📚 ANBU LIBRARY MANAGEMENT SYSTEM

Complete Operating Manual

![Anbu Academic Centre Logo](user_input_files/logo.jpg) **ANBU ACADEMIC CENTRE** **Library Management System** --- **Version:** 2.0 (Modern Windows Compatible) **Developed by:** Augustine Anbananthan **Original Development:** Year 2000 **Manual Updated:** December 2025 **Target Users:** School Librarians, Library Staff, Educational Institutions

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📖 Table of Contents

🚀 Introduction & Overview

Welcome to the **Anbu Library Management System** - a comprehensive solution designed specifically for school libraries. This system was created to address the challenges faced by educational institutions in managing their library resources efficiently.

Key Features:

- ✅ **Simple & Intuitive Interface** - Designed by librarians, for librarians

- ✅ **Fast Book Processing** - Issue up to 50 books during school breaks
- ✅ **Comprehensive Member Management** - Students and staff tracking
- ✅ **Advanced Search Capabilities** - Quick reference tools
- ✅ **Professional Reports** - Complete library analytics
- ✅ **dBase Compatible** - Works with standard database formats

> ** 💡 Design Philosophy:** *"Three times faster than manual entry, half the complexity of commercial systems"*

💻 System Requirements & Setup

Minimum Requirements:

- **Operating System:** Windows 7 or higher
- **RAM:** 512 MB minimum
- **Storage:** 50 MB free space
- **Database:** dBase III/IV compatible files

Required Files Structure:

> ** ⚠️ MANDATORY FILES:** **Executable Files:** - `anbulib.exe` - Main library application - `anbulbr.exe` - Library browser module - `anbu library.exe` - Library interface module **Database Files:** - `MASTER.DBF` - Book inventory database - `STAFF.DBF` - Staff members database - `STUDENTS.DBF` - Students database - `TRANSACT.DBF` - Transaction records **Configuration:** - `library_config.txt` - School configuration file

Initial Setup:

> ** ⚠️ IMPORTANT:** The system requires a `library_config.txt` file to launch properly. This is a mandatory configuration file.

Step 1: Create configuration file
1. Open any text editor (Notepad, WordPad)
2. Enter your school details
3. Save as `library_config.txt` in the program directory

Step 2: Launch the program
- Double-click any of the executable files
- The system will automatically read your configuration

