FRONT OFFICE COMPUTER APPLICATIONS
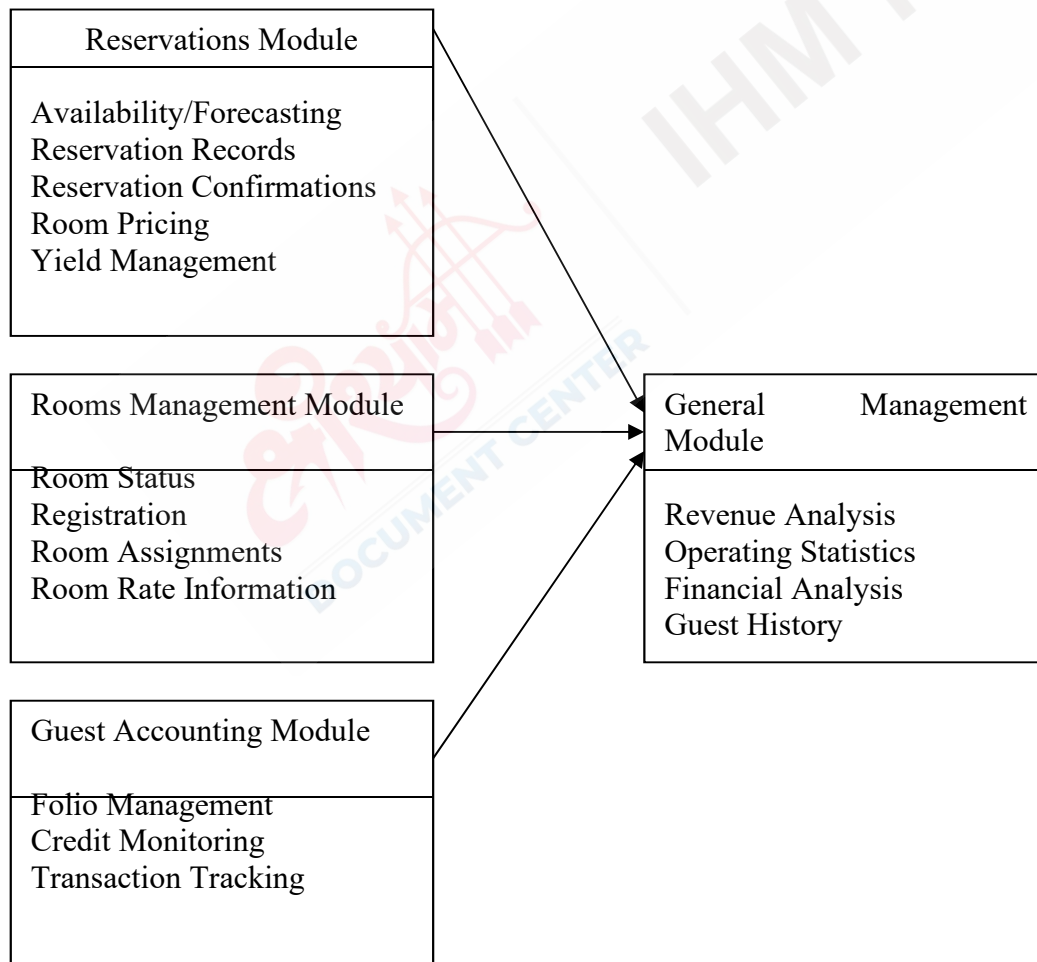
A *Property Management System* contains sets of computer software packages capable of supporting a variety of activities in front and back office areas. The four most common front office software packages are designed to help front office employees perform functions related to:

- Reservations Management
- Rooms Management
- Guest account Management
- General Management

Reservations Module
Availability/Forecasting Reservation Records Reservation Confirmations Room Pricing Yield Management

Rooms Management Module
Room Status Registration Room Assignments Room Rate Information

General Management Module
Revenue Analysis Operating Statistics Financial Analysis Guest History

Guest Accounting Module
Folio Management Credit Monitoring Transaction Tracking

Reservations Management Software

A computer based reservations package enables a hotel to rapidly process room requests and generate timely and accurate rooms, revenue, and forecasting reports. A property using a front office computer system can receive data sent directly from a central reservations office. Computerized in-house reservations records, files, and revenue forecasts are immediately updated as reservation data are received at the hotel. Modern systems allow two-way communication between the central reservations office and hotel computers. In this way, accurate hotel guestroom inventories and pricing are communicated between both systems.

