Cust. No. :	8149090364
M. Status :	Active
M. Plan Type :	WASH DRY FOLD
M. Expiry Date :	13-Jan-26
M. Rem. KG. :	54
Inv. Status :	Open
Inv. Date :	14-Nov-25
Booked By :	Arjun Singh
Delevery Dt. :	30-Nov-25
Pay. Mode :	Google Pay

Product	Uni	Qty	Rate	Total

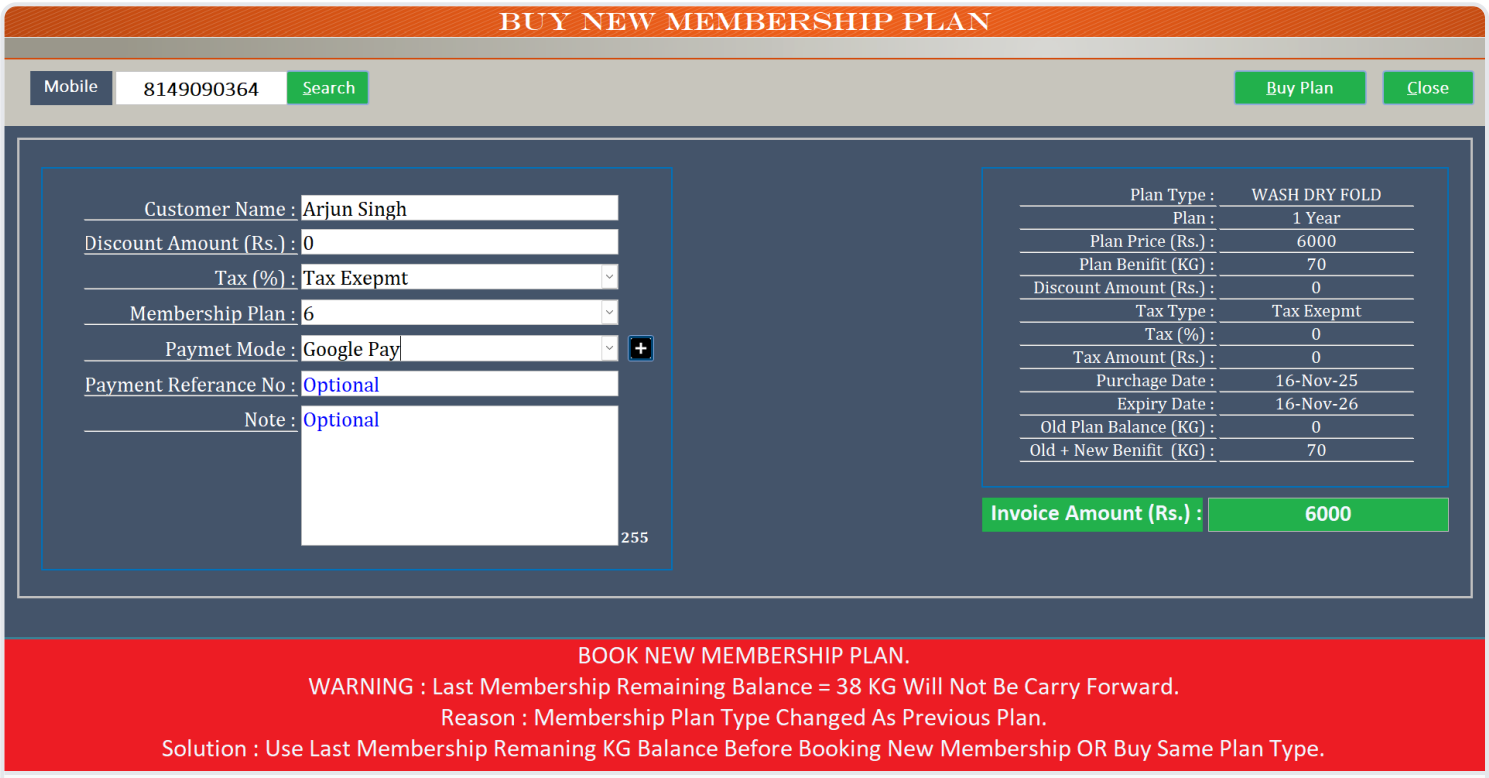
D/C SOFT TOY SMALL				
	Ite	5	200	1000
LEATHER HAND BAG				
	Ite	1	350	350
SAREE WORK				
	Ite	2	150	300
WASH DRY IRON				
	KG	24	85	2040

Sub Total :	3690
Dis. Amt. :	50
M. Plan Benifit :	0
Tax Type :	GST
Tax % :	18
Tax Amt. :	655.2
Last Inv. Amt. :	0
Paid Amt. :	200
Due Amt. :	4095.2
Inv. Amt. :	**4295.2**
Inv. No. :	**TS000078INV**



