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DATABASE DESIGN DOCUMENT

DENTAL OFFICE

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# 1: REVISION HISTORY:

|  |  |  |
| --- | --- | --- |
| **Version** | **Changes Made** | **Date** |
| **Version 1** | Initial document | 11/12/2021 |
| **Version 2** | Added sample data, diagrams, expanded business rules, and description | 11/20/2021 |
| **Version 3** | Added improved high-level model, Entities and their Attributes | 12/03/2021 |
| **Version 4** | Added more relevant tables, improved Business rules, and enhanced ER model. | 14/03/2021 |

# 2: OVERVIEW:

This document comprises the Business rules which are In-scope and Out of Scope and high-level diagrams required to build a database for a dental office. The report gives a brief explanation of what data needs to be stored along with its entities and attributes for the developers. It also comprises data types of the attributes, their relation, and sample data for each table.

This report covers the main entities like the Patients, Dentists, Appointments, Treatment, etc. along with the essentials associated with them are stored here. A patient books an appointment at the dental office. The patient's basic data is captured through the patient intake form, the appointment details that the patient has made are stored. An appointed dentist will provide the treatment for that patient.

# 3: AUDIENCE:

The database developers, stakeholders, and the people in the business are entitled to use this document for the correct understanding of how a dentist clinic database should be built and to get an overview of the various entities involved in this model.

# 4: BUSINESS RULES:

## **In-Scope Items**:

|  |  |
| --- | --- |
| ID Rule | Area |
| IS01 Capture the patient’s demographic information | Patient |
| IS02 Patient can have one or more addresses or contact number | Patient |
| IS03 Patient records can be one or more for different purposes such as Diagnosis, Medication, Teeth Cleaning, etc. | Patient |
| IS04 Capture the dentist demographic and official details | Dentist |
| IS05 A dentist can have multiple appointments in a single day | Dentist |
| IS06 Every appointment should contain a patient, dentist, and a location for that appointment | Appointment |
| IS07 Every patient should have an appointment | Appointment /  Patient |
| IS08 License data of the dentist should be captured, a dentist can have one or more license | Dentist |
| IS09 The patient history should be recorded | Patient History |
| IS10 Patient history must include medical conditions, allergies. | Patient History |
| IS11 Each appointment can serve only one patient. | Appointment |
| IS12 Room will be allocated depending on the date and time of appointment | Room |
| IS13 Patient can see multiple dentists during the treatment period | Patient |
| IS14 One room can house multiple appointments in a day but not at the  same time | Room |
| IS15 A prescription can have one or many prescribed drugs | Prescription |
| IS16 Prescription should be referenced with patient history | Prescription/ Patient History |
| IS17 A patient can have a prescription from more than one doctor | Prescription |
| IS18 Not mandatory that every patient will be prescribed after treatment | Prescription |
| IS19 Only a healthcare dentist can provide the prescription to a patient | Prescription |
| IS20 The patient’s allergic material or drug should be recorded | Patient |
| IS21 Specializations done by dentists should be tracked | Dentist |
| IS22 There should be only one entry per patient in case of multiple visits | Patient |
| IS23 Every entity should have a name that alone can be used to get access  to all the information regarding the entities | All |
| IS24 The status of the patient’s visit should be recorded | Patient |
| IS25 The patient record for every patient can be for different treatments  such as braces, root canal, etc | Patient History |
| IS26 Every revising patient will have patient history and treatment history  which should be tracked | Patient History |
| IS27 All prescription records must be maintained | Prescription |
| IS28 Details of the patient to be stored depending on patient intake form like  patient data, current complaints, payment information, etc. | Patient |
| IS29 Room schedule to be maintained so spots can be assigned for  Appointment | Room |
| IS30 Dentists and their availability to be recorded so patients can see which  the dentist is available and hence book an appointment with them | Dentist |
| IS31 Capture multiple payment options | Payment |
| IS32 Appointment end time should be captured | Appointment |
| IS33 A dentist can only have one appointment at one time | Dentist |
| IS34 Capture multiple payment options | Payment |
| IS35 A patient can have one or more insurances | Insurance |
| IS36 Treatment Catalog must list all the available services | Treatment Catalog |
| IS37 After the patient has made the payment, the payment type and the  payment status must be captured | Payment |
| IS38 The inventory of the dental equipment should be maintained | Equipment |
| IS39 The maintenance and the warranty of the equipment is maintained | Equipment |
| IS40 Every payment must be referenced with patient | Payment |
| IS41 A price should be assigned for every service in the treatment catalog | Treatment Catalog |
| IS42 Only treatment present in the treatment catalog will be offered in  the dental office | Treatment Catalog |

