

Hotel Automation Software (HAS)

A hotel has a certain number of rooms. Each room can be either single bed or double bed type and may be AC or Non-AC type. The rooms have different rates depending on whether they are of single or double, AC or Non-AC types. The room tariff however may vary during different parts of the year depending upon the occupancy rate. For this, the computer should be able to display the average occupancy rate for a given month so that the manager can revise the room tariff either upwards or downwards by a certain percentage. Guests can reserve rooms in advance or can reserve rooms on the spot depending upon availability of rooms. The receptionist would enter data pertaining to guests such as their arrival time, advance paid, approximate duration of stay, and the type of the room required. Depending on this data and subject to the availability of a suitable room, the computer would allot a room number to the guest and assign a unique token number to each guest. If the guest cannot be accommodated, the computer generates an apology message. The hotel catering services manager would input the quantity and type of food items as and when consumed by the guest, the token number of the guest, and the corresponding date and time. When a customer prepares to check-out, the hotel automation software should generate the entire bill for the customer and also print the balance amount payable by him. Frequent guests should be issued identity numbers which would help them to get special discounts on their bills.

Medical Shop Automation (MAS)

A retail medicine shop deals with a large number of medicines procured from various manufacturers. The shop owner maintains different medicines in wall mounted and numbered racks. The shop owner maintains as few inventory for each item as reasonable, to reduce inventory overheads after being inspired by the just-in-time (JIT) philosophy. Thus, one important problem the shop owner faces is to be able to order items as soon as the number of items in the inventory reduces below a threshold value. The shop owner wants to maintain medicines to be able to sustain selling for about one week. To calculate the threshold value for each item, the software must be able to calculate the average number of medicines sales for one week for each part. At the end of each day, the shop owner would request the computer to generate the items to be ordered. The computer should print out the medicine description, the quantity required, and the address of the vendor supplying the medicine. The shop owner should be able to store the name, address, and the code numbers of the medicines that each vendor deals with. Whenever new supply arrives, the shop owner would enter the item code number, quantity, batch number, expiry date, and the vendor number. The software should print out a cheque favoring the vendor for the items supplied. When the shop owner procures new medicines it had not dealt with earlier, he should be able to enter the details of the medicine such as the medicine trade name, generic name, vendors who can supply this medicine, unit selling and purchasing price. The computer should generate a code number for this medicine which the shop owner would paste as the code number in the rack where this medicine would be stored. The shop owner should be able to query about a medicine either using its generic name or the trade name and the software should display its code number and the quantity present. At the end of every day the shop owner would give a command to generate the list of medicines which have expired. It should also prepare a vendor-wise list of the expired items so that the shop owner can ask the vendor to replace these items. Currently, this activity alone takes a tremendous amount of labour on the part of the shop owner and is a major motivator for the automation endeavor. Whenever any sales occurs, the shop owner would enter the code number of each medicine and the corresponding quantity sold. The MSA should print out the cash receipt. The computer should also generate the revenue and profit for any given period. It should also show vendor-wise payments for the period.