Tool Rental Application Architecture

This document describes the architecture of tool rental application

# System Overview:

A screenshot of a black and white screen

Description automatically generated

# Technical Architecture:

## Classes:

Tool

* toolCode: String
* toolType: ToolType
* brand: String

RentalAgreement

* toolCode: String
* toolType: ToolType
* brand: String
* rentalDays: int
* checkoutDate: Date
* dueDate: Date
* dailyRentalCharge: double
* chargeDays: int
* preDiscountCharge: double
* dicountPercent: int
* discountAmount: double
* finalCharge: double

* typeName: String
* dailyCharge: double
* weekdayCharge: Boolean
* weekendCharge: Boolean
* holidayCharge: boolean

ToolType Enum:

Values:

ToolType Enum:

LADDER, CHAINSAW, JACKHAMMER

## Services:

RENTAL SERVICE:

Handles the business logic related to rental agreements, such as calculating charges, applying discounts, and generating rental agreements

RentalService(Tool, numberofDays, discounts, holidays):

Implements logic as per functional spec and returns the RentalAgreement object

# DATA MODEL:

Implement persistence representation of classes

# UI:

Implement UI wireframes, navigation

# Exception handling:

Checkout should throw an exception with an instructive, user-friendly message if

● Rental day count is not 1 or greater

● Discount percent is not in the range 0-100

# Security Architecture:

Typically we will document authentication, authorization, network security requirements if any here

# logging:

Implement logging to track application events and errors for debugging and monitoring purposes.

# Deployment Architecture:

Typically we will document view of the components once deployed.