

Computerized Apparel Management System

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ABSTRACT

A detailed study of the organization, functioning and requirements for the development of new information system of Apparel Management for Rimsha Enterprises, Faisalabad was carried out to update and maintain the with a fast, feasible and efficient information system that could hold huge records over the years. Computerized Apparel System was designed using Oracle 8i and Developer 6i. The new design eliminated the chances of wastage of time and ensured very user friendly access to the data and information related to the customer orders.

Key Words: Computer; Apparel management system; Software

INTRODUCTION

The usage of computers makes it possible to do efficient and quick work, and get accurate results in every field of life e.g. industry, agriculture research, engineering, medical. It is extremely difficult to organize and carry out to maintain the current and old official records manually. Most of the organizations are manipulating their data manually, putting their precious time and records at risk, without any security. The search for a specific file is cumbersome process and some time they fail in their search, this leads to realization to ease their work, which is possible with computers having sophisticated and user-friendly software.

The present project was aimed at the designing of such database system for the industry. For this project, it was decided to use Oracle 8i and Developer 6i due to their designing options and data handling capacity. The objectives of the present project included to find out data management requirements, analyze of current manual system, feasibility study and to study the implementation of Apparel Management System in the Industry.

The old system of the Rimsha Enterprises was analyzed and after a proper situation analysis, it was decided to develop a complete information system to fulfill the requirements of the Industry.

METHODOLOGY

A system is an inter-related set of components with an identifiable boundary, working together for some purpose. Hoffer *et al.* (1998) described nine characteristics of a system. These characteristics are: components, inter-related components, a boundary, a purpose, an environment, interfaces, input, output, and constraints. The development of a system, which fulfills all the requirements of the end user keeping in view all the constraints, is a very complex process that cannot be completed in a single step. Sanders (1988) stated that the system flow charts are used to record

the flow of data. The system development is performed in a series of steps and these steps are called phases of the system development life cycle (Shally, 1991). These steps are: Preliminary investigation; System analysis; System design; System implementation; System operation and support.

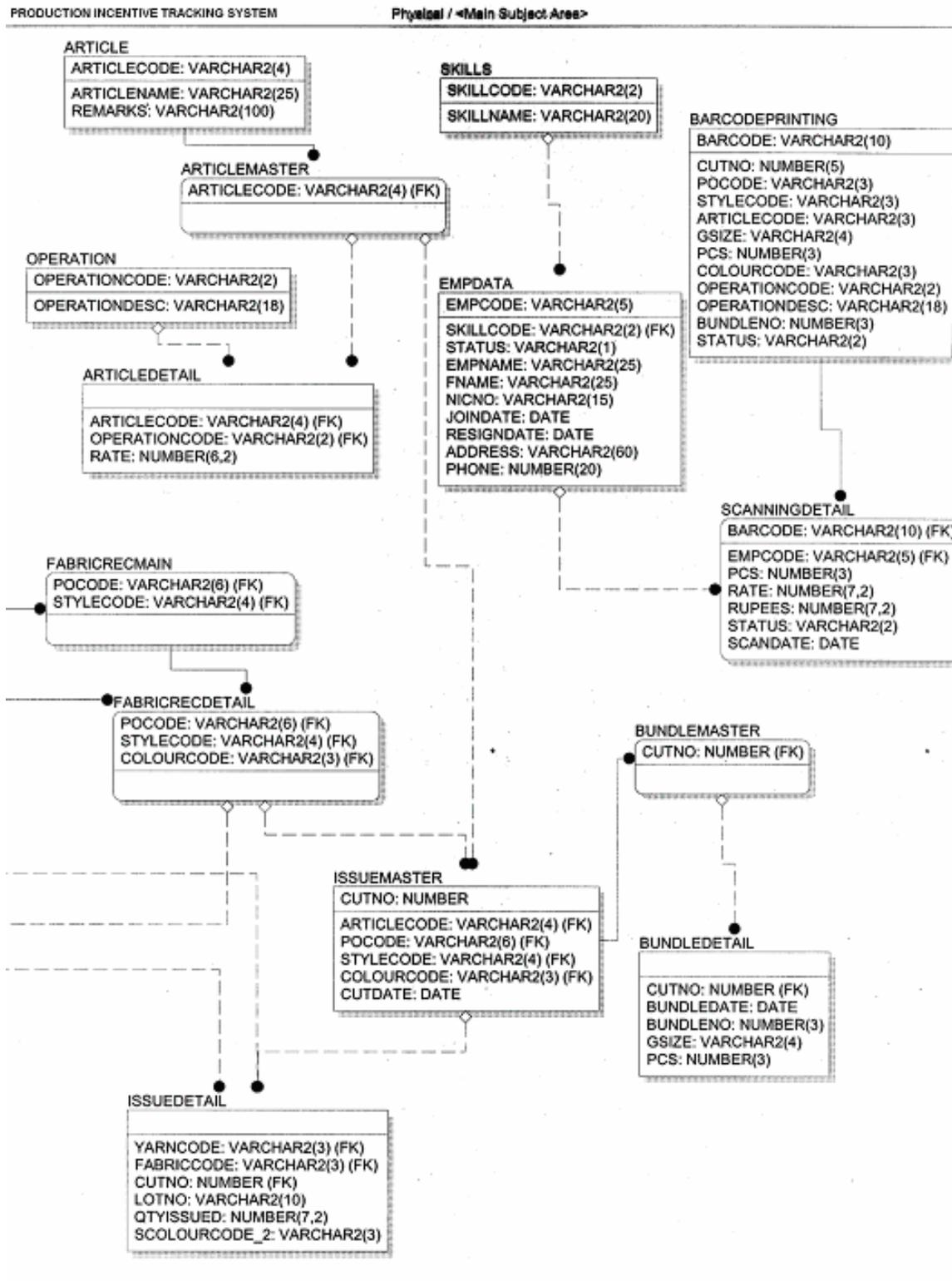
Preliminary investigation. The purpose of preliminary investigation phase is to identify clearly the nature and scope of the existing problem mentioned in the system request. A written request from the management or end user triggers the start of the system development life cycle. The written request is called System Request (SR). A system request has feasibility if the request can be successfully implemented. Three separate types of feasibility are technical, operational and economic feasibility.