🖥️ Main Interface Guide

Main Window Overview The main window provides access to all system functions through an intuitive menu system and quick-launch buttons. **Menu Structure:** - 📚 **Books** - Book inventory management - 👥 **Members** - Staff and student management - 📤 **Issue/Return** - Book circulation - 📊 **Reports & Export** - Analytics and statistics - ⚙️ **Settings** - System configuration - ❌ **Exit** - Close application **Quick Launch Buttons:** - Direct access to frequently used functions - Streamlined workflow for busy librarians - Real-time library statistics display
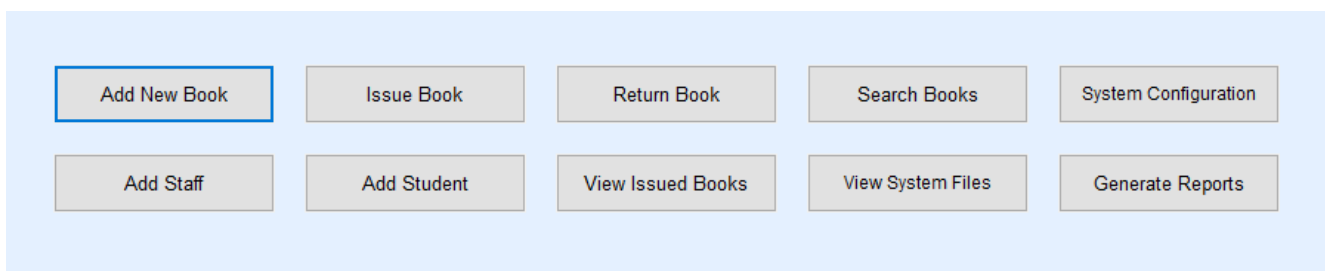
📸 Main Dashboard Interface
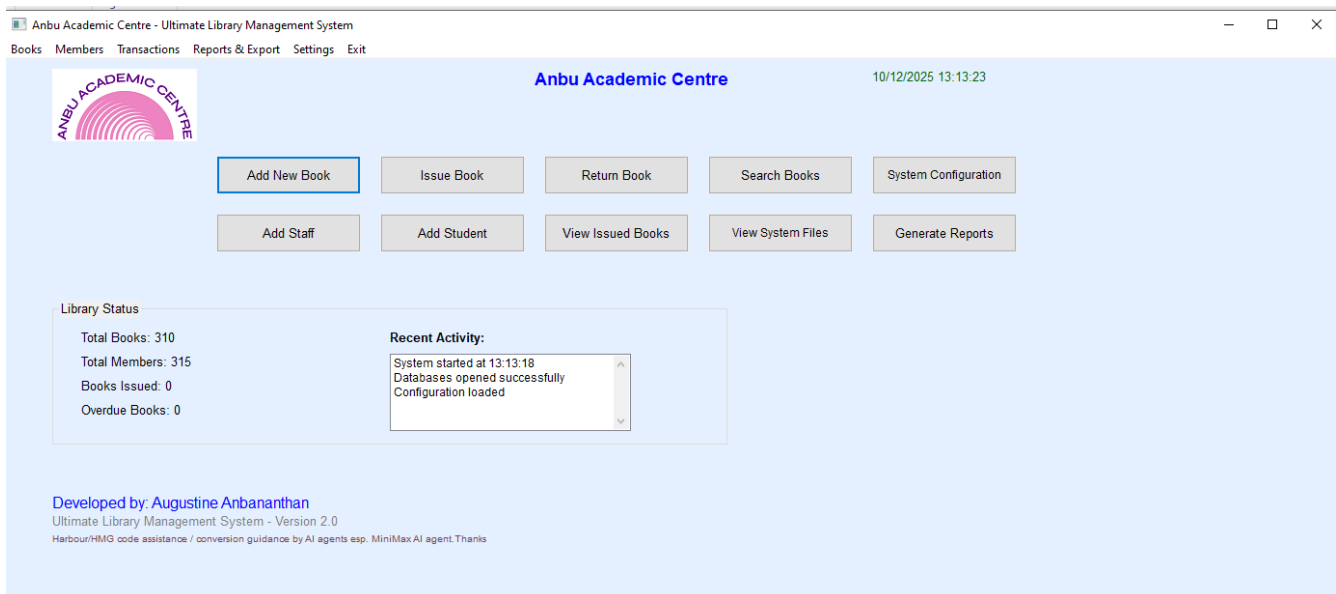
Dashboard Features:
- **Library Status Panel** - Real-time statistics
- Total Books: Current inventory count
- Total Members: Registered users
- Books Issued: Currently borrowed items
- Overdue Books: Items past due date
- **Recent Activity Log** - System events and status updates
- **Quick Action Buttons** - One-click access to core functions

📸 Main Menu Grid View

Add New Book	Issue Book	Return Book	Search Books	System Configuration
Add Staff	Add Student	View Issued Books	View System Files	Generate Reports

Quick Action Button Layout:
Row 1: Add New Book | Issue Book | Return Book | Search Books | System Configuration
Row 2: Add Staff | Add Student | View Issued Books | View System Files | Generate Reports

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📚 Book Management

Books Menu Interface ![Books Menu Screenshot](manual_screenshots/image2.png) **Books Menu Functions:** - **Add Book** - Register new inventory - **Search by Title** - Find books by name - **Search by Author** - Find books by writer - **Search by Subject** - Filter by category - **Search by Access No** - Find by accession number

Adding Books to the Library

Purpose: Add new books to the library inventory with automatic accession numbering.
Process:
1. **Navigate to Books Menu → Add Book**
2. **Enter Required Information:**
- 📖 **Book Title** (Mandatory)
- ✍️ **Author/Editor** (Mandatory)
- 📅 **Publication Details** (Optional)
- 🏷️ **Category/Subject** (Optional)

