Office Automation and Transaction Processing Systems

BBA 510113: Computer and Information Technology

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Office Automation System

Office automation refers to the varied computer machinery and software used to digitally create, collect, store, manipulate, and relay office information needed for accomplishing basic tasks. Raw data storage, electronic transfer, and the management of electronic business information comprise the basic activities of an office automation system. Office automation helps in optimizing or automating existing office procedures.

The backbone of office automation is a LAN, which

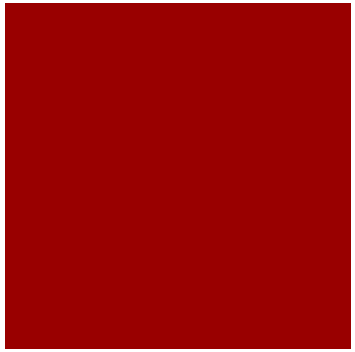
Office Automation System

allows users to transfer data, mail and even voice across the network. All office functions, including dictation, typing, filing, copying, fax, Telex, microfilm and records management, telephone and telephone switchboard operations, fall into this category. Office automation was a popular term in the 1970s and 1980s as the desktop computer exploded onto the scene.

Advantages of Office Automation

- Office automation can get many tasks accomplished faster.
- It eliminates the need for a large staff.
- Less storage is required to store data.
- Multiple people can update data simultaneously in the event of changes in schedule.

Examples of Office Automation



- Employee analytics.
- Hiring process.
- Employee help desk support.
- Meetings.
- Form auto fill.
- Facility management.
- Office design.
- Customer support.

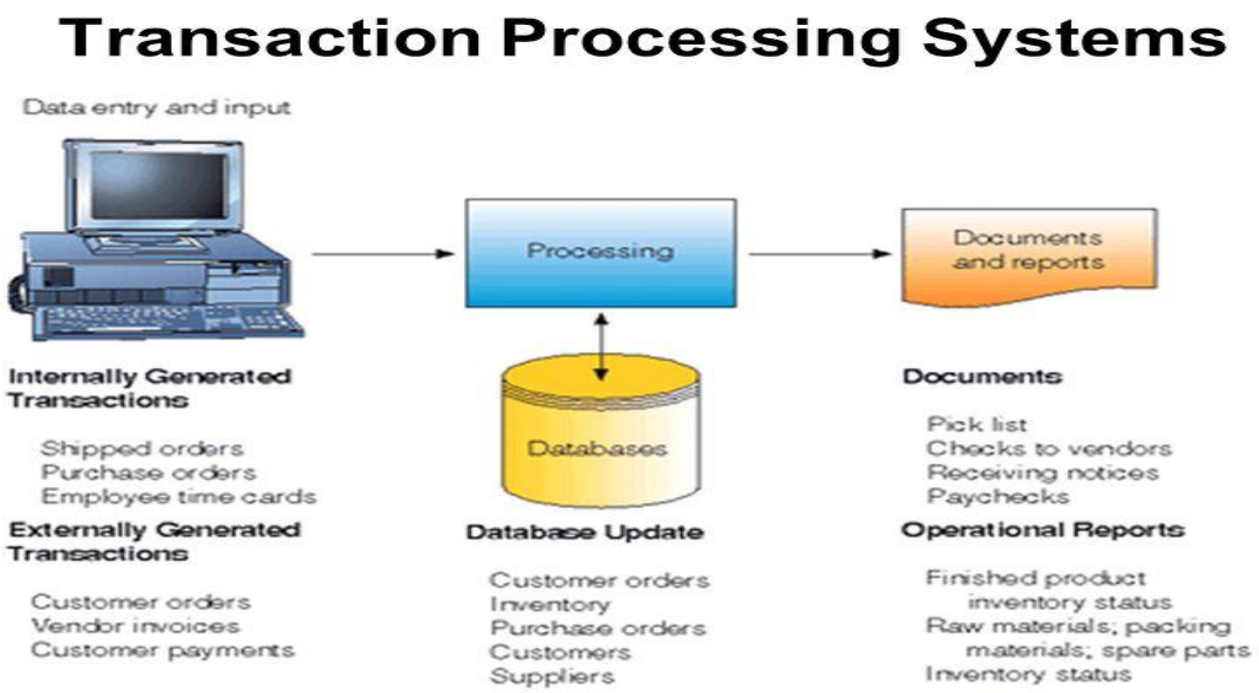
Transaction Processing System

Transaction processing systems consist of computer hardware and software hosting a transaction-oriented application that performs the routine transactions necessary to conduct business.

