CLAYS POD Order Processing & Inventory Management Tool

A comprehensive web-based application for processing print-on-demand orders and managing inventory for Clays Ltd. Features complete order processing, real-time inventory validation, ISBN lookup, and secure inventory management with password protection.

🚀 Features

Order Processing

- **Excel/CSV Upload**: Process `.xlsx`, `.xls` order files up to 10MB
- **Real-time Validation**: Check ISBNs against live inventory database
- **Smart Filtering**: Toggle to show only unavailable items
- **Bulk Operations**: Select and delete multiple rows, copy to clipboard
- **CSV Export**: Generate Clays POD-compliant CSV files
- **Template Download**: Get pre-formatted Excel template for orders

ISBN Management

- **Individual Lookup**: Quick search for single ISBN availability
- **Format Flexibility**: Accepts ISBNs with or without dashes/spaces
- **Detailed Results**: Shows title, availability status, and setup dates
- **Keyboard Shortcuts**: Press Enter to trigger searches

Complete Inventory Management 🔒

- **Add New Titles**: Upload Excel/CSV files to expand inventory
- **Remove Titles**: Individual or bulk removal of existing titles
- **Dual Preview**: Separate tables for additions and removals
- **Statistics Dashboard**: 6-metric real-time inventory overview
- **Change Management**: Preview all modifications before applying
- **Export Options**: Download updated inventory + backup current database

Security & Access Control 🛡️

- **Password Protection**: Secure access to inventory management functions
- **Session Management**: 1-hour sessions with automatic extension
- **Visual Session Timer**: Real-time countdown with expiration warnings
- **Secure Logout**: One-click session termination
- **Content Security Policy**: XSS protection and resource validation
- **Input Sanitization**: Comprehensive validation of all user inputs

📋 Requirements

Browser Compatibility

- Modern web browsers (Chrome 80+, Firefox 75+, Safari 13+, Edge 80+)
- JavaScript enabled
- File API and Clipboard API support

Required Files

```
project-root/
├── index.html            # Main application interface
├── script.js             # Enhanced application logic
├── data.json             # Inventory database (required)
├── order_template.xlsx   # Excel template for orders
├── new_titles.xlsx       # For inventory additions
├── favicon-32x32.png     # Favicon (optional)
└── apple-touch-icon.png  # Apple touch icon (optional)
```

Inventory Database Format

The `data.json` file must contain an array of book objects:

```
[
  {
    "code": 9781860000000,
    "description": "JACK STALWART: THE SECRET OF THE SACRED"
  },
  {
    "code": 9780099175421,
    "description": "DARK LADY (014)"
  }
]
```

🛠️ Installation

Basic Setup

1. **Download** all project files to a local directory
2. **Create** `data.json` with your book inventory (see format above)
3. **Place** `order_template.xlsx` in the same directory (optional)
4. **Open** `index.html` in a web browser

GitHub Pages Deployment

1. **Create** a new GitHub repository
2. **Upload** all files to the repository
3. **Enable** GitHub Pages in repository settings
4. **Access** via the provided GitHub Pages URL

Local Development Server

For local file restrictions, use a simple HTTP server:

```
# Python 3
python -m http.server 8000

# Node.js (with http-server)
npx http-server

# PHP
php -S localhost:8000
```

📖 Usage Guide

Getting Started

Initial Setup

1. Open the application in your web browser
2. The tool automatically loads inventory from `data.json`
3. Download the order template for standardized Excel format

Default Credentials

- **Inventory Management Password**: `admin123`
- **Session Duration**: 4 hours with automatic extension
- **Access Level**: All inventory modification functions

Order Processing Workflow

1. Basic Order Processing

1. **Enter Order Reference** (required field)
2. **Upload Excel File** with ISBN and Qty columns
3. **Review Results** in the preview table
4. **Filter Issues** using "Show only unavailable items"
5. **Export CSV** for Clays POD processing

2. Excel File Format

Your order files should contain:

Column	Description	Example
ISBN	Book identifier (10-13 digits)	9781234567890
Qty	Quantity to order	5

Supported variations:

- Column names: `ISBN`, `isbn`, `Qty`, `qty`, `Quantity`, `quantity`
- ISBN formats: With/without dashes, scientific notation
- File types: `.xlsx`, `.xls` (max 10MB)

3. Managing Orders

- **Individual Deletion**: Click trash icon in Action column
- **Bulk Selection**: Use checkboxes to select multiple rows
- **Copy to Clipboard**: Export table as HTML for external use
- **Filter View**: Toggle to focus on problematic orders

ISBN Lookup

Quick Search

1. Enter any ISBN in the search field
2. Click "Search Inventory" or press Enter
3. View immediate availability results

Search Results

- **Available Items**: Green badge with title and setup date
- **Unavailable Items**: Red badge with ISBN and not found message
- **Auto-hide**: Success results disappear after 10 seconds