🔢 Accession Number System

Automatic Numbering: Each book receives a unique accession number automatically. **Data Validation Rules:** - ✅ Title and Author/Editor are **mandatory** fields - ✅ Records without required fields are **automatically deleted** - ✅ Books are saved to `MASTER.DBF` database - ✅ Only add books with **physical stock available** **Database Storage:** All book data is stored in `MASTER.DBF` file

🔍 Search Options

Available Search Methods:
- 📝 **By Title** - Locate books by name
- 👤 **By Author** - Find works by specific writers
- 📁 **By Subject** - Filter by category or genre
- 🔢 **By Accession Number** - Direct physical copy lookup

> ** 💡 Librarian Tip:** Use search functions for quick reference during busy periods. The system handles complete book stock management but does not reflect current availability status.

👥 Member Management

> ### Members Menu Interface ![Members Menu Screenshot](manual_screenshots/image3.png) **Members Menu Functions:** - **Add Staff** - Register new staff members - **Add Student** - Register new student members - **List All Staff** - View complete staff database - **List All Students** - View complete student database

Staff Members

Staff ID Format:
- **Starting Number:** 5001
- **Manual Entry Required**
- **Database:** STAFF.DBF
- **Format:** 5001, 5002, 5003...

Eligibility: All staff members regardless of position or department.

🎓 Student Members

> **Age-Based Eligibility:** - ❌ **Class 3 and below:** Not eligible for membership - ✅ **Class 4 and above:** Eligible for membership - **Database:** STUDENTS.DBF **Student ID Format:**
>
> ```
> Class 4, Section A, Roll No 23 = 40123
> Class 10, Section B, Roll No 33 = 10233
> Class 12, Section C, Roll No 15 = 12115
> ```

> **Format Structure:** [Class][Section][Roll Number]

📊 Class Structure System

School Classes: 1 through 12
Section Coding: A, B, C, D...
Roll Numbering: 01 through maximum class strength

> **🎯 Advantage:** The 5-digit system (10xxx, 12xxx) eliminates any possibility of ID conflicts across different classes.

📤 Issue & Return System

> ### Transactions Menu Interface ![Transactions Menu Screenshot](manual_screenshots/image4.png) **Transactions Menu Functions:** - **Issue Book** - Check out books to members - **Return Book** - Process returned items - **View Issued Books** - Monitor current loans

Book Issue Process

Security Protocol:
- **No books issued without physical presence**
- **Member must hold and show book to librarian**
- **Member Number (MNO) verification required**

Required Information:
1. 🔢 **Member Number (MNO)**
2. 📚 **Book Accession Number**

Process Steps:
1. Verify member identity
2. Check physical book availability
3. Navigate to **Transactions → Issue Book**
4. Enter MNO and Accession Number
5. System automatically processes the issue
6. Record is saved to TRANSACT.DBF

⚡ High-Speed Processing

> **Performance Achievement:** During school break periods, librarians have successfully processed **50 book issuances** using this streamlined method.

Speed Advantage: Simple, two-field entry system eliminates complex procedures and accelerates circulation.

🔁 Book Return Process

Return Methods: **Method 1 - Immediate Processing:** 1. Navigate to **Transactions → Return Book** 2. Enter book accession number 3. System automatically processes return 4. Book status updated instantly **Method 2 - Batch Processing (Librarian Discretion):** - Collect returned books in collection box - Process returns during free time using same interface **Flexibility:** Librarians can choose the most efficient method based on their schedule and workload.