## **Out-of-Scope Items:**

|  |  |
| --- | --- |
| **ID Rule** | **Area** |
| OS01 No multiple entries in the patient entity for the same person | Patient |
| OS02 No multiple entries in the dentist entity for the same person | Dentist |
| OS03 The other staff like the nurse, cleaning staff, assistants, etc. are not included |  |
| OS04 Payroll and Human resource information |  |
| OS05 Inventory for supplies | Supplies |
| OS06 Location change not included | Location |
| OS07 Emergency appointment scheduling is not included | Appointment |
| OS08 Security measures for patient and dentist information | Patient / Dentist |
| OS09 Dentist License Renew |  |
| OS10 Multiple Locations for Dentist |  |
| OS11 Feedback by patients for the dentist is not recorded | Patient |
| OS12 People who work in an office but do not assist inpatient care are not  Recorded |  |
| OS13 Dentist parking costs are not included | Dentist |
| OS14 Storing scanned files of patient documents like X-rays etc. | Patient |
| OS15 Patients are not allowed to book multiple appointments in a day | Appointment/ Patient |
| OS16 Emergency appointments are not allowed | Patient |
| OS17 Time spent by the patient in the waiting room | Room |
| OS18 Online consulting between patient & dentist | Dentist |
| OS19 Number of patients treated, or number of surgeries performed by the  Dentist | Dentist |
| OS20 Any sensitive piece of information like SSN | Patient/Dentist |
| OS21 Walk-in or patients without prior appointment not to be tracked | Patient |
| OS22 Details of purchase of prescribed drugs not to be tracked | Prescription |
| OS23 Discounts or membership plans |  |
| OS24 Track of equipment like printer, telephone, WiFi |  |
| OS25 The equipment needed to perform the treatment should not be tracked |  |
| OS26 More than 2 payment methods at a time | Payment |
| OS27 Prior treatment, not necessarily given by the same dentist | Patient History |

# 5: ENTITIES:

Following are the entities and attributes that can be defined for the Dental database.

Index for Constraints:

**PK** – Primary Key

**NN** – Not Null

**FK** – Foreign Key

**1.** **Dentist** - This entity houses the demographic details of a provider in the dental system. This person must be licensed by the state they are operating in to perform general dentistry. A dentist can have multiple licenses. Dental assistants and other office staff are not represented here.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **Data Type** | **Constraints** | **Definition** | **Example** |
| Dentist\_ID | Int | PK | A unique ID is given to the dentist once they register with their license. | 101 |
| First\_Name | Varchar (20) | NN | The first name of the dentist. | Jeremy |
| Last\_Name | Varchar (20) | NN | The last name of the dentist | Gilbert |
| Specialization | Varchar (200) | NN | An area in dental care the dentist is an expert in. | Pedodontics |
| License No. | Varchar (7) | NN | The number of the dental license the dentist has registered. | ED1238F |
| Email ID | Varchar (50) | NN | An email ID associated with the dentist for contact purposes. | [JermeyG12@gmail.com](mailto:JermeyG12@gmail.com) |
| Availability | Timestamp | NN | This attribute gives the availability of the dentist for a day | 10.00am-2.00pm |