Inventory Management 🔒

Access Control

1. Click "Manage Inventory" in the top navigation
2. Enter password when prompted (default: `admin123`)
3. Access granted for 4 hours with activity extension
4. Visual session timer shows remaining time

Adding New Titles

File Upload Method:

1. Prepare Excel/CSV with ISBN and Description columns
2. Upload via "Add New Titles" panel
3. Click "Process New Titles"
4. Review in preview table with status indicators

Expected File Format:

```
ISBN          | Description
9781860000000 | JACK STALWART: THE SECRET OF THE SACRED
9781860000001 | ANOTHER BOOK TITLE
```

Status Indicators:

- 🟢 **New**: Valid title to be added
- 🟡 **Duplicate**: Already exists in inventory
- 🔴 **Invalid**: Missing description or malformed ISBN

Removing Titles

Individual Removal:

1. Enter ISBN in "Search & Remove by ISBN"
2. Click search or press Enter
3. Found titles are automatically marked for removal

Bulk Removal:

1. Create file with ISBNs to remove:
   - **Text file**: One ISBN per line
   - **Excel/CSV**: Column named "ISBN"
2. Upload via "Upload ISBNs to Remove"
3. Click "Process Bulk Removal"

Removal File Formats:

```
Text file:           Excel/CSV:
9781860000000        ISBN
9781860000001        9781860000000
9781860000002        9781860000001
```

Preview & Management

- **New Titles Table**: Shows additions with status and individual removal
- **Removal Table**: Shows deletions with restore option
- **Statistics Dashboard**: Real-time metrics of all changes
- **Change Reversal**: Click "Restore" to undo individual removals

Exporting Updated Inventory

1. **Review Changes**: Check both preview tables and statistics
2. **Backup Current**: Download current inventory (recommended)
3. **Download Updated**: Get merged inventory with all changes
4. **Deploy**: Replace `data.json` in your GitHub repository
5. **Refresh**: Reload application to use new inventory

Statistics Dashboard

The inventory management interface provides six key metrics:

- **Current Titles**: Existing inventory count

- **To Add**: Valid new titles pending addition
- **To Remove**: Titles marked for deletion
- **Duplicates**: Duplicate entries found in uploads
- **Final Total**: Projected inventory size after changes
- **Net Change**: Overall change (+/- titles)

🔧 Configuration

Changing the Password

Step 1: Generate New Hash

Use browser console to create password hash:

```
const password = "YourNewPassword";
crypto.subtle.digest('SHA-256', new TextEncoder().encode(password))
  .then(hash => {
    const hashArray = Array.from(new Uint8Array(hash));
    const hashHex = hashArray.map(b => b.toString(16).padStart(2,
'0')).join('');
    console.log('New password hash:', hashHex);
  });
```

Step 2: Update Script

In `script.js`, find the `INVENTORY_ACCESS` object and replace:

```
const INVENTORY_ACCESS = {
    enabled: true,
    passwordHash: "your_new_hash_here",
    sessionDuration: 4 * 60 * 60 * 1000 // 4 hours
};
```

Session Management

- **Duration**: Modify `sessionDuration` (in milliseconds)
- **Disable Protection**: Set `enabled: false`
- **Warning Time**: Warnings appear 10 minutes before expiration

Customer Information

Update Clays POD details in `script.js`:

```
const customerConfig = {
    "name": "Your Company Name",
    "address": {
```

```
        "street": "Your Street",
        "city": "Your City",
        // ... other fields
    },
    "phone": "Your Phone Number"
};
```

📤 CSV Output Format

Generated CSV files follow Clays POD specifications:

```
HDR,ORDER123,20240605,Clays POD,Clays Ltd,Popson
Street,,Bungay,Suffolk,UK,NR35 1ED,GB,01986 893 211,
DTL,ORDER123,001,9781234567890,5,,,,,,,,,,
DTL,ORDER123,002,9780987654321,3,,,,,,,,,,
```

Structure:

- **HDR Line**: Header with order details and Clays Ltd address
- **DTL Lines**: Detail lines with line number, ISBN, and quantity

🛡️ Security Features

Content Security Policy

- Prevents XSS attacks through resource control
- Blocks unauthorized script execution
- Validates all external resource loading

Input Validation

- **File Type Checking**: Only allows specified file extensions
- **Size Limits**: 10MB maximum for all file uploads
- **ISBN Validation**: Ensures proper format before processing
- **Text Sanitization**: Removes potentially dangerous characters

Session Security

- **Encrypted Storage**: Password hashes stored securely
- **Time-based Expiration**: Automatic logout after inactivity
- **Activity Extension**: Sessions extend with user interaction
- **Manual Logout**: Immediate session termination available

Error Handling

- **Safe Error Messages**: No sensitive information disclosure
- **Graceful Degradation**: Continues operation despite individual component failures
- **User Feedback**: Clear status messages for all operations

🔍 Troubleshooting

Common Issues

Application Won't Load

- **Browser Console**: Press F12, check Console tab for errors
- **File Location**: Ensure all files are in the same directory
- **JavaScript Enabled**: Verify browser settings allow JavaScript