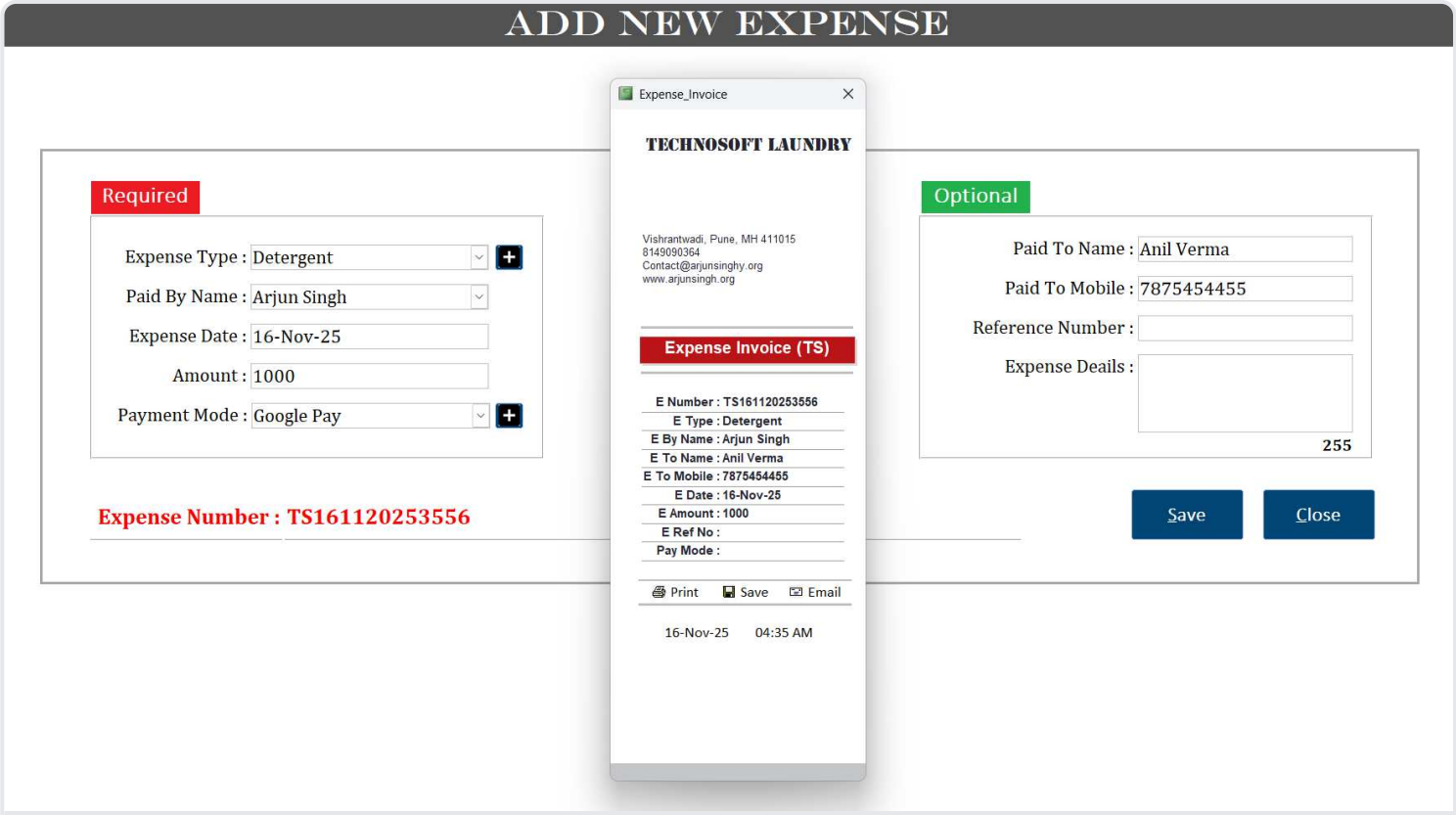
7. GST Invoice (PDF)

Professional GST-compliant invoice with company details, itemized products, tax breakdown, and payment status