In addition, previously received reservation data can be automatically reformatted into pre-registration materials, and a current expected arrival list can be produced. Current reservations management software also includes upgraded rate control features, guest history modules, and more detailed property information such as bed types, guestroom views, and special features. Reservation management software can also track deposits due, request deposits, and record deposit payments made.

Rooms Management Software

Rooms management software maintains current information on the status of rooms, provides information on room rates, assists in room assignment during registration, and helps front office personnel coordinate guest services. A rooms management module can also be used to provide rapid access to room availability data during the reservation process. Rooms management software can provide the front desk employees with a summary of each room's status. The front desk employee simply enters the room 's number at a computer system terminal and the current status of the room appears immediately on the terminal's display screen. With a computerized system, changes in room status are instantaneously communicated to the front desk. In addition, front desk agents can enter a guest's specific requests into the computer to find a room that exactly meets his or her needs.

Guest Account Management Software

The guest accounting module monitors predetermined guest credit limits and provides flexibility through multiple folio formats. At checkout, previously approved outstanding account balances can be automatically transferred to an appropriate accounts receivable file for subsequent billing and collection.

When the hotel's revenue outlets are connected to the front office computer system, remote electronic cash registers can be used to communicate guest charges to the front office, which are then automatically posted to appropriate electronic guest folios.

General Management Software

General management software cannot operate independently of other front office software packages. General management applications tend to be report-generating packages that depend on the data collected through reservations management, rooms' management, and guest accounting management programs. In addition to generating reports, the general management module serves as the normal link between the front and back office computer system interface applications.

Back Office Interfaces

Although front and back office software packages can be independent of one another, integrated systems offer the hotel a full range of control over a variety of operational areas. Such areas include room sales, telephone call accounting, payroll, and account analysis. The four most popular back office application modules are:

1. **Financial Accounting System** which consists of:

- *General ledger accounting software*, consisting of accounts receivable and accounts payable software packages. Accounts receivable software monitors guest accounts and accounts billing and collection when integrated with the front office guest accounting module. Accounts payable software tracks hotel purchases and helps the hotel maintain sufficient cash flow to satisfy its debts.

- *Payroll accounting software* processes such data as time and attendance records pay distribution, and tax withholdings.

- *Financial reporting software* helps the hotel develop a chart of accounts in order to produce balance sheets, income statements, and transactional analysis reports.

2. **Material Management System** It covers the entire material management function such as requirement, planning, purchase, receipt, stock accounting. Issues are recorded. This system should provide information for effective decision making and book keeping.

- Purchasing requirements reporting aids better order decisions.
- Easy monitoring of stock
- Automatic reminders on pending purchase orders
- Historical purchase vendor/cost analysis for lower purchase costs
- Aids spot stock taking

3. **Management Information System** The MIS system should provide statistical information to the management to assist in decision making and control. Comparison of budget with actuals, automatic MIS data collections to provide business and sales analysis etc. are some features. The timely and accurate information would ensure increased revenues, higher occupancy and cost savings.

4. **Personnel Management System** The personnel management system should integrate the requirements for effective career planning, personnel administration and payroll.

- Comprehensive data aids personnel career planning and manpower development
- Extensive reporting capabilities and employment profiles
- Comprehensive payroll system with automatic calculations and printing of pay slips

5**. Food and Beverage cost control systems** This module is the most important area of concern in hotel operations- the savings possible through control of food and beverage material usage.