Examples include systems that manage sales order entry, airline reservations, payroll, employee records, manufacturing, and shipping.

Transaction processing is a way of computing that divides work into individual, indivisible operations, called transactions. A transaction processing system (TPS) is a software system, or software/hardware combination, that supports transaction processing.

Transaction Processing System



Transaction Processing Cycle

Transaction processing systems capture and processes business transactions. Then they update organizational files and database and produce a variety of information for internal and external use. Transaction processing systems generally consist of five stage cycle.

- **Data entry**

The input activity in transaction processing systems involves a data entry processes. In this processes, data is captured, or collected by recording, coding,

Transaction Processing Cycle

and editing activities. Then the data may be converted to a form that can be entered into a computer system.

- **Transaction processing**

  Transaction processing systems process data in two online processing, batch processing and real time processing.

- **File and database processing**

  File and database processing are the basic activities

Transaction Processing Cycle

of transaction processing systems. These are also known as file and database maintenance which means that an organizations files and database must be maintained by its transaction processing systems so that they are always correct and up-to-date.

- **Document and report generation**

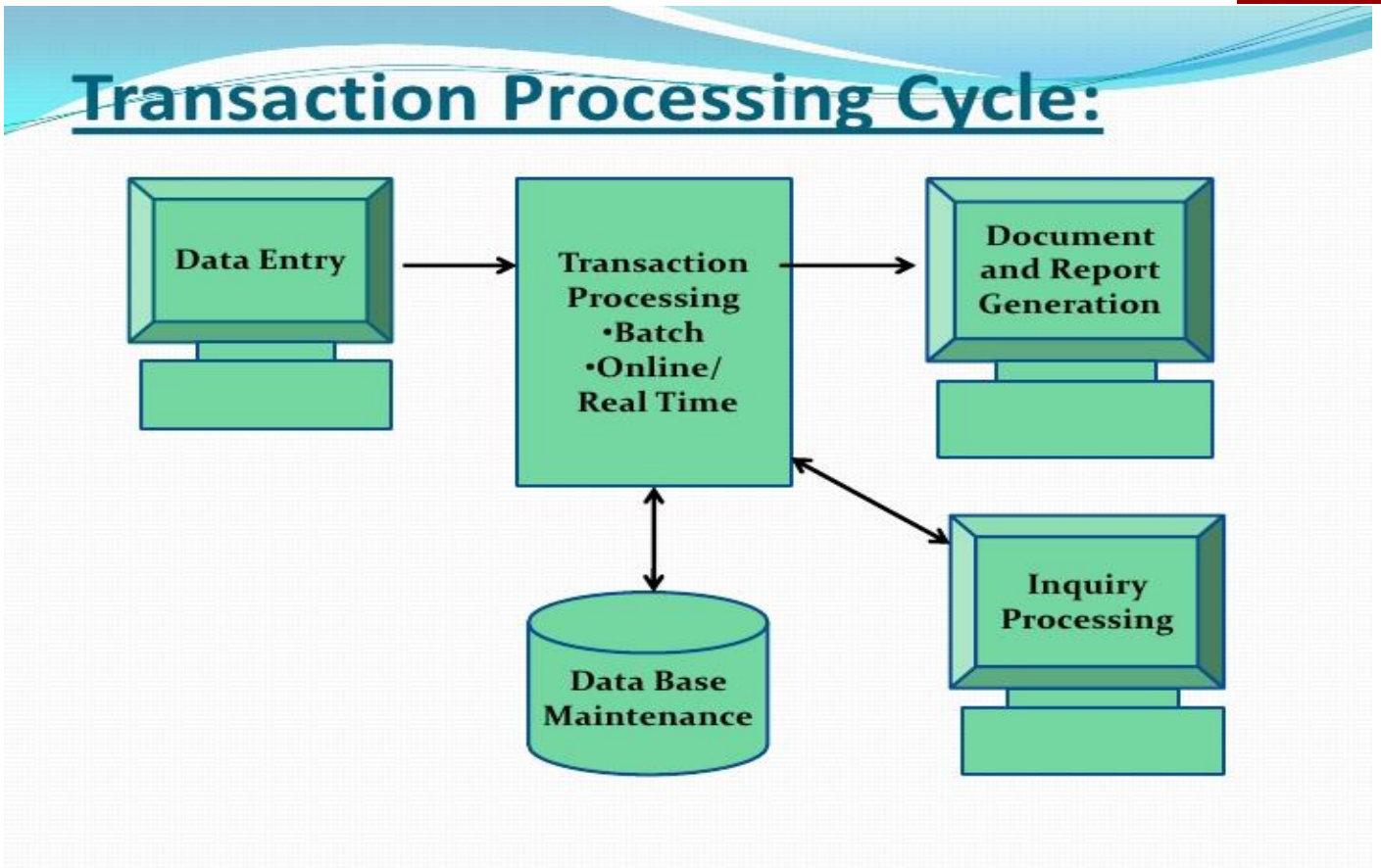
  The final stage in the transaction processing cycle is the generation of information products such as documents and reports.