To conduct a successful preliminary investigation, following five basic steps of preliminary investigation should be performed. These steps are followed regardless of the size of the project. These steps are: to obtain authorization to proceed; to identify the necessary information; to perform fact-finings to gather the required information; to analyze the information and to report the management.

System analysis. During the system analysis phase, the main task is to gather and record the facts about the current system, whether the system is manual or computer based, and what is required to support management needs. In the system analysis phase all the techniques applied in the preliminary investigation phase are applied but in detail.

System design. The most creative and challenging phase of system development life cycle is system design. The logical design of an information system defines the logical functions and features of the system and the relationships among its components. The logical design includes the output that must be produced by the system; all the input needed by the system, and processes that must be performed by the system. In contrast the physical design of an information system is plan for the actual implementation of

Fig. 1. Production incentive tracking system



continued

the system. The physical design is built on the system's logical design and describes the implementation of a specific set of system components. The system design activities include: Review the system requirements; Design the system; Present the system design.

System implementation. The purpose of the implementation phase is to transform design into executable computer software, which will be then tested, implemented, and evaluated. For software development, it is necessary to identify functional requirements of the system. For system development, selection of software and hardware is very vital for success of any system. Developing the software consists of following basic steps: Analyzing; Coding; Testing; Documentation.

System operation and support. The system operation and support phase begins when a system becomes operational and ends when it is replaced. The system's analyst's most important goal is a system that meets business needs and is efficient, easy to use, and affordable. After delivering the system, the analyst has two other important tasks. The first is to provide guidance and user training, which can include formal training sessions, technical support, and the creation of a centralized information center. The second responsibility is to perform necessary maintenance to keep the system operating properly and increases its value to users.

Various statistics are available to access system performance. An analyst working on the any system needs to analyze performance by measuring the response time, turn round time, and throughput time.

A typical Computer Aided Software Engineering (CASE) maintenance toolkit provides various tools for systems evaluation and maintenance, including a performance monitor, a program analyzer, an interactive debugging analyzer, a restructuring tool or a reengineering tool, automated documentation tools, network activity monitors, workload forecasting software.

RESULTS AND DISCUSSION

The computerized information system was developed for *Rimsha Enterprises* results regarding different steps of SDLC were similar to those of reported by Shally (1998) are presented in the script (Fig. 1). On completion of the preliminary investigation phase a preliminary investigation report was presented to the management to inform them about the working of the old system, its drawbacks, proposal for the new system, expected benefits and other facts like cost estimates etc. After getting approval the system analysis phase was started.

During system analysis phase all the steps used for preliminary investigation were applied in detail, data flow diagrams (DFDs) were drafted to examine the flow of data in existing system. The end product of this phase was system requirements document, which was presented to management and their approval was obtained. System

design phase deals in output design, input design, and database design of the project. The results of the queries used for generating the output of the system are similar to those of Gennick (2000), who presented a methodology for developing the queries. The data normalization techniques given by Date (1999) are found effective. At the end of this phase system design specification was made. The findings in this phase are coinciding with those of Ali (1990) who reported that the system provides online computerized facility which can store, update and retrieve the information.

The forth phase in which after review all the documents that have been made in the previous phases the coding of the software was started choosing the tools Oracle and Developer. Then the software was tested using different testing techniques like desktop testing, unit testing etc. as presented by the Jalote (1998). On completion of this phase complete working information system was in hand. The last phase of the SDLC consists of checking the performance of the system and observing whether it is working according to the user's requirements. In this phase different types of maintenance are adopted like corrective adoptive and perfective. Different measures for maintenance, and managing system performance were explained to users.

After the implementation of the project it was evaluated so that its benefits for the company can be measured. The following advantages were obtained: The new system gave complete and clean reports of all the operations on the requirement basis; Production Control; Daily Purchase Order Wise; Production , Finishing and Packing status; Decrease the rejection rate by watching operation wise status; Accurate Calculation of workers wages; Quick report for dispatch (Packing List); Quick Status of fabric / Accessories, Required/Received/Stock in hand; Back Tracking System; Worker wise efficiency report; Order wise manufacturing cost; Only those users are given access that has the authority to use it; Human intervention has been minimized in the system

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