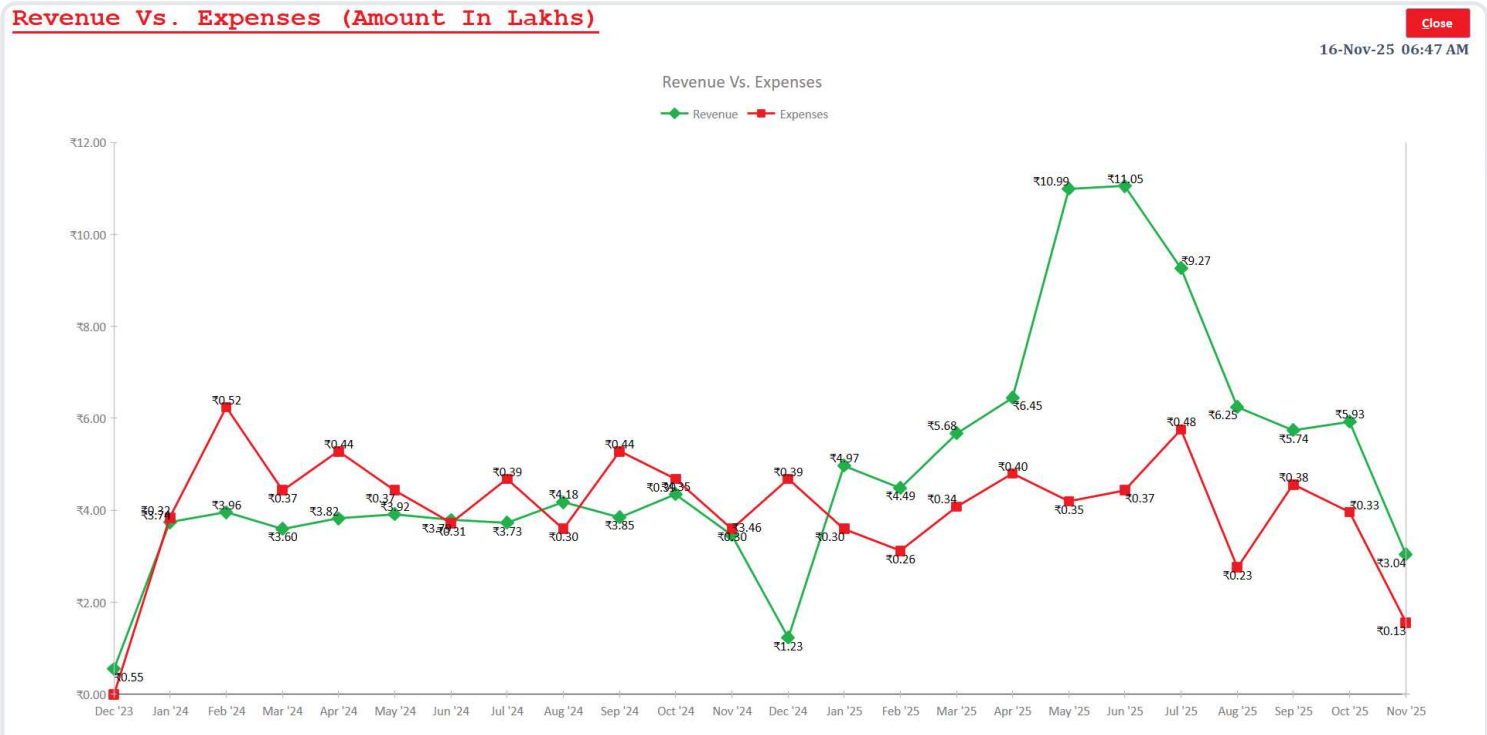
8. Membership Plan Purchase

Membership buying interface showing plan types, pricing, KG benefits, and carryforward warnings



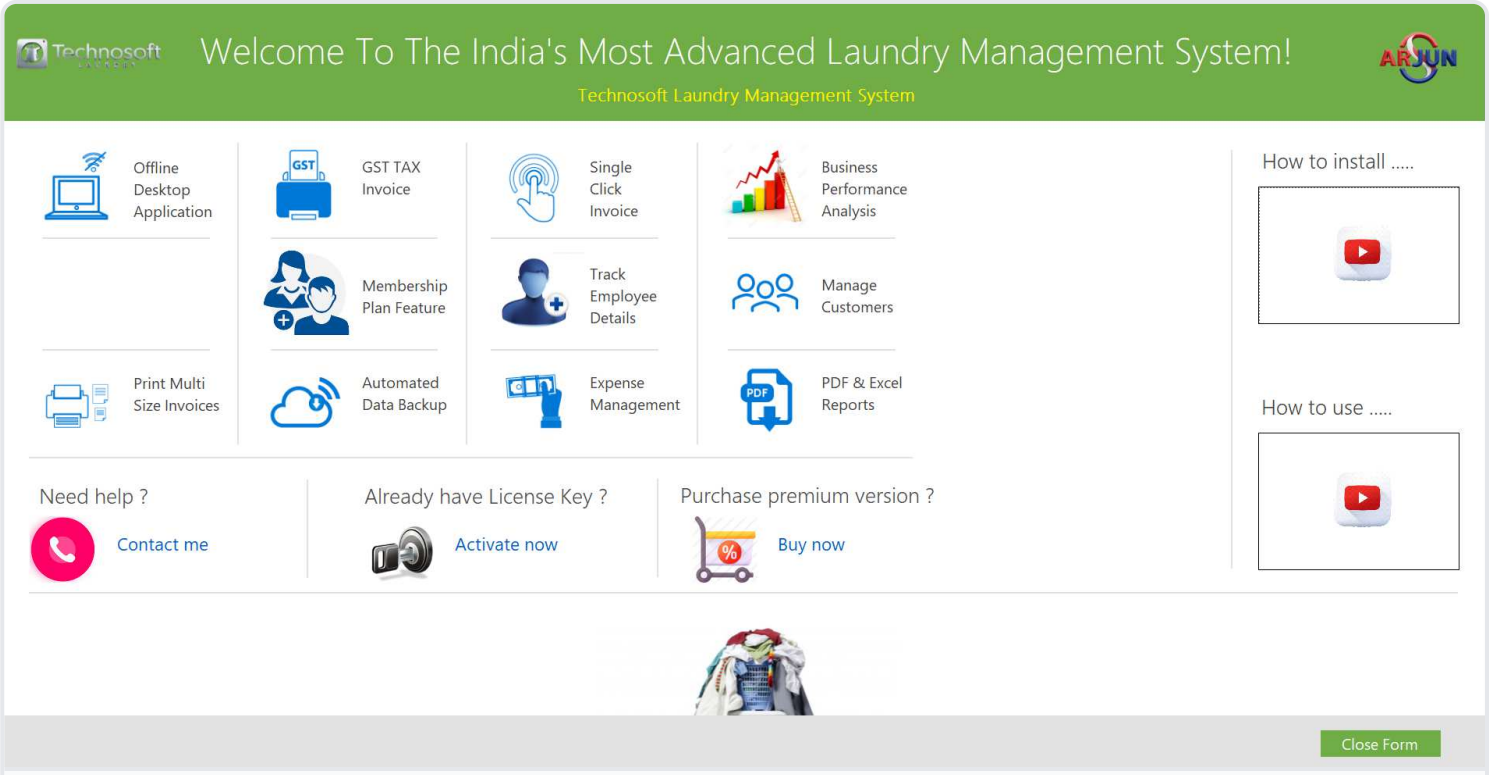
9. Expense Management

Expense recording system with category selection, payment modes, and automatic invoice generation



