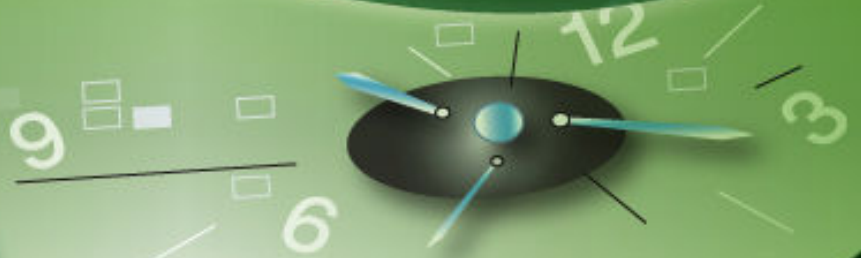


ROGER MEDICAL
INFORMATION SYSTEM



➤➤ APPOINTMENT MODULE
Version 6.0



Appointment system

The appointment module is an electronic paperless application designed with high flexibility and ease of usage, implemented in single clinics and polyclinics. The system serves in managing appointments for different resources. The resource can be any clinic or service, such as an Ophthalmology clinic or X-ray apparatus. Each resource has a defined daily schedule that indicates the available time slots for booking appointments.

Objectives

The appointments system is a means for E-health care that allows for quick booking and managing of patients appointments while eliminating the possibility of reiteration of the same time slot for different patients. Only eligible people with access permittance are consent to reserve appointments, thereby to provide the best service for patients. Specific objectives include:

- 1- Establishment of a paperless environment
- 2- scheduling of the medical activities and services within the healthcare center
- 3- Optimizes utilization of medical resources at the medical center
- 4- increase efficiency of medical care outcome

Functionality:

- On-line booking and reservation of Appointments
- Pop up explanations when putting the mouse on a certain function
- Access is permitted to authorized staff of the respective healthcare center
- Statistical data generation pertaining to invariable parameters

- Integration with the Master Patient Index (MPI)
- Integration with the Clinician System
- Keyboard use for data entry is minimized, compensated by a drop-down list
- Search engine is available
- Arabic support is included for all user functions

Authentication and Authority:

A- The system ensures high security, business integrity and confidentiality through full information log to the system by the administrator and eligible users. The system is defined by default according to userID for permittance or denial to access information, for the reason of business and medical ethics.

B- Security:

1- On Operating System Level:

- All processes on system are known through the user authentication
- Intranet-based, which disables accessibility to the network
- Identifying patients based on their national ID or residency number

2- On Application and User Level:

- The database administration does not have access to user password because passwords are encrypted on a 64 bit function.
- User should have security level (8 or more) to book an appointment

Description:

To access the appointment system, you must first be defined as a user to both the machine and the application. If you have already been defined, then access is permitted from within the center or through the web by clicking on the System Log-on menu and entering the user ID and password.

The various functions of the appointment system are displayed once the user logs into the system. To ensure ease of use, the current date is displayed by default but can be easily changed if needed to. A calendar, in addition, is incorporated to get the required date.

There are three types of appointments, which are defined according to patient status upon reserving:

- 1- Normal
- 2- Walk-in
- 3- Emergency

The appointment cycle is comprised of:

- 1- Reserved: Upon booking an appointment
- 2- Opened: Upon the arrival of a patient to his appointment
- 3- Ended: Upon the dismissal of the patient after check-up
- 4- Pending for Reschedule: In case the appointments for a certain resource where deleted.

Appointments are classified as repetitive or single booking. Repetitive appointment is that for repeated ones during a certain time interval. Single booking is designed to view all appointments for a defined period at a specific time, to go to

any other date and time regardless if new or old, to book a forced and view their details. First Free function is used to find the first available appointment on the level of the opened resource only and the already selected criteria in the previous fields.

Once the patient arrives at the center, the system will automatically mark his appointment as “Open”, and checks if his demographics are fit to the resource booked at. Opening of future booked appointments is disabled by the system, as they are directly related to the arrival of the patient on the due date and time. In case the patient was late or did not show to his appointment, the system will note the occurrence and ultimately block booking after a defined period of “no shows”. However to prevent missing an appointment, the system is accustomed to generate notifications as reminders for patients (voice calls and sms messages on patients’ mobiles). Notifications are also generated for Recalls, whereby the system reminds the user of a series of calls that has to be made, and allows selection whether by phone or by mail.

