Software Design Patterns

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# Introduction

# Existing System Overview

The ToolSYS application is a management system designed to streamline operations for a tool rental business. The application was developed during the second year "Requirements Engineering" and "Software Engineering Project" modules and was built using Visual Studio with Windows Forms for a straightforward, user-friendly solution.

The system is organised into five main sections: Rates, Tools, Customers, Rentals, and Admin.

* Rates Module – This module allows users to define categories of tools and their associated rental rates, ensuring that rental fees are calculated consistently.
* Tools Module – This module manages all aspects of tool management, including adding new tools, updating their details, removing unavailable tools, and viewing the complete inventory.
* Customers Module – This section focuses on customer information, enabling users to add, update, and view customer details.
* Rentals Module – This module facilitates the tool rental process, allowing users to rent tools, return them, and view rental records.
* Admin Module – This section provides analytical features, such as annual revenue reporting and tool type usage analysis, offering valuable insights into business performance.

A diagram of tools

Description automatically generated

# Design and Architectural Pattern Exploration

# Design and Architectural Pattern Implementation

# Testing and Validation