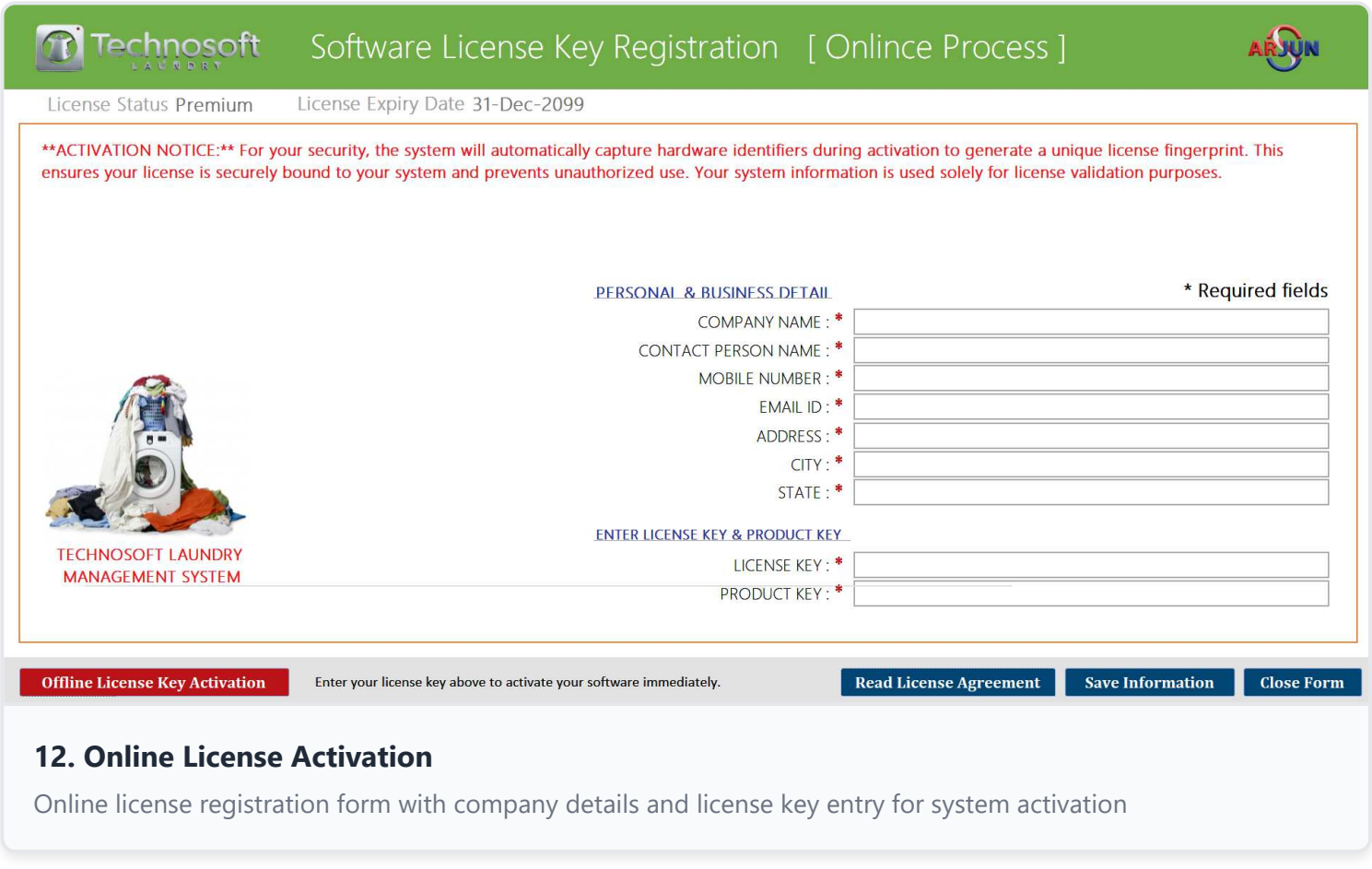
10. Revenue vs Expenses Graph

Visual trend analysis comparing monthly revenue and expenses for financial performance tracking