Transaction Processing Cycle

- **Inquiry processing**

  Many transaction processing allows to use internet and web browsers or database management query languages to make inquiries and receive responses concerning the results of transaction processing activity. responses are displayed in a variety of pre specified formats or screen.

Transaction Processing Cycle



Features of TPS

The following features are considered important in evaluating transaction processing systems.

- **Performance**

  Fast performance with a rapid response time is critical. Transaction processing systems are usually measured by the number of transactions they can process in a given period of time.

- **Continuous availability**

  The system must be available during the time period

Features of TPS

when the users are entering transactions. Many organizations rely heavily on their TPS; a breakdown will disrupt operations or even stop the business.

- **Data integrity**

  The system must be able to handle hardware or software problems without corrupting data. Multiple users must be protected from attempting to change the same piece of data at the same time, for example two operators cannot sell the same seat on an airplane.

Features of TPS

- **Ease of use**

  Often users of transaction processing systems are casual users. The system should be simple for them to understand, protect them from data-entry errors as much as possible, and allow them to easily correct their errors.

- **Modular growth**

  The system should be capable of growth at incremental costs, rather than requiring a complete replacement. It should be possible to add, replace, or update hardware and software components without shutting down the system.

Transaction Documents

Transaction documents refers to legally relevant documents that are either printed, inserted and mailed, or electronically presented. They consist of a mixture of fixed and variable data.