In reference with the type of healthcare consultant and type of visit, the time slot for every appointment is reserved. The daily schedule is taken over the resource as a whole, that is, the physician, clinic, and medical service. Since every resource has its specific procedure, time slots are defined accordingly. For example, an appointment for an Ophthalmology clinic may include procedures such as measurement of refraction error, intraocular pressure, and eye dryness; whilst another specialty includes different procedures that will require different allocation of timing as per appointment. Time slots are all viewed on the system so that patients can reserve for a clinic or service based on the availability of the resource

requested. However, the system is set to a defined period of time between two appointments for the same patient (e.g. a patient consulting an ENT may not book for another ENT appointment before 3 hours).

The appointment system is an integrated function through whereby eligible users are opt to perform a variety of tasks, while keeping entries inserted in Arabic and English format of every operation: processing a booked appointment, canceling appointments, shifting times and/or dates, and forcing time slots when encountering walk-in patients or emergency cases.

Emergency patients are given a temporary medical number to collect the minimum required data. Subsequently, a Booking Slip Form, will be automatically issued with the Emergency record, whilst the patient ID, can be converted to a permanent number, if needed. The appointment might be canceled due to patient's request, doctor's absence, or resource's defects. Appointments could be canceled before they are started but must be provided with a justification selected from a list of options to facilitate statistics generation. Cancellation is also done on the clinic level; however patients affected by such incidents are marked for substitution with a compensating resource. Upon cancellation, the system provides three options:

- Cancel: will cancel all appointments
- Ok: will provide alternative appointment
- Later: will provide a reminded based on a time specified by the user

Booking record corresponds to the availability of booking an appointment at the time specified. A filled record stands for a booked slot whilst an empty record signifies a time still available for reservation. The system encompasses the specific schedule for every resource, which is every physician and clinic, as well as specialty for the defined period. Accordingly, the user booking appointments is

capable of viewing all available time slots and manages the load of patients as per clinic. In case the time/date demanded was reserved, the system provides alternative appointments. Overbooking for more than one patient is feasible when the user is given the command to do so.

For both repetitive and associative appointments, the system is adequate of automatically searching and booking in the available periods only. The system is supplied with Resource Master File to update data about the resources and allocate their time slots, in addition to Daily Schedule Master File to maintain all the resource schedules. The resource is uniquely identified by the resource code, so the first window is prompt for the resource code.

After the appointment is booked it first arrives to be seen by the doctor, so he will be able to view and manage his daily schedule. In view of that, the system automatically prepares medical record files which are built smoothly from the day-to-day operations. Physicians might need to add a referral or update an already existing one. As the system is integrated with the clinician module, physicians booking follow-ups and/or referrals are all recorded on the appointment module, along with the named of referred-to physician and medical diagnosis.

Appointment booking parameters maybe easily modified to suit the environment and could be customized accordingly, i.e. holidays, holidays with the exception of specific days, doctors' day off, and lunch breaks. Exceptions are defined as:

- Fixed: e.g. Independence Day
- Variable: e.g. Adha Holiday

The system automatically blocks all appointments to be assigned for any fixed holiday. However, in case the user reserves an appointment during a variable holiday defined from previous years, a notification message appears as a reminder, however the user may choose to continue to book for the date specified.

Comment/Remark:

Comments and Remarks field is used to enter any remarks about the patient or comments about his appointment. Free text entry field is available to type information. A list box, like a drop-down list, is valid to facilitate the search and it displays a list of choices of which an item is selected. Through this list box information can be retrieved any about the booked appointments of the selected patient, whether old or new. The list box facilitates the search for the user, along with the search engine. Nevertheless, mandatory fields are indicated in special format. If the mandatory field is left blank an error message will be displayed indicating that this field is mandatory.

Reports

Reports in general are considered the output of any application. It comes in the stage following the setup and the processing functions. The Appointment system provides the user with the possibility of getting the final reports of the various processed data in the different functions of the system. This report is used to display the summary report for the daily outpatient statistics for a specific specialty on a specific date.

The system is accustomed to generate reports pertaining to managerial and statistical aspects:

1- Managerial:

- A resource's schedule for a defined day
- Resource Schedule and Available Booking List: All appointments for a specific patient with information regarding the name of medical center, patient ID , doctor name, appointments' time and date, and chief complaint
- Justifications of cancellation of appointments
- Patients affected from canceling their appointments

2- Statistical:

- Missed appointments
- Canceled appointments
- Number of patient as per resource (clinic, physician, service)
- Waiting Interval
- Appointment Durations
- Clinics per day, physician or specialty per day, and apparatus per day: to retrieve what happened in a specific day for a specific clinic, resource or a specific doctor.