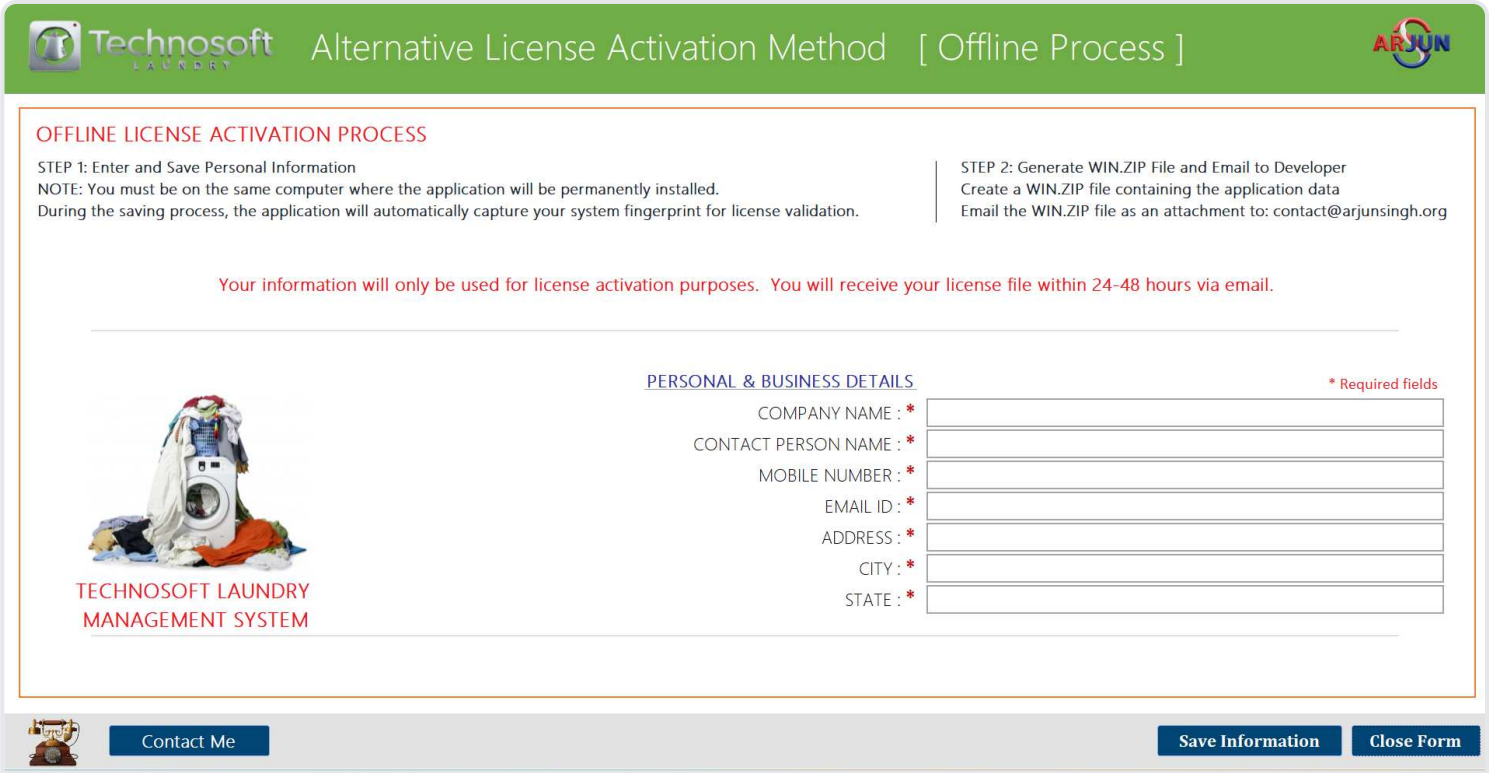
11. Welcome & Features Screen

Feature showcase highlighting GST invoicing, membership plans, expense tracking, and automated backups



