**IST 659 Summer 2024**

**Project Proposal: Landscaping Quote Management System**

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**Business Description**

The goal of this project is to create a quote estimation system specifically for landscaping businesses. This system will help businesses provide accurate and professional estimates for their services, enhancing customer satisfaction and operational efficiency. By tracking customer information, default material costs, service costs, employee wages, and generating detailed invoices, the system ensures that businesses can maintain profitability by accurately calculating business costs and profit margins as they create quotes and bids.

**Problem Statement**

Landscaping businesses often struggle with manual or outdated methods for providing job estimates, leading to several issues:

* **Inaccurate Quotes**: These can result in undercharging or overcharging customers, causing financial losses or customer dissatisfaction.
* **Inconsistent Features and Pricing**: Variability in the features and pricing offered can confuse customers and lead to a lack of trust in the business.
* **Inefficiencies**: Manual processes are time-consuming and prone to miss-estimation or errors, affecting both the business and its customers.

To ensure a profitable business, it is essential to have a clear understanding of business costs and profit margins when creating quotes and bids. This project aims to address these issues by developing a streamlined and user-friendly job estimation system that integrates material costs, service costs, and employee wages to provide accurate and profitable quotes.

**Proposed Solution**

The proposed solution is a landscape job estimation platform with the following features:

1. **Job Estimating**:
   * Allow customers to submit requests for job estimates.
   * Provide instant quotes for standard services and customizable options for unique situations.
   * Track and manage job estimates through the system.
2. **Customer Management**:
   * Store and manage customer contact information.
   * Maintain a history of estimates provided to each customer.
3. **Materials Management**:
   * Maintain a default material cost list.
   * Track materials used in estimates.
4. **Cost Templates**:
   * Create cost templates for common jobs.
   * Include default material costs and employee man-hours in templates.
5. **Employee Management**:
   * Store employee information including hourly wage.
   * Calculate estimate wage costs based on employee data.
6. **Auto Invoicing**:
   * Generate and send invoices based on approved estimates.

**Users**

The primary users of this system include:

1. **Customers**:
   * Request job estimates online.
   * Receive and review job estimates.
   * Receive automatically generated invoice upon quote acceptance.
2. **Business Owners/Managers**:
   * Manage job estimates and customer information.
   * Ensure accurate, consistent, and professional estimates are provided.

**Potential Entities and Attributes**

1. **Customers**: Stores customer information.

* Customer ID
* Name
* Address
* City
* Zip code
* Email
* Phone number

1. **Quotes**: Tracks job estimates provided to customers.

* Quote ID
* Customer ID
* Service Type
* Updated Date
* Address
* Project
* Version
* Estimate Status
* Proposal (yes/no)
* Quote Expiration Date
* Total Price

1. **Invoices**: Manages invoices generated from quotes.

* Invoice ID
* Quote ID
* Amount
* Payment Status

1. **Materials**: Details of materials used for services.

* Material ID
* Material Name
* Description
* Default Price

1. **Services**: Information about the services offered.

* Service ID
* Service Name
* Description
* Default Price

1. **Employees**: Tracks employee information and wage details.

* Employee ID
* First Name
* Last Name
* Email
* Hourly Wage

1. **Invoice Line Items**: Details of line items in invoices, including references to materials, services, and employees for pricing.

* Line Item ID
* Invoice ID
* Material ID (nullable)
* Service ID (nullable)
* Employee ID (nullable)
* Quantity
* Unit Price
* Total Price