

Intelligent System for Factory Operations

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ABSTRACT

The broad functional goals of the Intelligent System are providing expert assistance in the accomplishment of professional and managerial tasks, and Integrating and coordinating the management of the organization. A system for factory operations which serves many industries and various functional areas in an integrated fashion, attempting to automate operations from supply chain management, manufacturing scheduling and production, sales support, customer relationship management and almost any other data oriented management process. Much software are available in market but these all are mainly designed for large scale business and most of them are very complicated, installation and maintenance is costly and they cannot be modified. This system is designed in such a way that modification & updating is possible according to user's requirement. Reusable software reduces design, coding and testing cost by eliminating effort over several designs.

Key words: Database, Supply chain management, Manufacturing Scheduling, Ease of use, Reduction in design & coding

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INTRODUCTION

A business is an organization involved in trades of goods, services or both to customer. It's very chaotic job to keep records manually in register. While searching a particular record we have to go through entire register which is a critical and time taking. To match with faster world, it is necessary to be fast & accurate. Intelligent system for factory management is the ultimate solution in that case. It is much suitable for medium scale industries than available softwares which are complicated and costly. This system provides ease in modification at user end. It facilitates changes in software according to user's requirements. This intelligent system for factory operations also provides security by allowing username and passwords.

Intelligent system for Factory Operations covers following operations:

- A. Maintaining all purchase orders
- B. Maintaining all production details
- C. Maintaining all dispatch data
- D. Report Generation

PROPOSED SYSTEM

The proposed system is fully automated and maintains various records. The system preserves the records of various clients like individuals, dealer and details of transaction like production on everyday basis, dispatch. If the user wants to investigate the records of existing table, instead of turning pages of register he can easily access data through computerized system.

Automatic report generation facility is also developed by the system. The system maintains all the records regarding production, clients and transport details and using this system one can add, delete, and modify save records whenever required.

Proposed system is fully computerized and secured. There is less chance of loss record & it is not possible for any unauthorized person to interfere the system as username & password is provided.

If we want to search the record within a minute we can discover it using find button. By using this system organization could maintain its records effectively.

This system consists of following modules:-

A] Master: This module consist of

1. Product Information: Product information can be given and updated
2. Add Client: Client information can be added under this module.
3. Add Product: Products with specifications and IDs are added and updated whenever required.
4. Production: Towards fulfillment of orders.

B] Transaction:

1. Receive Order: Order is received with product ID, order number, date and quantity
2. Product: Has model number and ID
3. Transport: It consist of client name, address and contact details.
4. Bill: It includes date, order number, bill number and price
5. Pending order: (If any)

C] Reports: This module is to be designed for generating reports which is important task towards record keeping.

1. User: This report includes orders, product details and billing information
2. Production: Report for production is required to be generated towards fulfillment of orders
3. Client: These reports usually have billing details.
4. Sales

D] About Us: It gives company details.

E] Exit: Termination of task.

FEASIBILITY

A. Technical feasibility: It deals with the software and hardware requirements.

This system is designed by keeping in view the response of system, space utilization, security, reuse of code and modifications for implementing next versions.

B. Operational feasibility: It checks whether user of the system be able to handle the system.

This system is user friendly; search for particular data is possible by date or month, pending order information is available, reports are generated which will help for record keeping and coordination, the system can be used for on time delivery.