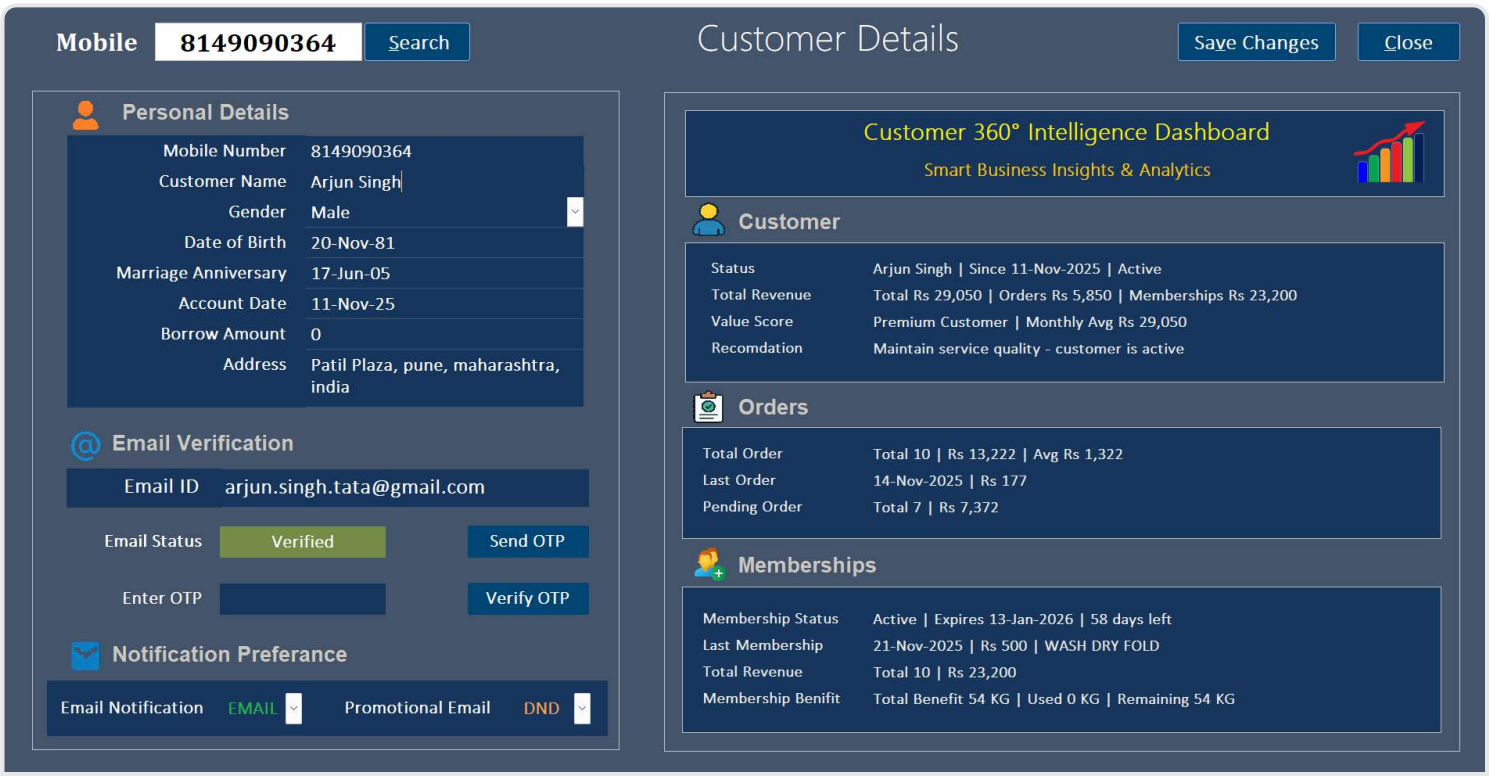
12. Online License Activation

Online license registration form with company details and license key entry for system activation



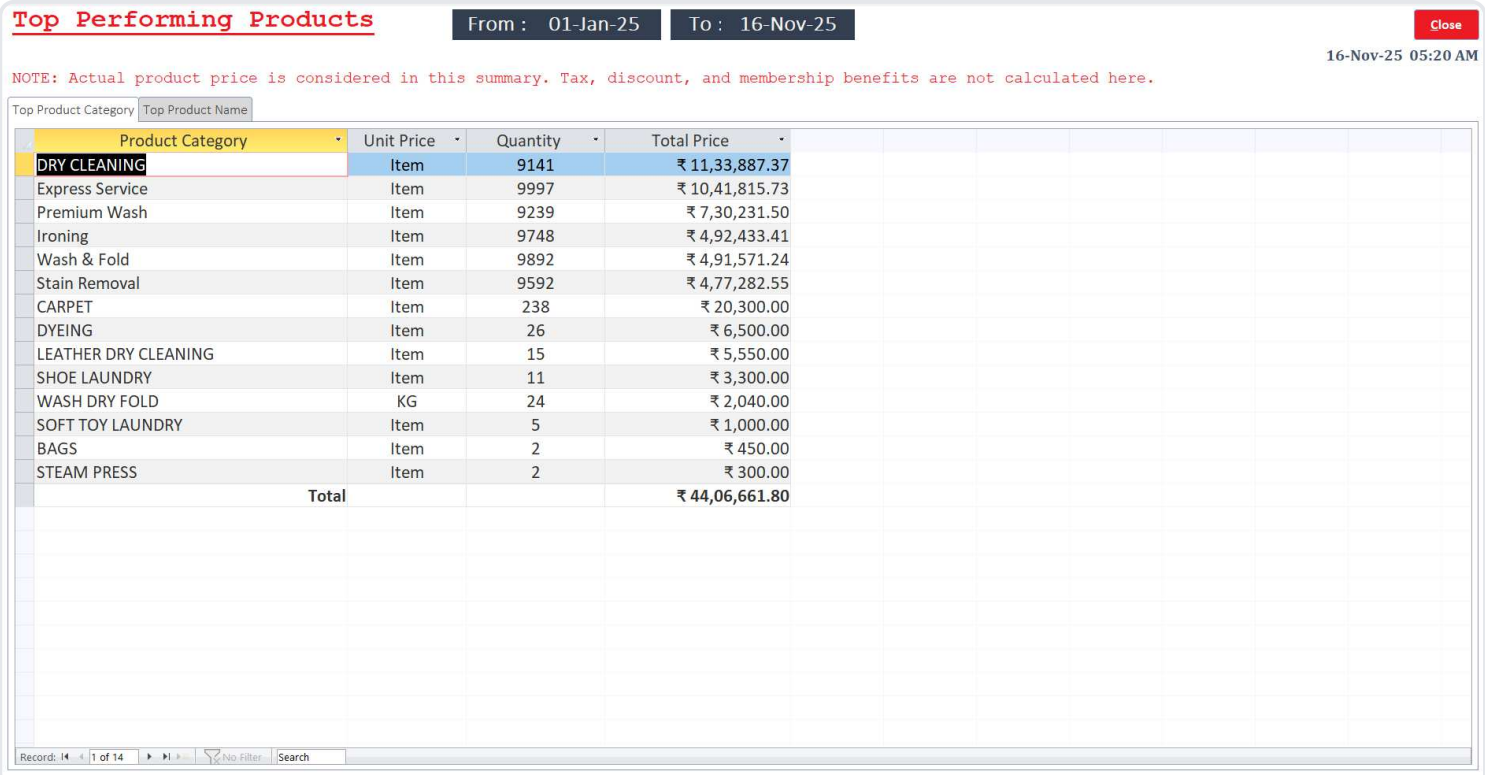
13. Offline License Activation

Alternative offline activation method with hardware fingerprinting and email-based license delivery



14. Customer 360° Intelligence

Complete customer profile with revenue analytics, order history, membership details, and email verification



Top Performing Products

From : 01-Jan-25 To : 16-Nov-25 Close

16-Nov-25 05:20 AM

NOTE: Actual product price is considered in this summary. Tax, discount, and membership benefits are not calculated here.