- Should automatically pick up issues and costing from Material Management System.
- Should automatically pick up sales details from POS outlets
- Beverage control and bar control system

Property Management System Interfaces

Non-guest operated interfaces

- *A point-of-sale (POS) system* allows guest account transactions to be quickly transmitted from remote revenue centers to the PMS for automatic posting to electronic guest folios.
- *A call accounting system (CAS)* directs, prices, and tracks guestroom telephone use for automatic posting to electronic folios.
- *An electronic locking system (ELS)* may interface with the rooms management application to provide enhanced guest security and service.
- *An energy management system (EMS)* can automatically control the temperature, humidity, and air movement in both public spaces and guestrooms through a rooms management interface.

Guest operated interfaces

In some properties, guests may inquire about in-house events and local activities through automated information devices in public areas or the guestroom. Guests may review their folios and checkout of the hotel in the comfort and privacy of their guestrooms. In-room televisions or computers interfaced with a guest accounting module enable guests to simultaneously access folio data and to approve and settle their accounts by selecting a pre-approved method of settlement.

In-room computers linked to external computer information services can permit guests to access airline schedules, local restaurant guides, entertainment guides, stock market reports, video games etc.

An *in-room movie* system can be interfaced with the front office accounting module or can function as an independent system. When interfaced with the accounting module, the system is capable of automatically posting charges to an electronic folio when the television is set on a pre-coded channel. Incorporating a preview channel can significantly reduce the number of pay television or movie charges disputed by guests.

There are two types of *in-room beverage service* systems:

Non-automated honor bars: It consists of beverage and snack items in both dry and cold storage areas within a guestroom. The bar's beginning inventory level is recorded, and the hotel employees on a daily basis note changes in inventory. Appropriate charges for missing or consumed items are posted to the guest's folio.

Fully automated guestroom vending machines: They contain fiber-optic sensors that record the removal of stored products from designated compartments. When a sensor is triggered, the vending machine sends appropriate information to a dedicated microprocessor and, in turn, to the front office accounting module for folio posting.

The *in-room fax machine* enables guests to send and receive faxes directly from their rooms. The fax machines are connected to the hotel telephone system, which automatically calculates the cost of the fax and forwards the charge to the front desk computer. Guests can even receive a printed copy of their folio through the fax machine with this system.

Selecting a Property Management System

This section focuses on the components that should be included when deciding to adopt a PMS. The decision-making process begins with understanding the importance of needs analysis performed by a team of frontline staff members. The needs analysis should focus on the flow of the guests through the hotel and interdepartmental communication needs. A review of administrative paper work produced by management in all areas of the hotel is also a consideration. After management has gathered relevant data concerning the operational needs, it must objectively determine whether a computer will help to improve guest service. Other important concepts covered here include software selection considerations and computer hardware terminology. A review of how people interact with computers and how a hotel must make provisions while hardware is being installed is also offered. The importance of computer training and planning a backup power source for continued computer operation is reviewed. The often overlooked maintenance agreement and the very important financial pay back complete the discussion of selecting a PMS.

Importance of a need analysis

Selecting a new equipment for a hotel property is best done after a needs analysis is performed. A needs analysis indicates the flow of information and services of a specific property to determine whether the new equipment – in this case, computers - can improve the flow. The bottlenecks that occur at registration or the lack of information from the H/K dept. on the occupancy

status of a room can be alleviated by the use of computers at the front desk. Only after the completion of an operational flow analysis can computer applications be developed to improve the situation.

Installing and operating a PMS is not inexpensive, and the cost of installing and operating a system that does not meet the specific needs of a particular property is exorbitant.

A system that works very well for one downtown hotel may not meet the needs of a downtown hotel in another city of a motel in the same area. All the technological gadgetry in the world will not impress a guest if the equipment fails to deliver service. The system must meet the needs of the staff as well as the guests. An inappropriate PMS will produce control reports that are not useful to management; the functions of such software is therefore become limited, and the cost of the system exceeds its value. For eg, a hotel owner who believes that PMS would speed up registrations and decides to purchase a system that does not allow housekeeping staff to input a room status from the guest room phone will be disappointed.