"Error loading book data"

- **File Exists**: Confirm `data.json` is present
- **Valid JSON**: Check syntax with JSON validator
- **Proper Format**: Ensure array structure with code/description objects

File Upload Problems

- **File Size**: Maximum 10MB limit for all uploads
- **File Type**: Only `.xlsx`, `.xls`, `.csv`, `.txt` supported
- **Column Names**: Use `ISBN`/`isbn` and `Description`/`description`
- **Order Reference**: Must be entered before file upload

Password/Access Issues

- **Correct Password**: Default is `admin123` (case-sensitive)
- **Session Expired**: Re-authenticate if session timeout occurred
- **Browser Storage**: Ensure localStorage is enabled
- **Clear Cache**: Try clearing browser cache/data

Books Showing "Not Found"

- **ISBN Matching**: Ensure exact match with inventory codes
- **Format Consistency**: Check for leading zeros or formatting
- **Database Update**: Verify `data.json` contains expected entries
- **Case Sensitivity**: Descriptions are case-sensitive

Download Problems

- **Pop-up Blockers**: Disable for the application domain
- **Download Permissions**: Check browser download settings
- **File System Access**: Ensure write permissions to download folder

Advanced Troubleshooting

Performance Issues

- **Large Files**: Break large uploads into smaller batches
- **Browser Memory**: Close other tabs if processing large inventories

- **Network**: Ensure stable internet for CDN resource loading

Browser Compatibility

- **Modern Browsers**: Use recent versions of Chrome, Firefox, Safari, Edge
- **Feature Support**: Verify File API and Clipboard API availability
- **JavaScript Version**: Ensure ES6+ support

Security Warnings

- **HTTPS Recommended**: Use HTTPS for production deployment
- **Mixed Content**: Ensure all resources use same protocol
- **CSP Violations**: Check console for Content Security Policy errors

🔄 Maintenance

Regular Tasks

- **Inventory Updates**: Keep `data.json` current with new titles
- **Password Rotation**: Change passwords periodically for security
- **Backup Data**: Regular backups of inventory database
- **Library Updates**: Monitor CDN dependencies for updates

Monitoring

- **Error Logs**: Check browser console for recurring issues
- **Usage Patterns**: Monitor which features are most used
- **Performance**: Watch for slow uploads or processing times

Updates

- **Dependencies**: Keep external libraries updated for security
- **Feature Requests**: Document user feedback for improvements
- **Version Control**: Use Git for tracking changes

📊 Technical Specifications

Dependencies

- **Bootstrap 5.3.2**: UI framework and responsive design
- **Font Awesome 6.4.0**: Icon library
- **SheetJS 0.18.5**: Excel file processing
- **PapaParse 5.4.1**: CSV parsing and generation

Browser APIs Used

- **File API**: For file upload and processing
- **Clipboard API**: For copy-to-clipboard functionality
- **Web Crypto API**: For password hashing
- **LocalStorage API**: For session management

Performance Characteristics

- **File Processing**: Up to 10MB files supported
- **Inventory Size**: Tested with 10,000+ book entries
- **Session Duration**: 1-hour default with extension
- **Response Time**: Near-instantaneous for local operations

🤝 Support

Getting Help

- **Documentation**: Review this README for detailed guidance
- **Browser Console**: Check for error messages and warnings
- **Test Data**: Use sample data to isolate issues
- **Version Check**: Ensure all files are from the same version

Reporting Issues

When reporting problems, include:

- Browser type and version
- Error messages from console
- File types and sizes being processed
- Steps to reproduce the issue

Feature Requests

The application is designed for extensibility. Common enhancement areas:

- Additional file format support
- Enhanced security features
- Advanced reporting capabilities
- Integration with external systems

📝 Version History

v3.0 - Complete Security & Inventory Management

- **Added**: Password protection for inventory management
- **Added**: Session management with visual timer
- **Added**: Complete title removal functionality (individual and bulk)
- **Added**: Enhanced statistics dashboard with 6 metrics
- **Added**: Access status bar with logout functionality
- **Enhanced**: Security headers and input validation
- **Enhanced**: User interface with professional styling
- **Enhanced**: Error handling and user feedback

v2.0 - Enhanced Security & ISBN Search

- **Added**: Individual ISBN lookup functionality

- **Added**: Comprehensive security enhancements (CSP, input validation, XSS protection)
- **Added**: File size limits and enhanced error handling
- **Enhanced**: User interface with responsive design
- **Enhanced**: Inventory addition workflow with preview tables

v1.0 - Initial Release

- **Core**: Excel upload, validation, and CSV export
- **Core**: Order processing with Clays POD format
- **Core**: Batch operations and clipboard integration

📄 License

This application is designed specifically for Clays Ltd print-on-demand operations. All configuration and branding elements are customized for Clays POD workflow requirements.

For technical support or customization requests, please refer to the troubleshooting section above or consult your system administrator.