1. **Main Subject Areas**

**Patient**

* The Patient entity cluster will store all the information related to the patient identity like Patient ID, Patient Name, Address, Phone Number, E-Mail ID along with insurance details and medical history. This entity cluster will help in capturing all the information related to patient. Patient entity cluster will have a relationship with the dentist entity cluster with the help of appointment.

**Provider**

* The Provider entity cluster will store all the information about the dentist who will be operating on a patient. It will have information about the License a provider is having, years of experience, Provider ID, Provider name, etc. It will also store the insurance details and the appointment details. It will have a relationship with the appointment entity cluster as well as treatment entity cluster.

**Visit**

* This will have the details regarding the treatment which has been given to the patient during the current visit. It will also have details regarding any treatment taken from previous visits. Details regarding prescription given will also be stored in this entity cluster. Invoice will be generated based on the treatment given to the patient.

**Inventory**

* Inventory management will track the detail of all the supplies and equipment. It will track the cost and availability of all the Equipment and supplies. It will also record the contract details with a vendor such as a purchase contract or maintenance contract. Apart from this, the user can easily track the detail of any equipment such as where it is located, is it functioning properly or not, etc.

1. **Business Rules**
   1. **In Scope Items**

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| **ID** | **Business Rules** | **Area** |
| IS01 | The dentist will provide the treatment to one/many patients. | Dentist |
| IS02 | Dentist will provide the medical prescription to the patient | Dentist |
| IS03 | Dentist can treat a single patient at a time. | Dentist |
| IS04 | The Dentist Entity will store basic Information of Dentist such as Name, Phone Number, Address etc. | Dentist |
| IS05 | The Dentist can provide service to multiple location. | Dentist |
| IS06 | Every Dentist must have a valid license. | Dentist |
| IS07 | The Dentist can have one or multiple License according their specialization. | Dentist |
| IS08 | The Detail of license will be stored in License Detail Entity such as License Number, status, Type etc. | Dentist |
| IS09 | Confidential data such as SSN, Tax Payer Id, etc. should be stored in separate reference table with more security applied to the table. | Dentist |
| IS10 | The Specialization Entity will store the information of the doctor and detail of his/her specialization such as Dentist can be general dentist, orthodontist, prosthodontist etc. | Dentist |
| IS11 | Appointments booked by every patient will be recorded along with date, time and Dentist's details with whom the appointment is booked. | Dentist |
| IS12 | The patient Entity will store the basic detail of patient such as Name, Phone Number, and Emergency Number. | Patient |
| IS13 | Other Patient Details like missing teeth, facial growth problems, oral habit, spaced teeth etc. must be recorded in Patient’s health history. | Patient |
| IS14 | A patient can have more than one insurance. | Patient |
| IS15 | There cannot be multiple appointments at a single time for a patient. | Patient |
| IS16 | The system will store the details of various dental disease details. | Patient |
| IS17 | The system will store the detail of the treatment given by dentist to the patient. | Patient |
| IS18 | Patient can pay the bill via different payment mode and can set the preferred payment mode. | Patient |
| IS19 | The dentist can prescribe the drugs to the patient according to the disease. | Prescription |
| IS20 | The patient can get prescriptions from multiple dentists. | Prescription |
| IS21 | The Patient can change the payment mode and set the primary payment mode | Invoice |
| IS22 | The system will save the demographic information of the patient such as Address. | Patient |
| IS23 | A Patient can have one or more home addresses. | Patient |
| IS24 | Patient will have Emergency Contact Details | Patient |
| IS25 | Details regarding number of upper teeth and number of lower teeth of the patient must be recorded. | Patient |
| IS26 | Patient history must contain previous medical history. | Patient |
| IS27 | Multiple appointments can be made by a patient at multiple locations with different time | Appointment |
| IS28 | There is appointment status which will maintain the status of appointment such as Done, Canceled etc. | Appointment |
| IS29 | An appointment must be associated with a specific location via a room | Appointment |
| IS30 | A room can be booked more than one time for different appointments. | Location |
| IS31 | Prescription provider name must be included in the prescription. | Prescription |
| IS32 | Treatment must have a treatment ID that can be used for invoice and dentist. | Treatment |
| IS33 | Details regarding which tooth has been treated during the treatment must be recorded. | Treatment |
| IS34 | The Dentist can send the prescription to the patient without having any appointment. | Prescription |
| IS35 | There is at least one invoice against the appointment | Invoice |
| IS36 | The Dentist can work with multiple schedule at multiple location | Dentist |
| IS37 | The Dentist can have one or more than one appointment in his/her working hours | Dentist |
| IS38 | The System will track the all the Equipment Details such as vendor detail, Is the equipment portable etc. | Equipment |
| IS39 | The Vendor Detail will save the all the information of Equipment / Supplies vendor | Vendor |
| IS40 | The System will track the information of all the available supplies | Supplies |
| IS41 | Supplies must contain supplier ID to track the shipment. | Supplies |
| IS42 | The System will track the contract details with Multiple vendors of equipment and supplies | Equipment |
| IS43 | We will track the details of the equipment such as where it is located currently | Equipment |
| IS44 | Medical equipment can be bought from multiple vendors. | Vendor |
| IS45 | Warranty details of equipment should be stored for repairing and replacement. | Equipment |

* 1. Out of Scope Items

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| ID | Business Rules | Area |
| OS01 | Feedback for dentist is not tracked. | Dentist |
| OS02 | Salaries of dentist and staff are not tracked in the system | Dentist |
| OS03 | Schedule of staff working in the office is not captured. | Other Staff |
| OS04 | Other staff working in office but not participating in the dental care of the patient are not tracked. | Other Staff |
| OS05 | Cost of the prescribed medicines are not tracked in the system. | Medicine |
| OS06 | Utilities that are being used in the room are not tracked. | Location |
| OS07 | Finances of Dentist office are not tracked. | Dentist |
| OS08 | Medicines for other diseases apart from dental problems, | Medicine |
| OS09 | No method for membership plans/discounts to the regular patients at this dental office. | Membership |
| OS10 | Status of prescription is not required. | Prescription |

1. **Audiences**

**Admin**

* The role of the admin will be to enter and manage the system. He will be responsible for updating the data like if appointment is cancelled then change the status to cancel, if it is done then change the status to complete or done.
* All the database activities will e managed by the admin. Admin will be allowed to create new roles if required. He can increase or decrease the security of a table.
* Admin will play a main role in managing the system from data entry to data deletion and updating the data as per the requirement.

**Dentist**

* Apartment from admin, dentist will also be allowed to access the system.
* He/ She can check their appointments scheduled for a given date.
* He/ She can access the patient history and medical details with the help of the system. This will help the dentist to know more about the patient history before starting the treatment. He will get the details of the necessary precaution which needs to be taken before starting the treatment
* Dentist can also give prescription through the system directly to the patient without an appointment.
* He/ She will be informed about the license expiry, so that the Dentist can renew or make a new license.