Procedure for performing a needs analysis

The following list shows the procedure for performing a needs analysis.

1. Select a team to analyzes needs
2. Analyze the flow of guest through lodging property
   - ✓ Reservations
   - ✓ Registrations
   - ✓ Guest accounting
   - ✓ Checkout
   - ✓ Night auditing
   - ✓ Guest history
3. Analyze the flow of information from other departments to the front office.

4. Analyze the administrative paper work produced in other departments.

5. Review the information's gathered in steps 2 3 4

6. Evaluate the needs that have been identified- such as controlled reports, communication, and administrative paper work produced in other departments- in terms of importance

7. Combine needs to determine desired applications

Selecting a team

The first and most important step in performing a needs analysis for adopting a PMS in a hotel is to select a team to determine the reports and information being generated. The analysis team should include employees at both the management and the staff levels. Such a team is better able to see all aspects of the operations; management can provide input on all objectives, while staff is more aware of day to day needs.

Analysis the flow of guest through the hotel

The second step in the needs analysis is to analyze the flow of guests through the visit to the property, which provides a structure for this very detailed analysis process. The guest stay does not start at registration but at the time the reservation is made.

Issues that can be analyzed are quite diverse. They include
analyzing the ease with which the telephone system can be used
the availability of room occupancy status for guests on any specific date
the length of time it takes to complete a reservation request,
methods for gathering guest information upon check in at the process for ensuring the correct posting of guest changes,
the time required for a guest to check out,

the procedure used to resolve to a guest's dispute of charges

- the process for posting meal and phone charges just before check out.
- How is the information assembled in the night auditing?
- How long does it take to produce this information?
- Also determine if the guest information already on hand from the reservation, registration and guest accounting is being applied for additional visit.

Communicating information

The third step in the need analysis process is to look at the information coming from other depts. to the front office. How is information concerning occupancy status received from the HK dept.? How can a guest report emergency or fire on the property? How do the F&B dept. and the gift shop report guest charges? How does the marketing and sales dept. determine if blocks of rooms available on certain dates? How does the engineering dept. monitor energy use in guest rooms? How does the security dept. ensure the integrity of guest keys? A good PMS can embrace all of these lines of communication.

Reviewing Administrative Paperwork

The fourth step is to review the administrative paper work produced in the hotel that is necessary to assist management. How does the HR dept. maintain personal files and former employee reports? How are functions books and individual functions sheets maintained? How are tickler files, files used to prompt notice of when certain events will be occurring, maintained? What method is used to devise daily menu specials?

Management Review of information

In the fifth step of this analysis, management must take charge of the information compiled to determine if needs are being met. Is the marketing and sales dept. making mistakes because incorrect information concerning the inventory of available rooms was provided by the F O staff? Is desk clerk unable to check the occupancy status of guest room because the HK dept. is not providing immediate information? Have misquotes on room rates caused lost revenue for the hotel?

The significance of each need and the consequences if the need is not met are then established. Customer satisfaction and quality of service as well as financial implication are considered. How often have conventions not been booked because accurate information on room availability was not at hand? How much revenue was lost as a result?

Assessing needs based on findings

The final step in the analysis is to combine various operational and administrative needs to determine which computer applications are appropriate for the property. Often the shared use of a room inventory data base is as well worth the financial investment. A word- processing program to produce direct-mail letters, regular correspondence, and daily menus may also justify a particular module of a PMS. The needs analysis enables you to know what you do not need and will help you choose from the many systems available.

Choosing software

The effectiveness of a PMS depends on selecting software that allows management to increase guest satisfaction and to access financial and information data for control purposes. The information obtained from the needs analysis will provide a frame work for evaluating the numerous software packages on the market today.

