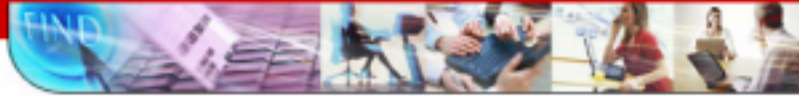


## Hospital Management System

### Contents:

1. Users
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3. Specification for Server
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6. Tools Used
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## Users

The Main users of the system are listed below.

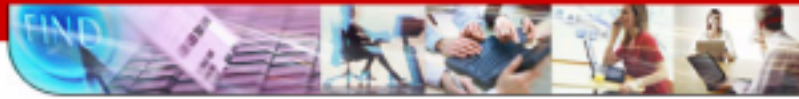
**Doctor:** Doctor has to login with unique login id and password for particular practice and if s/he is signed up in more than one practice then s/he has to first go to that practice home page i.e. s/he can not login to more than one practice at a time. (Since there will be different database for different practices) After successful login s/he will be redirected to schedule for that day to see his/her appointments, (default page). S/he doctor can make new appointment, mark event, recall and give prescriptions.

**Patient:** Patient has to login with unique login id and password for particular practice and if s/he is signed up in more than one practice then s/he has to first go to that practice home page i.e. s/he can not login to more than one practice at a time. (Since there will be different database for different practices) After successful login s/he will be redirected schedule for that day to see his/her appointments where Patient can view his appointment, cancel appointment or view prescriptions and request new appointment via email or phone call. Patient can sign up/register for particular practice by entering his information, which will be validated by staff & will respond accordingly. Any alert posted through e-mail if not responded within a stipulated time then the patient is contacted on his/her contact no/Fax.

**Staff:** Patient has to login with unique login id and password for particular practice after successful login s/he will be redirected to staff's default page. S/he can perform all functions in the practice management as dictated by the permissions set up by the Practice administrator.

Among the staff there will be one practice administrator who will set permissions for doctors, staff & patient

**Administrator:** S/he has complete rights for the whole system. S/he can add practices. He can make any necessary changes that come across. Can create or delete user and can assign access privilege level to the existing user. Admin can be a doctor or any staff with admin level access rights.



## Functions

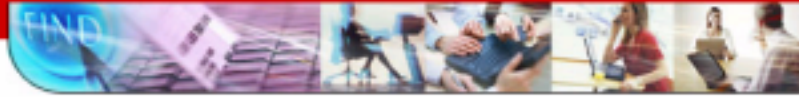
Functions associated with the **HMS** software are documented in brief. Different pages to accomplish the various tasks access these functions, and the accessibility of these functions are maintained by the accessibility level of the user. Ex. None of the patient module pages has the access right for the Payroll and Inventory Functions. They are made available only when a user with an access privilege of Staff/Admin Level logs in.

### CLINICAL: (Reception)

- Registration of new patients with details like name, address, phone number, age, sex etc.
- Registration of OPD Visit of registered patient
- Registering admission of Patient.
- Locating an admitted patient in the hospital.
- Giving appointments of various consultants in the hospital.
- Adding reminders
- Printing and Posting of OPD and IPD bills.
- Maintaining address book

### OPD: (Out Patient Department)

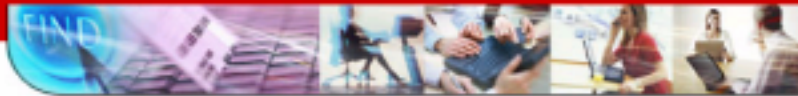
- Selecting an OPD patient for recording the visit records
- Registration of Patient
- Recording clinical findings as chief complaints, past history, personal history, habits, systemic examination, doctor's impression, provisional and final diagnosis etc.
- Recording and printing Outcome of the visit with follow up date and advise.
- Recording systemic examinations in comprehensive manner.
- Keeping immunization record of the patient.