📊 Reports & Analytics

Reports & Export Menu Interface ![Reports Menu Screenshot](manual_screenshots/image5.png) **Comprehensive Reporting System:** **Transaction Reports:** - Print Today's Transactions - Print All Issues - Print All Dues (Overdue) **CSV Data Export:** - Export Books to CSV - Export Staff to CSV - Export Students to CSV **List Printing:** - Print Book List - Print Staff List - Print Student List **PDF Data Export:** - Export Book List to PDF - Export Staff List to PDF - Export Student List to PDF **Utilities:** - Generate Templates

💼 Professional Level Management

Auditor Access: - Use external database managers (e.g., dbfmanager) - Direct access to all `.dbf` files - Complete data transparency - Professional-level auditing capabilities **Database Compatibility:** - ✅ dBase III format - ✅ dBase IV format - ✅ Cross-platform compatibility - ✅ Standard database structure **Database Files Access:** - MASTER.DBF - Complete book inventory - STAFF.DBF - Staff member records - STUDENTS.DBF - Student member records - TRANSACT.DBF - All transaction history

⚙️ Configuration

Settings Menu Interface ![Settings Menu Screenshot](manual_screenshots/image6.png) **Settings Menu Options:** - **Configure School Details** - Set

institution information - **System Configuration** - Technical settings - **About** - Software information and credits

School Details Configuration

Required Configuration:
- School name and address
- Academic year details
- Librarian information
- System preferences
- Logo and branding

Configuration File: `library_config.txt`

Setup Process:
1. Navigate to **Settings → Configure School Details**
2. Enter school information in the form
3. Save configuration
4. Restart application for changes to take effect

Persistence: Configuration is loaded automatically on subsequent program launches.

📁 System Files Management

View System Files Feature ![System Files Viewer Screenshot](manual_screenshots/image8.png) **System Files Viewer Interface:** - **File List Panel** - Browse available system files - **View Selected File** - Display file contents - **Refresh List** - Update file directory - **Delete Selected File** - Remove files (use with caution) **File Types Available:** - **Configuration Files:** library_config.txt, system.txt, system_config.txt - **Templates:** receipt_template.txt, overdue_notice_template.txt, library_rules_template.txt - **Data Exports:** students_export.csv, staff_export.csv, books_export.csv **External Viewing:** Files can be opened in any text editor or word processor for external viewing and printing.

🎯 Quick Reference

Quick Launch Buttons **Purpose:** Streamlined access to frequently used functions **Available Functions:** - 📚 **Add New Book** - Register inventory - 👥 **Add Staff** - Register employees - 🧑‍🎓 **Add Student** - Register students - 📤 **Issue Book** - Check out books - 📥 **Return Book** - Process returns - 🔍

Search Books - Find inventory - 📊 **Generate Reports** - Create summaries - 📁 **View System Files** - Access logs and exports - ⚙️ **System Configuration** - Settings ### ⌨️ Keyboard Shortcuts | Function | Shortcut | |----------|----------| | Add Book | Ctrl + B | | Add Member | Ctrl + M | | Issue Book | Ctrl + I | | Return Book | Ctrl + R | | Reports | Ctrl + H | | Search | Ctrl + F |

📂 Complete File Structure

Program Directory Structure:

```
Anbu Library System/
├── 📁 EXECUTABLES/
│   ├── anbulib.exe          (Main library application)
│   ├── anbulbr.exe          (Library browser module)
│   └── anbu library.exe     (Library interface module)
├── 📁 DATABASE FILES/
│   ├── MASTER.DBF           (Book inventory)
│   ├── STAFF.DBF            (Staff members)
│   ├── STUDENTS.DBF         (Students database)
│   └── TRANSACT.DBF         (Transaction records)
├── 📁 CONFIGURATION/
│   └── library_config.txt   (School configuration)
├── 📁 REPORTS/
│   └── *.txt               (Generated reports)
└── 📁 TEMPLATES/
    └── *.txt               (Print templates)
```

🏛️ Development History

The Story Behind Anbu Library System **Original Development Era:** Year 2000 **Initial Platform:** MS-DOS 5.0 **Developer:** Augustine Anbananthan **Original Client:** Mr. G. Devanathan (Expert Librarian)

📸 About Screen

Software Credits:
- **Developed by:** Augustine Anbananthan
- **Ultimate Library Management System - Version 2.0**
- **Technical Stack:** Harbour/HMG with AI assistance
- **Special Thanks:** MiniMax AI agent for conversion guidance

🎯 Problem Statement

Market Challenges in 2000: - ❌ **Expensive Commercial Systems** - Beyond small school budgets - ❌ **Complex Interfaces** - Required extensive training - ❌ **Slow Processing** - Three times slower than manual entry - ❌ **Generic Solutions** - Not designed for school libraries specifically - ❌ **Bundled Features** - Unnecessary account/attendance modules **The Solution Gap:** Schools needed a simple, affordable, fast library management system designed specifically for educational environments.