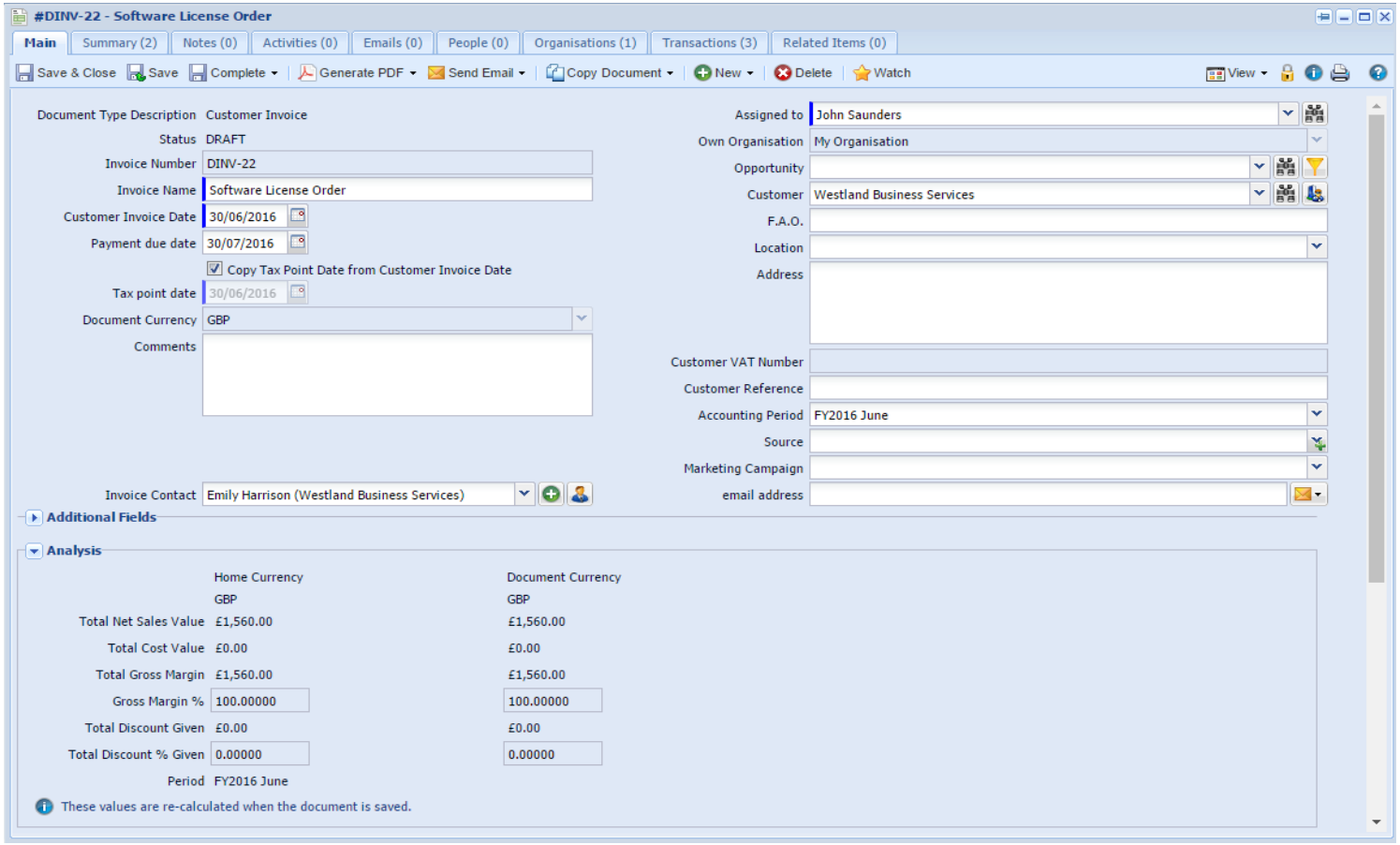
These documents are usually created by organizations through their financial computing system and then delivered to other parties (such as clients) through the post office or through an electronic billing system. The printed transaction documents, once delivered to the post office, conform to the mail box rule.

Transaction Documents

Common examples of transaction documents are:

- Bills
- Bank statements (and credit card, financial services, etc.)
- Insurance policies
- Notices
- other legally relevant correspondence, etc.

Transaction Documents



Transaction Processing Modes

Transaction processing is distinct from and can be contrasted with other computer processing models, such as batch processing, time-sharing, and real-time processing.

- **Batch processing**

  Batch processing is execution of a series of programs (jobs) on a computer without manual intervention. Several transactions, called a batch are collected and processed at the same time. The results of each transaction are not immediately available when the transaction is being entered; there is a time delay.

Transaction Processing Modes

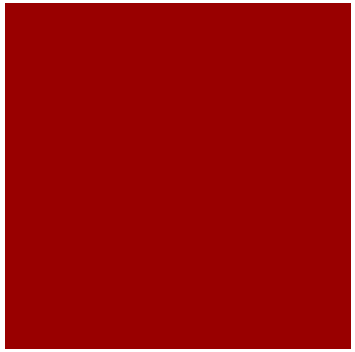
- **Real-time processing**

  Real time systems attempt to guarantee an appropriate response to a stimulus or request quickly enough to affect the conditions that caused the stimulus. Each transaction in real time processing is unique; it is not part of a group of transactions.

- **Transaction processing**

  A Transaction Processing System (TPS) is a type of information system that collects, stores, modifies and retrieves the data transactions of an enterprise.

Transaction Processing Modes



Transaction processing systems also attempt to provide predictable response times to requests, although this is not as critical as for real-time systems. Rather than allowing the user to run arbitrary programs as time-sharing, transaction processing allows only predefined, structured transactions. Each transaction is usually short duration and the processing activity for each transaction is programmed in advance.

THANKS…