ENTITY RELATIONSHIP DIAGRAM

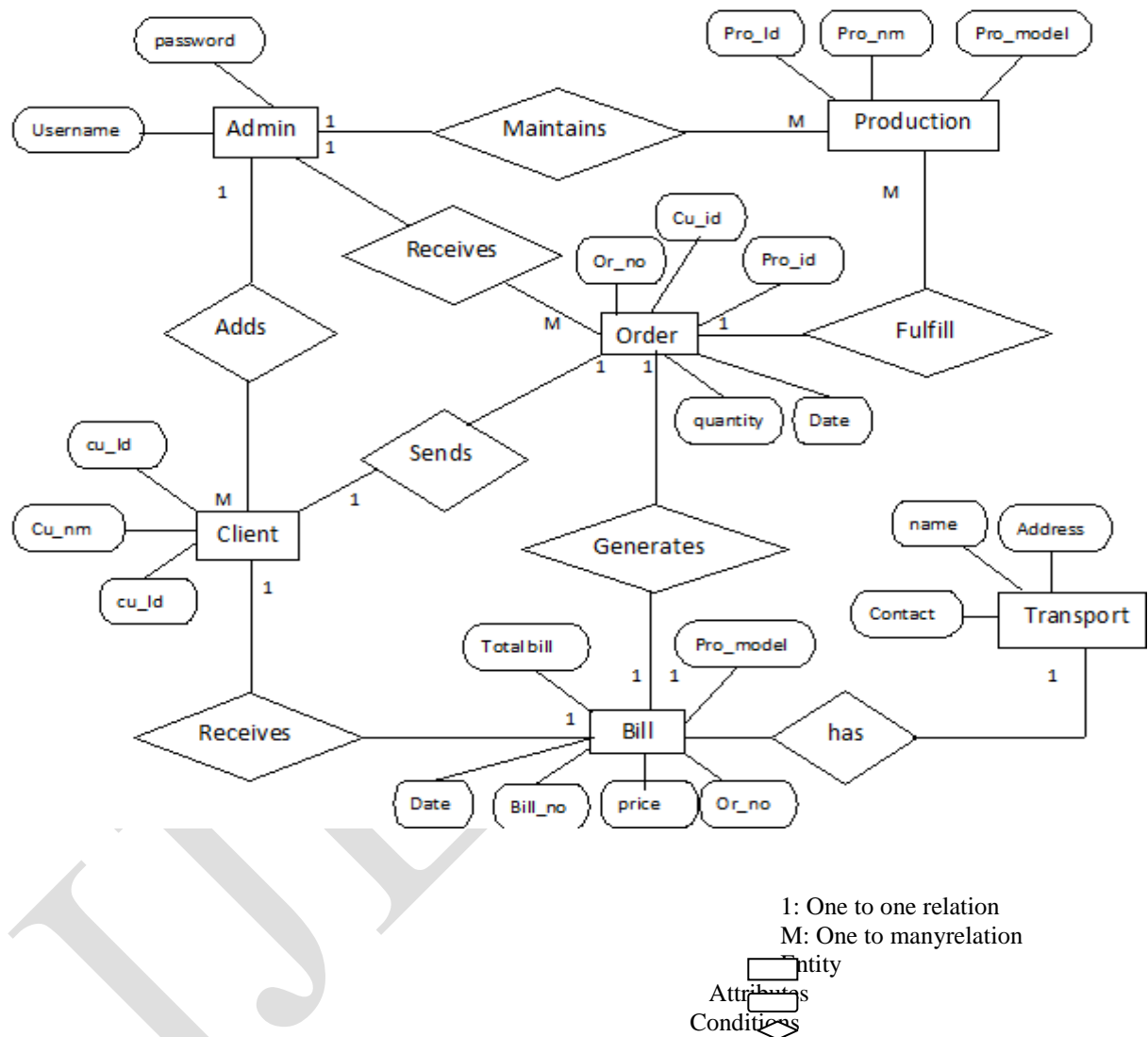


Figure 1. Entity relationship diagram

Security is provided by user name and password. Admin has all the authorities related to system. Admin can add no of clients along with their information. Admin can update all product related information like specifications and parameter of products. System accepts order information like product along with their quality according to clients requirement. Production is related with every day manicuring data updates. Transaction module contains 1. Transport: it contains all the dispatch related information, transport information. 2. Bill : it generates bill for order. 3. Pending order

ADVANTAGES

This system has many advantages. Few of them are –

1. less space utilization
2. fast response
3. better security
4. menu oriented search

CONCLUSION

This system is useful for small/medium scale business. This application can be easily implemented under various situations. We can add new features as and when we require.

The main features are:

- Less complex.
- Economically feasible.
- It is user friendly & menu driven.
- Customized system.
- You will require less number of Staff to cater more clients in same time or even less.
- You would have the choice to re-deploy them at other suitable locations.
- This system can add, update, delete and find the records of the product, client, and reports stored.

This system is stand alone and can be made available on network. It can be made multiuser keeping security in mind.

As reusability is possible, next version can be updated according to new requirements of user.

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Volume 5, Issue 6 (December 2012)

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