**Practical 1**

**Name: Aaron Rocque**

**Batch: A2**

**Roll No: 31**

**Subject: SE Lab**

**Functionalities for Hospital Management System**:

1. Appointment Scheduling: Appointments should be scheduled by considering the doctor's availability. This can be done online too to cut short crowds at the front of the desk.
2. Patient Registration: Managing registration ensures that you have the updated information of the patient ie their blood group, age, address, name, etc.
3. Inpatient registration: By doing so you get all the information about a patient. Whenever an old patient comes in with a new problem, you can get his/her entire medical history. It also becomes fairly easy to register a new patient.
4. Boarding: By managing the boarding it becomes easy to identify the number of beds available and thus its allocation can be seamless.
5. Billing: At the time of discharge, if all the billing is managed properly the discharge summary, billing details, and reports can be issued smoothly.
6. Process Management: The hospital system is designed such that there are two categories of patients ie the IPD and OPD. The process management adjusts to the needs of such kinds of patients.
7. Consultation Management: This helps a patient go to the right department. Say someone has issues with their teeth, and they will be referred to the dental department.
8. Digital imaging and diagnostic management: You can rapidly simplify imaging and diagnostic procedures. It understands all types of laboratory reports. From radiology to pathology, strong support is facilitated to manage appointments, billing, and diagnostic reports.
9. Vital Tracking and Management: Sample collection, sample tracking, and delivery of test results.
10. Patient Portal: Doctors can connect with their patients via a portal where they can keep track of their patients progress.
11. Claims Management: By using this claimed feature you can automate the entire claim management process.
12. Workforce management: The availability of physicians and other providers is visible in this system.
13. Lab Management: The potential is to manage all records and analyze reports.
14. Pharmacy: This module comprises effective management of drugstores.

**Trauma Center (Casualty Department):**

A trauma center (or trauma center) is a hospital equipped and staffed to provide care for patients suffering from major traumatic injuries such as falls, motor vehicle collisions, or gunshot wounds. A trauma center may also refer to an emergency department (also known as a "casualty department" or "accident & emergency") without the presence of specialized services to care for victims of major trauma.

There are six levels of the Trauma Center:

1. Level 1 Trauma Center
2. Level 2 Trauma Center
3. Level 3 Trauma Center
4. Level 4 Trauma Center
5. Level 5 Trauma Center
6. Pediatric Trauma Center

Level 1 Trauma Center: A Level I trauma center provides the highest level of surgical care to trauma patients. Being treated at a Level I trauma center can reduce mortality by 25% compared to a non-trauma center.[17] It has a full range of specialists and equipment available 24 hours a day[18] and admits a minimum required annual volume of severely injured patients.

Level 2 Trauma Center: A Level II trauma center works in collaboration with a Level I center. It provides comprehensive trauma care and supplements the clinical expertise of a Level I institution. It provides 24-hour availability of all essential specialties, personnel, and equipment. Oftentimes, level II centers possess critical care services capable of caring for almost all injury types indefinitely. Minimum volume requirements may depend on local conditions. Such institutions are not required to have an ongoing program of research or a surgical residency program

Level 3 Trauma Center: A Level III trauma center does not have the full availability of specialists but has resources for emergency resuscitation, surgery, and intensive care of most trauma patients. A Level III center has transfer agreements with Level I or Level II trauma centers that provide backup resources for the care of patients with exceptionally severe injuries (such as multiple trauma).

Level 4 Trauma Center: A Level IV trauma center exists in some states in which the resources do not exist for a Level III trauma center. It provides initial evaluation, stabilization, diagnostic capabilities, and transfer to a higher level of care. It may also provide surgery and critical-care services, as defined in the scope of services for trauma care. A trauma-trained nurse is immediately available, and physicians are available upon the patient's arrival in the Emergency Department. Transfer agreements exist with other trauma centers of higher levels, for use when conditions warrant a transfer.

Level 5 Trauma Center: A Level V trauma center provides initial evaluation, stabilization, diagnostic capabilities, and transfer to a higher level of care. They may provide surgical and critical-care services, as defined in the service's scope of trauma care services. A trauma-trained nurse is immediately available, and physicians are available upon patient arrival in the emergency department. If not open 24 hours daily, the facility must have an after-hours trauma response protocol.

Pediatric Trauma Center: A facility can be designated an adult trauma center, a pediatric trauma center, or an adult and pediatric trauma center. If a hospital provides trauma care to both adult and pediatric patients, the level designation may not be the same for each group. For example, a Level I adult trauma center may also be a Level II pediatric trauma center because pediatric trauma surgery is a specialty unto itself. Adult trauma surgeons are not generally specialized in providing surgical trauma care to children and vice versa, and the difference in practice is significant. In contrast to adult trauma centers, pediatric trauma centers only have two ratings, either level I or level II.

**References:**

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