Each software package offers numerous features; it is important to choose one package that is most appropriate for your needs. Software of the market today includes those guest service, accounting, information options that are standard in the hotel industry. Investigate the guest service features, accounting options and information applications to determine which PMS is best for the property. If it is felt that the applications of a particular software package will not help to manage the property, that adding a particular guest service will not increase guest satisfaction, that no significant savings will result from producing more sophisticated accounting reports, that the arrangement of historical information of the guests will not be beneficial, then that particular PMS should not be adopted. The function of proper software selection is to assist the hotel in doing a better job. Only the particular property can decide which applications are most useful for the property.

Fidelio Hotel Management System

Fidelio Hotel Management System is a completely integrated system package designed to maximize the efficiency of the hotel.

- It is a highly flexible system
- Highly user friendly and user definable software with pull down menus
- Has its own special anti-virus file
- Has user definable night audit
- The package enhances inter departmental co-ordination
- Can create extensive guest history for unlimited years
- Complete graphical plan illustrations of each floor allow monitoring and controlling the occupancy of every room
- Initial cost is high and underutilization could be expensive

Reservation module

This module includes various types of reservations like individual, company, group, airline, travel agent etc. Availability is displayed by room type or on the

basis of yield management principles, and has unlimited availability period. Ability to form a standard/modified confirmation letter and automatic printing of the same for companies or agents.

Group Allotment Management

Create room blocks, search view and modify a block, create a block header. Block can be rigid or elastic (overbooking possible/not possible). Block any combination of rooms type with various rate codes or rates, enter a cut off date, create a group master and multiple paymaster.

Yield Management

The concept of yield management ie. the management of yield of revenue in relation with the available room and what shall be the best possible rate structure for the rate availability and charges in the strategy for selling the room of the hotel ie. reject low price business even if not full when it can predict that the room can be sold to a higher paying customer.

Packaging

A package refers to a deal in which the guest is given other services also along with room in the rate. Fidelio module offers two ways of handling packages a. basic package module

b. advance package module

For basic package Fidelio module can configure (i) print package on guest folio (ii) package prices can be added or included to the rate (iii) multiple posting possibilities such as every night, certain nights of the week etc.

The advanced package module includes maximum integration between POS and front office Fidelio. POS charges are always posted to Fidelio. When certain services are inclusive in rates, Fidelio creates an allowance for the guests.

Check in and Ongoing

This module covers various aspects like ability to enter complete and modify guest data, handling of walk ins, individual check in of group members etc. This module also covers possibility to modify all reservation data, ability to enter fixed charges and billing instructions at check in, credit card number check, automatic room assignment, credit limit etc.

Guest History

This module can create profiles for individuals, guests, companies, agents and sources, assign a number to the guest, enter special room features for the guest, possibility to put the guest on all payment cash basis, override the overbooking parameters for VIP etc.

Check out

This module has user definable folio formats in different languages, ability to enter individual and additional text for each folio, automatic printing of folio with department code text, modify previous billing instruction at check out, total or partial transfer of folio to and from another room, unlimited combination of payment mode etc.

Rooms Management

Room status can be changed through telephone interface, display room status at any time with function keys, floor plan options, can check for clean, dirty, out of order, assigned rooms and discrepancies.

Reporting Systems

This module covers up user definable menus for

a. guest in-house

b. reservations

c. guest history

d. financial

e. night audit

f. statistics

g. shift report etc.

Night Audit

It features user definable night audit, handling of no shows, balance control and audit trail report, automatic postings of all fixed charges and room rates, posting of telephone charges by telephone interface etc.

Micros

Fidelio 'OPERA' Enterprise System(OES) is a multi-tier application that leverages the oracle database, speed, reliability, functionality and ease of use. The OES design takes advantage of the latest internet technology allowing various hotel companies to host the data and application centrally.

Interfaces

The Fidelio system has the capability of interfacing with the following

1. Fidelio sales and catering
2. Back office systems
3. CRS
4. Credit Card Interface
5. Telephone and call accounting
6. POS
7. Door locking systems
8. Minibar
9. Energy Management
10. 10.Voicemail
11. Paging System