- Recording and printing MLC (Medical/Lab Certificate) information of patient.
- View Patient information entered at the time of registration.
- Advise investigations
- Preparing and printing reference letters to other doctors / Institutes
- Storage of Images like X-Ray, ECG, photographs etc in the patient's file.
- Storage of important video clips like 2D Echo Doppler etc. on the patient's file.
- Preparing and printing prescription in various languages.
- Recording of various procedures and related comments of the doctor in the patient's file.
- Printing of various information sheets like diet advises, exercises, handouts etc.
- Refer various modules in Library.
- Viewing and printing Case Paper of the selected period.
- Preparing and printing death certificate.
- Preparing and Printing Biochemistry Report
- Printing birth certificates
- Viewing Appointments, Reminders, Address book, and Internet connectivity.
- Preparing and printing personal letters

#### IPD: (Internal Patient Department)

- Registering a patient as IPD
- Assigning a bed to a patient.
- Recording clinical findings as chief complaints, past history, personal history, habits, systemic examination, doctor's impression, provisional and final diagnosis etc.
- Recording and printing Outcome of the visit with follow up date and advise.
- Recording systemic examinations in comprehensive manner.
- Keeping immunization record of the patient.
- Recording and printing MLC (Medical/Lab Certificate) information of patient.
- View Patient information entered at the time of registration.
- Advise investigations
- Preparing and printing reference letters to other doctors / Institutes
- Storage of Images like X-Ray, ECG, photographs etc. in the patient's file.
- Storage of important video clips like 2D Echo Doppler etc. on the patient's file.
- Recording of daily round details
- Preparing and printing prescription in various languages.
- Recording of various procedures and related comments of the doctor in the patient's file.
- Printing of Observation chart.
- Operation theatre scheduling.
- Registration of Operative details.
- Printing of various information sheets like diet advises, exercises, handouts etc.
- Preparing and viewing General Order Book.
- Recording Pre Anesthesia Information.
- Refer various modules in Library.



- Viewing and printing Discharge Summary Report of the selected period.
- Preparing and printing death certificate.
- Preparing and Printing Biochemistry Report.
- Printing birth certificates.
- Viewing Appointments, Reminders, Address book, I nternet connectivity.
- Preparing and printing personal letters.

**Nursing Station:**

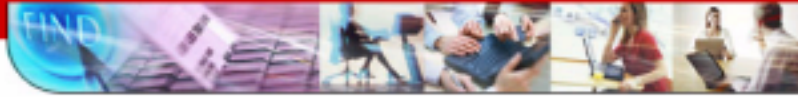
- View patient's clinical information in various modules
- Viewing Appointments, Reminders, Address book, I nternet connectivity
- Preparing and viewing General Order Book
- Preparing and printing of Observation chart

**Diagnostics:**

- Selection of OPD /IPD patient
- Viewing reference letters
- Recording of various diagnostic reports.
- Storage of I mages like X-Ray, ECG, photographs etc. in the patient's file
- Storage of important video clips like 2D Echo Doppler etc. on the patient's file
- Refer various modules in Library
- Viewing Appointments, Reminders, Address book, I nternet connectivity

**ADMINISTRATION:**

- User Rights
- Doctor Master
- Various Master like Scheme Master, Procedure Master, Department Master etc.
- I nvestigation Master, Hide / Show I nvestigation 5.OT Master
- Setting up of Beds for each beds and handling the transfers.
- View Log
- Report Generation of Referring and referred Doctors.
- Diagnosis wise patient listing
- I nvestigation wise patient listing
- Patient List, Doctor List
- IPD / OPD registers
- Occupancy Report
- Billing Report
- Printouts of Appointment for individual doctor.
- Biochemistry Report
- Clinical MI S Report
- Viewing Appointments, Reminders, Address book, I nternet connectivity
- Locking of Case paper



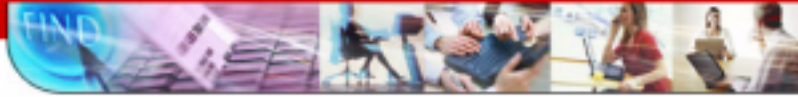
- Deleting Patient visits
- Backup / Restoration of data

**Payroll:**

- Employee wise Pay Calculation
- Employee wise Leave calculation
- Recording of EMI loan and Advance given to employee
- Records of Reducing balance loan
- Overtime calculation
- Bonus calculation
- Maintaining Records of Performance bonus
- Maintaining records of Incentive / Ex-Gratia calculations
- Maintaining Records of Special Holiday calculations
- Processing Records of Payroll to prepare Monthly Pay sheet.
- Leave Reports
- Generating department wise employee list
- Generating Designation wise employee list
- Maintaining Maternity/Paternity leave records
- Preparation and printing of salary certificate.
- Viewing retirement information of employees
- Maintaining Gratuity records
- Date wise leave report
- Periodic pay calculation.

