Scope Statement

Of

Automated Waste Disposal (Phase 1)

for

Purbachol City Corporation

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1. Introduction

The "Purbachal City Corporation (PCC)" is planning to automate their waste management system to develop an efficient system of waste disposal.

2. Functional (Business) Requirements

The software is a bundle of two separate products:
- Desktop based Win Client directly connected to weighbridge
- Browser based Web Dashboard hosted on public cloud

2.1 Win Client

I. The Win client, hereafter will be called "Win App", will be connected to weighbridge through Serial Port (RS-232). There are different branded weighbridge but at first phase it'll support the most common one "Rinstrum".

II. Multiple Weighbridge can be connected to a single Win Client. However, at any point of time a single Weighbridge load can be captured.

III. For multi deck weighbridge it should capture all axle weight separately and sum them up.

IV. After a truck comes in the driver will enter Registration Number to proceed.

V. Driver detail, truck detail, product information, maximum load for each axle should be recorded earlier from Web Dashboard.

VI. If the truck is overloaded the truck must drive off and tip off extra load and reweigh.

VII. Any overloaded transaction should be recorded but no docket will be issued.

VIII. Docket will be issued for the truck and will be printed. The printer can be a RS-232 or USB printer.

IX. A sample docket will contain the following fields:
- ✓ Docket Number (unique number)
- ✓ The number will be combination of site prefix, weighbridge prefix and a unique auto increment number within the site & weighbridge. By generating number in this way we can ensure unique number even on the case of offline transaction.
- ✓ Job Number
- ✓ Registration number
- ✓ Driver Name
- ✓ Customer Name
- ✓ Deck 1 Weight
- ✓ Deck 2 Weight
- ✓ Deck 3 Weight
- ✓ Deck 4 Weight
- ✓ Gross Weight (Deck 1 + Deck 2 + Deck 3 + Deck 4)
- ✓ Tare Weight (if tare weight is not available then it must be recorded during the entrance of the truck when it is empty). So, docket number will always be issued when weighing out from source. Nothing will happen at destination except printing the destination along with source at the docket.
- ✓ Net Weight
- ✓ Product
- ✓ Source
- ✓ Destination
- ✓ Date & Time

X. The Win Client must be able to run standalone in case of internet failure. Therefore, a local database must be available to run the operation. It'll be good enough to keep record for only that particular site.

XI.   On internet availability both local and cloud database must be synched.

XII.   The Winclient must also have option for credential validation with auditing.

2.2 Web Dashboard

I.   The Web Dashboard, hereafter will be called "Web App", will be a cloud hosted multi-tenant application with tenant isolation.

II.   There should be a single web for all tenant.

III.   Tenant information:
- ✓ Tenant Name
- ✓ Street
- ✓ City
- ✓ Postal Code
- ✓ Phone
- ✓ Email

IV.   Site Information (a tenant can have multiple sites)
- ✓ Site Name
- ✓ Site Prefix
- ✓ Street
- ✓ City
- ✓ Postal Code
- ✓ Phone
- ✓ Email

V.   Weighbridge Information (a site can have multiple weighbridge)
- ✓ Weighbridge Name
- ✓ Weighbridge Prefix
- ✓ Location (loading point)
- ✓ Total Deck

VI.   Vehicle Information (a tenant can have many vehicles and each vehicle can go any site and weighbridge)
- ✓ Registration number
- ✓ Fleet No.
- ✓ Tare
- ✓ Steer Axle Max Load
- ✓ Second Axle Max Load
- ✓ Second Axle Max Load
- ✓ Third Axle Max Load

VII.   Driver Information (a driver can drive any vehicle of his tenant)
- ✓ Driver Name
- ✓ Street
- ✓ City
- ✓ State
- ✓ Postal Code
- ✓ Phone
- ✓ Email

VIII.   Customer Information
- ✓ Customer Name
- ✓ Street
- ✓ City
- ✓ State
- ✓ Postal Code
- ✓ Phone
- ✓ Email

IX.   Product Information

        ✓   Product Code
        ✓   Product Name
        ✓   Product Description

X.   A job should be created when a truck is ready to load from source to destination with the following information
        ✓   Job No
        ✓   Source Site
        ✓   Destination Site
        ✓   Product
        ✓   Driver
        ✓   Customer

3. Non-Functional Requirements

3.1 Role

Roles are unique irrespective of tenant. So, all tenant will have all the roles except Super Admin. The Super Admin role is solely for the Weighbridge vendor to create new tenant. There will be four type of roles.

i.   Super Admin:
        ✓   Tenant Creation.

ii.   Site Admin:
        ✓   Site Creation
        ✓   User Creation
        ✓   Weighbridge, Vehicle, Driver, Customer & Product management

iii.   Manager:
        ✓   Report Generation

iv.   Operator:
        ✓   Job Creation
        ✓   Weighbridge operation
        ✓   Printing Docket
        ✓   Recording Tare Weight (weight of empty vehicle)

3.2 Users

A user can have one or multiple role. However, no user can have Super Admin Role except Weighbridge vendor.

i.   User of one tenant can't access other tenant data.

ii.   The user name must be unique irrespective of tenant. We can use the email address as user name to sign in.

iii.   User can reset his password by himself.

iv.   There should be a password lifetime after which user will be forced to change his password.