

# IT214 DATABASE MANAGEMENT SYSTEM PROJECT

**Project Title :** Tiles Industry Database

**Lab-Group No. :** 3

**Team Id :** G3\_13

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## **Problems faced by industries :**

In Industries, without any type of management system, we face many types of problems like managing production, customers, employees, Orders, etc. If we can't use any structured approach then we can't handle these things properly.

Poor Financial Management : Managing finances is an essential part of running a business. Without a management system to track expenses, revenue and profits, it becomes difficult to understand the business's financial health. This can lead to poor decision-making and cash flow problems. In short, if we don't have any type of data then we can't increase profitability and also can't reduce costs.

Lack of Strategic Planning: A management system enables a business to set goals, create a plan to achieve them and track progress toward them. Without a management system, there is a lack of strategic planning which can lead to a lack of direction, missed opportunities and reduced growth potential.

## **Project Scenario :**

Here, We can try to resolve the above problems with the use of DBMS. So we choose real-life tiles industry examples and try to do our best. So, We select the project based on the tiles industry database management system.

The Tiles Factory produces and sells various types of tiles such as ceramic, vitrified, double charge, parking, etc. And the factory has multiple departments such as production, stock, sales, and accounting. The management wants to develop a DBMS to manage the operations of these departments.

## **Features :**

1. Production Department : The production department is responsible for producing tiles from raw materials. The DBMS will have a module to manage the production process. It will include details such as raw material inventory, production output, product name, product category, product size, sale price, etc. By using these data we can make better tiles at low cost.
2. Stock Management : The stock module will keep track of the stock of raw materials and finished products such as product quantity, row material quantity, etc. The stock module will allow the stock manager to monitor the stock levels of raw materials and finished products, track the movement of goods, and generate reports to analyze the stock levels.
3. Sales Management : The sales module will keep track of customers, customer orders, delivery schedules and billing information such as order quantity, order price, the purpose of use, etc. It will also allow the sales manager to enter customer orders, delivery dates and generate invoices.
4. Accounting Management : The account module will manage financial transactions such as purchases, sales, expenses and payments and it will also include the details about row-material bills, order bills, etc. It will allow the account manager to enter financial transactions, generate financial reports and reconcile accounts. This module will also include features to manage payroll, handle taxes and comply with accounting regulations.
5. User Authentication and Authorization : The system will have a user authentication and authorization mechanism to ensure that only authorized users can access specific modules and features. This module will allow the administrator to create user accounts, assign roles, and manage access permissions.

6. Security : The system will have robust security measures to protect the data from unauthorized access, modification, and deletion. The system will include features such as data encryption, user authentication, access control, and backup and recovery.

Overall, the DBMS will help the industry management to monitor and control the operations of the factory efficiently. It will also provide valuable insights to improve production efficiency, reduce costs, and increase profitability.

### **Tentative list of queries :**

1. What is the average price of tiles in a particular region or country?
2. Which tile brands have the highest sales in a given time period?
3. What type of tiles is the most and least popular among customers based on rating?
4. Which tile designs(category) are currently trending in the market?
5. What are the top-selling tile brands in the past year?
6. Which regions have the highest demand for glass tiles?
7. Which colors/types are most popular for kitchen/bathroom backsplash tiles?
8. What are the most common sizes of tiles used in commercial flooring applications?
9. Which type of tiles have the highest margin?
10. Give the price range of tiles based on category.