💻 Technical Evolution

Original Technology Stack: - **Database:** FoxPro dBase - **Compiler:** wLink compiler - **Platform:** MS-DOS 5.0 - **Files:** 25+ program files (.prg) **Development Journey:** 1. **Research Phase** - Analyzed existing solutions 2. **Design Phase** - Created school-library-specific workflow 3. **Development Phase** - Months of coding 4. **Testing Phase** - Real-world implementation 5. **Deployment Phase** - Successful launch **Performance Achievement:** The system worked "like a warhorse" in actual school environments.

🔄 Modern Revival

Transition Challenge: - DOS programs became obsolete - Need for Windows compatibility - Code preservation in backup drives - Modern development environment adaptation **Modern Technology Stack:** - **Platform:** Modern Windows - **Compiler:** Harbour (FoxPro compatibility) - **AI Assistance:**

> MiniMax AI agent support - **Code Conversion:** Automated syntax translation **Key Differences:** - FoxPro: 4-letter syntax (simple) - Harbour: Space-specific syntax (complex) - Modern: Enhanced compatibility layer

🙏 Tribute

> **In Memory of Mr. G. Devanathan** - **Role:** Expert, experienced, enthusiastic librarian - **Contribution:** Fine-tuned software to finest detail - **Legacy:** Extensive use in multiple schools with great efficacy - **Remembered:** Victim of COVID-19 complications - **Impact:** His expertise shaped this system's practical design *"His contributions remain fresh in my memory" - Augustine Anbananthan*

🔧 Troubleshooting

> ### Common Issues & Solutions

🚨 Windows Security Warning

> **Issue:** "Unknown Publisher" or Windows Defender warning when launching anbulib.exe, anbulbr.exe, or "anbu library.exe" **Cause:** The software is not digitally signed by a recognized certificate authority **Solutions:** 1. **Temporarily disable antivirus** during installation and first launch 2. **Add exception** in Windows Defender 3. **Right-click → Properties → Unblock** (if available) 4. **Run as Administrator** if needed **Developer Note:** *"I had to disable my virus programme to develop this. Nothing more I can do about it."*

📁 File Access Issues

Problem: Cannot read or write database files (MASTER.DBF, STAFF.DBF, STUDENTS.DBF, TRANSACT.DBF)

Solutions:

1. Check file permissions in program directory
2. Ensure all .dbf files are not read-only
3. Verify sufficient disk space
4. Run as administrator if necessary
5. Check if all required database files are present

🔍 Search Not Working

Problem: Search functions return no results

Solutions:

1. Verify correct spelling of search terms
2. Check if data exists in respective database (MASTER.DBF for books, STAFF.DBF/ STUDENTS.DBF for members)
3. Ensure proper field formatting
4. Try partial matches with wildcard characters

💾 Database Corruption

Problem: Database files appear corrupted

Solutions:

1. Check recent backups of .dbf files
2. Use dBase repair utilities
3. Verify file integrity with external tools
4. Restore from last known good backup
5. Ensure proper file closure after each operation

🔧 Configuration Issues

Problem: Program won't launch or shows configuration errors

Solutions:

1. Verify library_config.txt exists in program directory
2. Check configuration file syntax and format
3. Ensure proper school details are entered
4. Use **Settings → Configure School Details** for guided setup

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📞 Support & Contact

Getting Help **Developer Support:** Augustine Anbananthan **Available Support:** - ✅ **Technical assistance** for system setup and configuration - ✅ **Feature explanations** for optimal system usage - ✅ **Troubleshooting support** for common issues - ✅ **Enhancement discussions** for future improvements **Support Promise:** *"I won't hesitate in offering my help and support in this."*

🤝 Community Usage

Encouraged Actions: - Share experiences with other educational institutions - Provide feedback for system improvements - Report bugs or suggest enhancements - Contribute to documentation updates **Mission:** Make quality library management accessible to all schools, regardless of budget constraints.