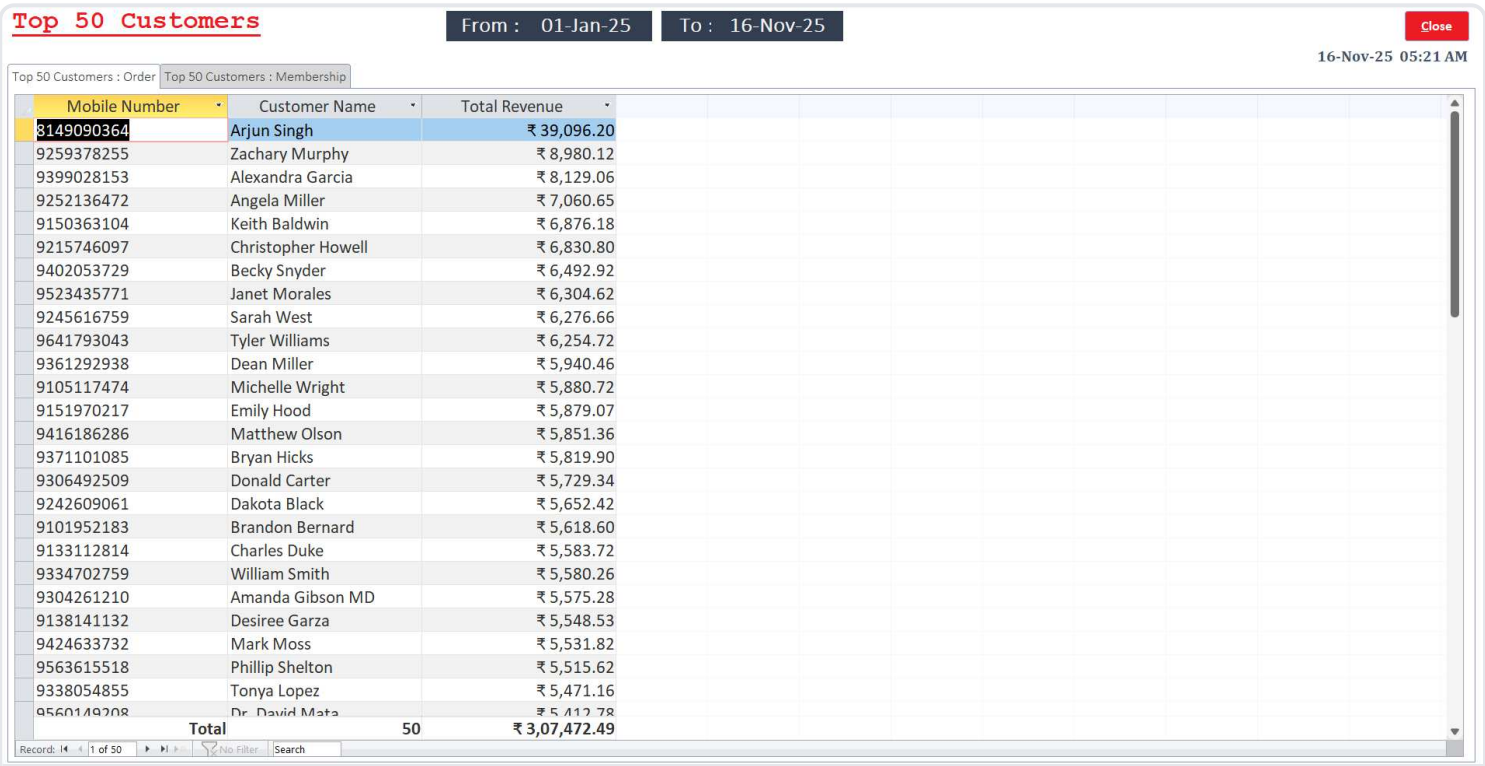
Top Product Category | Top Product Name

Product Category	Unit Price	Quantity	Total Price
DRY CLEANING	Item	9141	₹ 11,33,887.37
Express Service	Item	9997	₹ 10,41,815.73
Premium Wash	Item	9239	₹ 7,30,231.50
Ironing	Item	9748	₹ 4,92,433.41
Wash & Fold	Item	9892	₹ 4,91,571.24
Stain Removal	Item	9592	₹ 4,77,282.55
CARPET	Item	238	₹ 20,300.00
DYEING	Item	26	₹ 6,500.00
LEATHER DRY CLEANING	Item	15	₹ 5,550.00
SHOE LAUNDRY	Item	11	₹ 3,300.00
WASH DRY FOLD	KG	24	₹ 2,040.00
SOFT TOY LAUNDRY	Item	5	₹ 1,000.00
BAGS	Item	2	₹ 450.00
STEAM PRESS	Item	2	₹ 300.00
Total			**₹ 44,06,661.80**

Record: 1 of 14 No Filter Search

15. Top Products Performance

Product-wise revenue analysis showing quantity sold and total revenue by product category