**Inventory:**

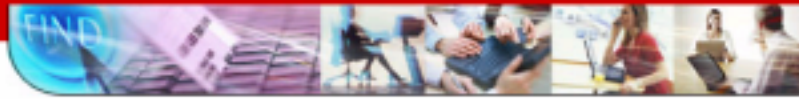
- Supplier Registration
- Item Entry into Stores / Pharmacy
- Item - Supplier / Supplier - Item relationship
- Purchase Requisition
- Vendor Selection
- Purchase Order generation
- Goods Received Register
- Indent Register
- Issue Register
- Return against Issue
- Scrap / Condemn
- Reconciliation Process
- Bill / Invoice
- Posting
- View Purchase Register
- Transactions from previous years
- Generation of Stock Statement



- Generation of I tem List
- Printout of Suppliers Name and Addresses in Label format
- Generation of Supplier wise I tem and I tem wise Supplier Listing
- Generation of Supplier wise Outstanding PO
- Generation of Supplier wise Closed PO
- Generation of Supplier wise Cancelled PO
- Reorder / Expiry Warning
- PO History
- Generation of PO list according to Date / Supplier
- Generation of GRR list according to Date / I tem / PO / Supplier
- Issue Date wise / Department wise
- Indent I tem wise / Department wise
- I tem wise Scrap list

**Financial Accounting:**

- Automatic Posting of Clinical bills, Employee Payables, Supplier Bills from Clinic, Payroll, and Inventory respectively.
- Creation of new Accounts under various heads
- General Voucher Entry
- Patient Billing with Insurance details.
- Searching for a voucher according to the Narration, Voucher Type etc
- Advance / Refund to Suppliers on Purchase Order basis
- Payment of Supplier bills
- Recording Advance / Refund transactions with the patients
- Recording patients bills payment
- Employee payables
- Generation of Trial Balance
- Generation of Profit & Loss Account
- Generation of Balance sheet
- Sales & Purchase Books
- Cash & Bank Books
- Ledger view
- Journal
- Day Book
- Cash Flow
- Daily Balances
- Out standings
- Statistics
- Account Comparison
- Group & Account Reports
- Financial MIS report



### Specifications for Server:

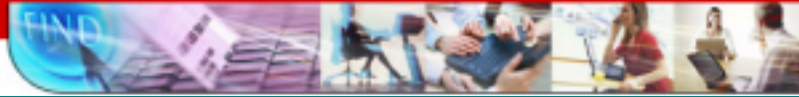
- Pentium III - 566/ 700 Mhz processor
- 256 Mb SDRam
- 20 Gb Hard Disk Capacity ( Primary )
- 8.4 Gb Hard Disk Capacity ( Backup )
- 48X / 52X CD ROM
- 10/100 MBps LAN Card
- 10/100 MBps Ethernet Hub if more than 2 machines are to be connected [preferably D-Link]
- CAT -5 Cable
- SVGA
- Keyboard
- Mouse
- 3.5" Floppy Drive
- Printer ( Dot Matrix/ Deskjet/ Laserjet )
- UPS
- Additionally Windows NT Server 4.0 Or Higher will have to be installed with Internet Explorer 4.0

### Specifications for Workstations

- Celeron 500 MHz / Pentium III 450 MHz or Higher processor
- 128 MB SDRam.
- 8.4 GB Hard Disk Capacity
- SVGA Colour Monitor
- Keyboard
- Mouse
- 10/100 MBps Lan Card
- Windows 98/ Windows NT workstation with Internet Explorer 4.0 or higher should be installed Additionally one machine will need a scanner
- CD - Writer (Optional)

### Software Specifications:

1. Windows 95/98/NT or higher version.
2. Internet Explorer 4.0 or higher version.



#### Tools Used:

- 1. Visual Basic 6.0, ASP, MSSQL

#### Guidelines Maintained

Following guidelines are kept in thought during the design of the system:

- Data to be entered with the least amount of keystrokes.
- Most fields in a screen should be populated with default values thus reducing the amount of time for the user to fill various screens.
- User should be allowed to do as much work on one screen as possible without asking him/her to switch to another screen. However, care has been taken not to inundate the user with lot of fields on one screen.
- All the page request and data handling is very efficient.
- Efficiency, Scalability and Security are of prime consideration.
- Wherever possible, Data (Results, History, etc) displayed to the user is allowed to be sorted (by date, Name, as applicable). The default sorting should be considered for each such displayed screen (For example, when showing transaction history, whether to show them in chronological or reverse chronological).
- Classified and filtered.
- Data can be added/modified/deleted to the tables (for e.g. patient, medicine table etc.) on the fly. Used records will not be deleted they will be marked as hidden and will not be used for future transaction. But old transaction can always refer to such records. Common client-server specifications are applied.