📋 Quick Start Checklist

Pre-Installation Checklist - [ ] Verify Windows compatibility (Windows 7+) - [ ] Ensure 50MB free disk space - [ ] Prepare school configuration details - [ ] Plan for antivirus exception (if needed) - [ ] Download all executable files (anbulib.exe, anbulbr.exe, anbu library.exe) ### Installation Steps - [ ] Download and extract program files - [ ] Create `library_config.txt` with school details OR use **Settings → Configure School Details** - [ ] Verify all required database files exist (MASTER.DBF, STAFF.DBF, STUDENTS.DBF, TRANSACT.DBF) - [ ] Launch anbulib.exe or anbulbr.exe - [ ] Test basic functions (Add Book, Add Member) - [ ] Configure initial book inventory - [ ] Set up member databases (staff and students) ### Operational Readiness - [ ] Train library staff on interface - [ ] Establish circulation procedures - [ ] Set up reporting schedule - [ ] Create backup procedures for .dbf files - [ ] Document system-specific configurations

🏆 System Benefits

For Schools - 💰 **Cost-Effective** - No expensive licensing fees - ⚡ **Fast Processing** - 3x faster than manual methods - 🎯 **School-Specific** - Designed for educational environments - 📊 **Complete Analytics** - Professional reporting capabilities ### For Librarians - 😊 **User-Friendly** - Intuitive interface design - 🚀 **High Efficiency** - Process 50+ books during breaks - 🔍 **Quick Search** - Instant reference capabilities - 📈 **Professional Reports** - Auditor-level data access ### For Administrators - 💼 **Database Transparency** - Direct access to all .dbf files - 🔧 **System Control** - Complete configuration flexibility - 📋 **Audit Trail** - Comprehensive activity logging - 🔄 **Modern Compatibility** - Windows system integration

🎉 Thank You for Choosing Anbu Library Management System ![Anbu Academic Centre Logo](user_input_files/logo.jpg) **Developed with passion for education

📚 Appendix

A. File Structure (CORRECTED)

```
Anbu_Library_System/
├── anbulib.exe          (Main library application)
├── anbulbr.exe          (Library browser module)
├── anbu library.exe     (Library interface module)
├── MASTER.DBF           (Book inventory database)
├── STAFF.DBF            (Staff members database)
├── STUDENTS.DBF        (Students database)
├── TRANSACT.DBF        (Transaction records)
├── library_config.txt   (Configuration file)
├── Reports/             (Generated reports folder)
└── Templates/           (Print templates folder)
```

B. Database Schema (CORRECTED)

- **MASTER.DBF** - Complete book inventory with accession numbers
- **STAFF.DBF** - Staff member records (starting from 5001)
- **STUDENTS.DBF** - Student member records (class-based numbering)
- **TRANSACT.DBF** - All book issue and return transactions

C. Technical Specifications

- **Database Format:** dBase III/IV
- **File Compatibility:** Standard dBase readers (dbfmanager, etc.)
- **Character Encoding:** ANSI
- **Record Limits:** Based on dBase specifications
- **Backup Format:** Same .dbf structure for restoration

D. Member ID Formats

- **Staff:** 5001, 5002, 5003... (manual entry)
- **Students:** [Class][Section][Roll] format

- Class 4A Roll 23 = 40123
- Class 10B Roll 33 = 10233
- Class 12C Roll 15 = 12115

E. Interface Screenshots Reference

1. **Main Dashboard** - Complete overview with statistics and quick actions
2. **Books Menu** - Inventory management and search options
3. **Members Menu** - Staff and student registration
4. **Transactions Menu** - Issue and return operations
5. **Reports & Export** - Comprehensive reporting system
6. **Settings Menu** - Configuration and about information
7. **System Files Viewer** - File management and templates
8. **Developer Credits** - About screen with technical details

End of Manual