

# Computer Based Information Systems - Transaction Processing System

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## Abstract

After introducing the concept of information system and its components, it is time now to understand how information systems serve different business processes at the organization. Because there are different levels in the organization, no single system can provide all the information needs for managers at different levels.

**Key words:** *Management Information System, MIS, Information System, IS, Electronic Enterprise, Information Technology, IT, Business Information Systems, Electronic Enterprise.*

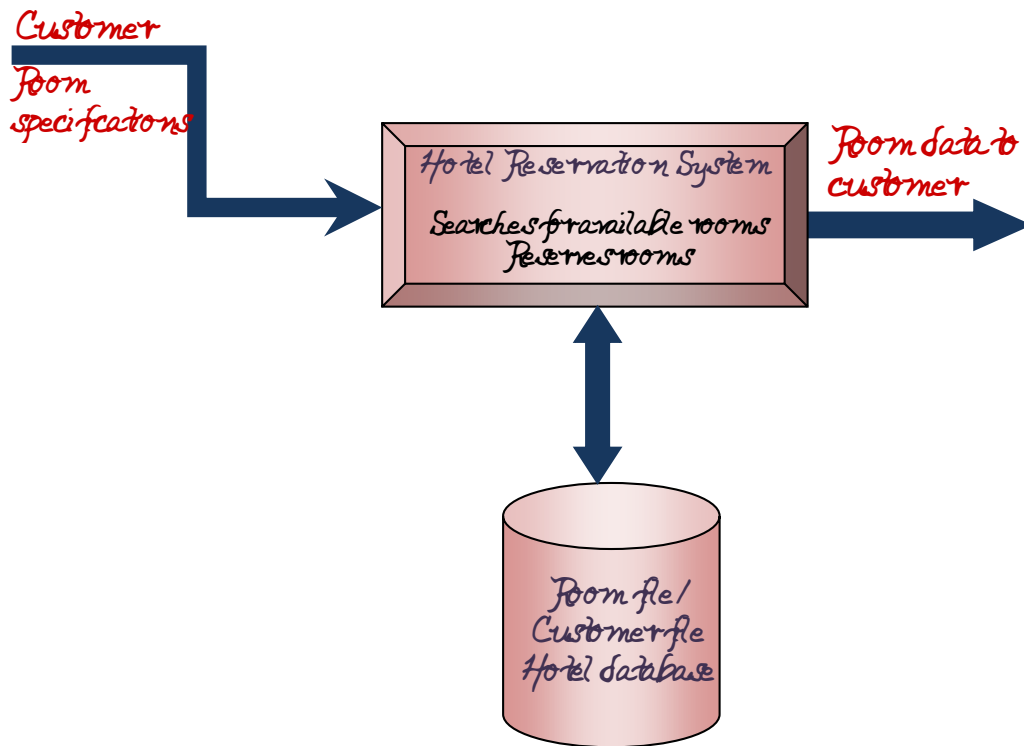
**Methodology:** Case study, System Analysis, Business Analysis, web search and books review.

## **Introduction**

Information systems can be classified depending on the system's complexity and the type of functions it serves. In business area, information systems range from simple transaction processing systems that record daily sales to executive systems that support the strategic plan of the organization.

## **Study structure**

Transaction Processing System: Operational managers need systems that record and keep track of the day to day activities and transactions of the organization. Transactions are events and operations that occur as a part of doing business like for example, products selling and purchasing, employee record keeping, withdrawal, deposit. Transaction processing system (TPS) is computerized systems that keep track of the daily routines transactions necessary to conduct business. The main purpose of TPS is to answer routine questions like how many items are in inventory, how many employees are absent today, what products we sold today. An example of TPS would be hotel reservation. Customer requests to reserve a room with defined specifications like the type and view of the room. The employee checks for the availability of rooms with such specifications, asks customer for his/her data, records them in the system and then reserves the room for the customer.



From previous figure we can conclude that transaction processing systems capture and process data describing business transactions. Then they update files and databases and produce variety of information products for internal and external use. These activities are considered as transaction processing cycle.

The transaction processing cycle include:

**Data Entry:** Data is captured and collected and then entered to the system. Data entry can be manual or automated.

**Data Processing:** Transaction processing systems process data in two basic ways: (1) batch processing , where transaction data are accumulated over a period of time and processed periodically; and (2) real-time processing (also called online processing), where data are processed immediately after a transaction occurs.

**Database Update:** The major activity of TPSs is database updates. Organization's database should be updated after each transaction to keep the data right and consistent. For example, transaction of customer withdrawal from teller machine causes the decrease of customer balance.

**Document & Report Generation:** The information generated from transaction processing systems can take the form of documents and reports. Examples of transaction documents include purchase orders, paychecks, sales receipts, invoices, and customer statements.

**Inquiry Processing:** Many transaction processing systems allow you to make inquiries and receive responses regarding the results of transaction processing activity. Typically, responses are displayed in a variety of pre-specified formats or screens. For example, you might check on the status of a sales order, the balance in an account, or the amount of stock in inventory and receive immediate responses at your PC.

**Conclusion:** Transaction processing systems are often so central to a business that TPS failure for a few hours can lead to a firm's demise and perhaps that of other firms linked to it. Imagine what would happen to retail stores if their point of sale machines were not working! What would the airlines do without their computerized reservation systems.

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*Transaction processing systems (TPS) collect and record the routine transactions of an organization. Examples of such systems are sales order entry, hotel reservations, payroll, employee record keeping, and shipping.*