

ICET Certified Professional

COURSEWORK

Module	Java FX
Coursework Title	Java FX Standalone Application
Coursework Type	Final Course Work

JavaFX Standalone Application Development Projects

Project Overview

This coursework requires students to design and develop real world standalone desktop applications using JavaFX. Each project should simulate a practical business scenario and include appropriate data management, validation, and reporting functionalities. Students must use JavaFX for the user interface and MySQL as the database. Projects should be well structured, visually appealing, and user friendly. Students are encouraged to design their systems to function as realistic, professional desktop applications suitable for business use. Integration of Jasper Reports for generating reports is optional but recommended.

Learning Outcomes

By completing this coursework, students will be able to:

- Design and develop complete standalone applications using JavaFX.
- Connect and manage data using MySQL.
- Apply software development principles, including system design, validation, and reporting.
- Implement user interfaces that follow modern design standards.
- Demonstrate an understanding of real-world system design and functionality.
- Use version control practices effectively for project management and submission.

Project Titles

1. Clothify Store (POS System)

Develop a standalone application that automates the operations of a clothing store. The system should handle product management, inventory updates, supplier and employee records, order processing, and basic reporting.

It should represent a complete, user friendly point of sale experience.

Key Functionalities:

- User login and authentication for admin and staff.
- Product and category management (add, update, delete).
- Inventory tracking with real-time quantity updates.
- Supplier and employee record management.
- Order placement and invoice generation.
- Basic sales and inventory summary reports.
- Search and filter options for products and transactions.

2. Book Rental Management System

Create a system to manage book rentals for a library or bookstore. The system should include features to manage books, customers, rental transactions, and returns.

It should represent a complete, user friendly point of sale experience.

Key Functionalities:

- User authentication and role-based access (admin/staff).
- Book registration with title, author, category, and quantity details.
- Customer registration and profile management.
- Book rental and return process with issue and return dates.
- Calculation of overdue days and fines for late returns.
- Search and filter books or rentals by name, ID, or date.
- Generate rental and return history reports.

3. Pharmacy Inventory Management System

Develop a standalone application to manage a pharmacy's stock, suppliers, sales, and expiry tracking. The system should automate daily operations, ensuring accuracy in medicine inventory, supplier records, and billing.

It should represent a complete, user friendly point of sale experience.

Key Functionalities:

- Medicine management (name, brand, expiry date, quantity, price).
- Supplier management and contact record maintenance.
- Sales and billing system with transaction details.
- Expiry alerts that highlight or notify expiring medicines.
- Stock summary and sales reports.
- Search and filter options for medicines and sales history.
- Low-stock and expiry notification dashboard.

Project Submission Requirements

Milestone 01: Design Phase

- Submit the Figma UI design link that represents the planned user interface layout of the application.
- This milestone represents the planning and design phase of the project.

Milestone 02: Final Submission

- Develop a fully functional JavaFX standalone application
- Connect the system to a MySQL database.
- Integrate Jasper Reports for report generation.
- Submit the GitHub repository link containing all source code, assets, and resources.
- ***The final project submission must include at least 30 commits in the GitHub repository.***

Deadline

- Refer to the LMS for the official deadline date.

Late submissions will negatively impact your academic progress and may affect your final evaluation.