Top 50 Customers

From : 01-Jan-25 To : 16-Nov-25 Close

16-Nov-25 05:21 AM

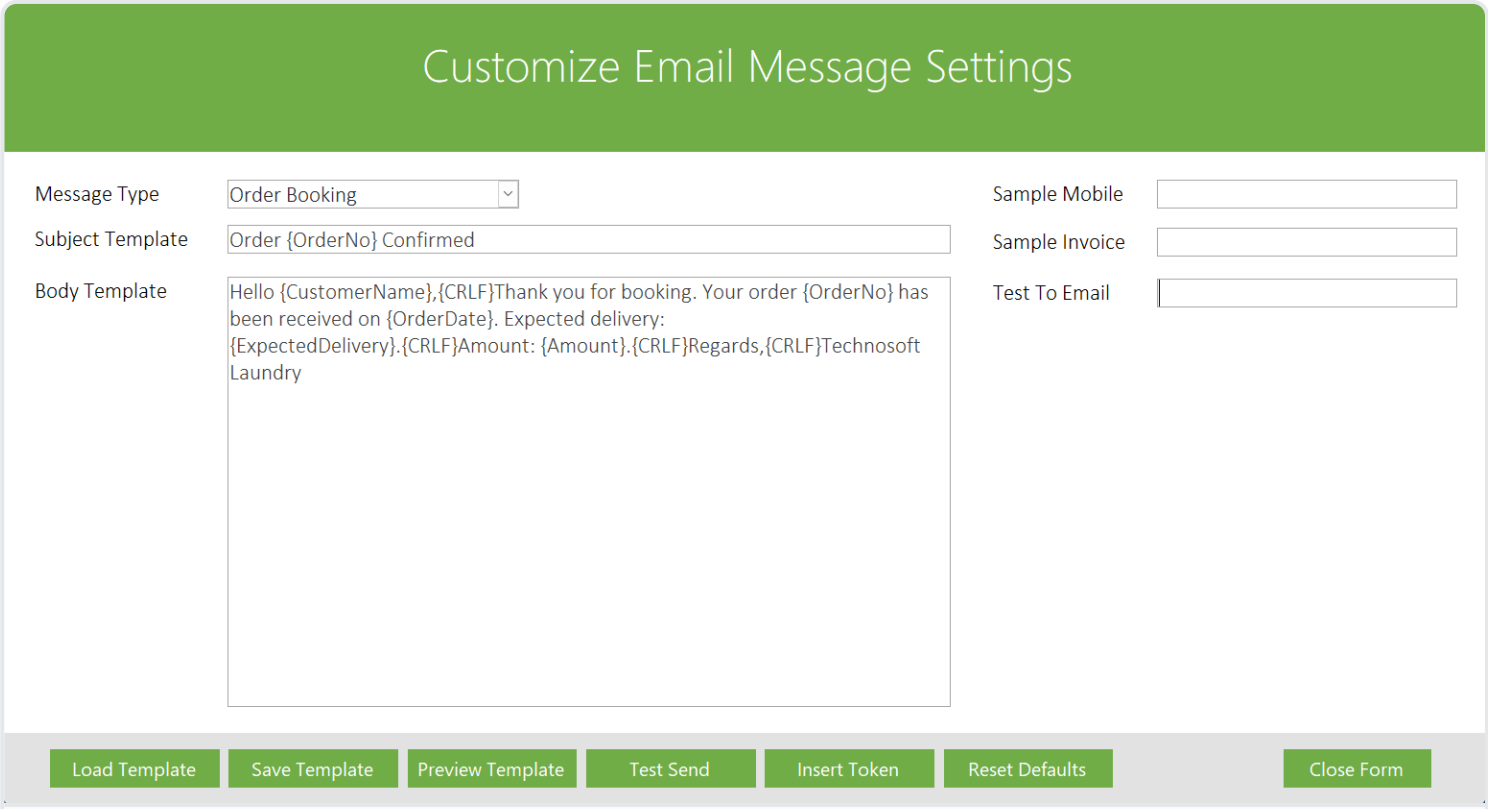
Top 50 Customers : Order | Top 50 Customers : Membership

Mobile Number	Customer Name	Total Revenue
8149090364	Arjun Singh	₹ 39,096.20
9259378255	Zachary Murphy	₹ 8,980.12
9399028153	Alexandra Garcia	₹ 8,129.06
9252136472	Angela Miller	₹ 7,060.65
9150363104	Keith Baldwin	₹ 6,876.18
9215746097	Christopher Howell	₹ 6,830.80
9402053729	Becky Snyder	₹ 6,492.92
9523435771	Janet Morales	₹ 6,304.62
9245616759	Sarah West	₹ 6,276.66
9641793043	Tyler Williams	₹ 6,254.72
9361292938	Dean Miller	₹ 5,940.46
9105117474	Michelle Wright	₹ 5,880.72
9151970217	Emily Hood	₹ 5,879.07
9416186286	Matthew Olson	₹ 5,851.36
9371101085	Bryan Hicks	₹ 5,819.90
9306492509	Donald Carter	₹ 5,729.34
9242609061	Dakota Black	₹ 5,652.42
9101952183	Brandon Bernard	₹ 5,618.60
9133112814	Charles Duke	₹ 5,583.72
9334702759	William Smith	₹ 5,580.26
9304261210	Amanda Gibson MD	₹ 5,575.28
9138141132	Desiree Garza	₹ 5,548.53
9424633732	Mark Moss	₹ 5,531.82
9563615518	Phillip Shelton	₹ 5,515.62
9338054855	Tonya Lopez	₹ 5,471.16
9560149208	Dr. David Mata	₹ 5,412.78
Total	**50**	**₹ 3,07,472.49**

Record: 1 of 50 No Filter Search

16. Top 50 Customers

Customer revenue ranking showing top 50 customers by total revenue contribution for targeted marketing



17. Email Message Settings

Customizable email template configuration for automated order confirmations and notifications

18. Company Details Configuration

System configuration for company information, GST details, contact info, and invoice customization

Technosoft Laundry Management System

Developed by Arjun Singh | Assistant Manager, Tata Teleservices Limited

contact@arjunsingh.org | www.arjunsingh.org | 8149090364

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