**2. Patient** - This entity contains the details of a person under dental care. The person may be waiting for this care or maybe receiving it or may have already received it. This entity contains the personal details of the person like the contact details, name, and address. It also displays the information entered in patient intake form.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **Data Type** | **Constraints** | **Definition** | **Example** |
| Patient\_ID | Int | PK | A unique ID is given to the patient once they register with the dental care provider. | 12 |
| First\_Name | Varchar (70) | NN | The first name of the patient. | Elena |
| Last\_Name | Varchar (70) | NN | The last name of the patient. | Gilbert |
| Address | Varchar (200) | NN | The primary address of the patient. | 75 St Alphonsus Street, Boston, MA, 02115 |
| Birthdate | Date | NN | The age of the patient in years. | 24/05/1995 |
| Email ID | Varchar (50) | NN | An email ID associated with the patient. | JermeyEl@gmail.com |
| Contact No | Char (13) | NN | The patient's contact number. | +1 8575642313 |
| Symptoms | Varchar(50) | NN | Describes the symptoms/Concerns of the patient | BP, Tooth Sensitivity |
| Allergies | Varchar(30) | NN | Defines allergies of the patient | Metal, Latex |

**3.** **Appointment** - This is an agreement made by the patient and doctor to meet at a specific time, date, and location. A patient can schedule an appointment in the available slots. This entity contains the basic information about the patient, the dentist associated with it, and the location for the appointment.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attributes** | **DataType** | **Constraints** | **Definition** | **Example** |
| Appointment\_ ID | Int | PK | A unique ID is given to every appointment once the patient schedules one. | 637 |
| Date | Date | NN | On what date is the appointment scheduled. | 10/10/2021 |
| Time | Date | NN | At what time is the appointment scheduled. | 12:30 AM |
| Room\_Number | Int | FK,NN | Place at which the appointment will take place. | 203 |
| Patient\_ID | Int | FK,NN | This will be a reference to the Patient\_ID from the patient entity. | 12 |
| Dentist\_ID | Int | FK,NN | This will be a reference to the Dentist\_ID from the patient entity. | 101 |
| Location \_ID | Int (2) | FK,NN | This will be a reference to the Location\_ID from the location entity. | 10 |

**4.** **Location** -This entity houses the location of the dental office.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attributes** | **DataType** | **Constraints** | **Definition** | **Example** |
| Location\_ID | Int | PK | A unique ID is given to every location of the physical space where the dental appointment will be held. Eg. 3 | 234 |
| Street\_Name | Varchar(50) | NN | It is the name given to a street where the physical space is present. | Tremont street |
| City | Varchar(15) | NN | It is the name of the city where the dental office is present. | 75, St Alphonsus Street |
| State | Varchar(20) | NN | It is the name of the state. | MA |
| Zipcode | Int | NN | A Unique code of the location | 02120 |

**5.** **Patient History** - A summary of the patient's medical history that is updated when first visiting the practice and yearly or per visit thereafter. It comprises the list of medications given to the person or any other medical conditions of the person and if the person has any type of allergies.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attributes** | **DataType** | **Constraints** | **Definition** | **Example** |
| Patient\_History\_ID | Int | PK | Contains the identification number used to uniquely fetch the patient’s history and records | 12 |
| Mouth\_State\_ID | Int | FK,NN | This will be a reference to the Mouth\_state\_ID from the Present mouth state entity | 001 |
| Patient\_ID | Int | FK,NN | This will be a reference to the Patient\_ID from the patient entity. | 12 |
| Prior\_Mouth\_State | Varchar(10) |  | This indicates the previous visit mouth condition of the patient | Cavities |
| Prior\_Treatment | Varchar(30) |  | This describes the previous treatment given to the patient | Root Canal |
| Current\_Medication | Varchar(30) |  | Current medication patient takes | BP medication |

**6. Prescription** - A dentist’s order for the preparation and administration of a drug or device for a patient after the patient has received a dental service. This entity only contains the drugs list and a schedule for those drugs.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attributes** | **DataType** | **Constraints** | **Definition** | **Example** |
| Prescription\_ID | Int | PK | Contains the identification number used to identify and track each prescription uniquely. | 122 |
| Patient\_ID | Int | FK,NN | This will be a reference to patient ID from a patient entity | 12 |
| Dentist\_ID | Int | FK,NN | This will be a reference to the dentist ID from the dentist entity | 101 |
| Appointment\_ ID | Int | FK,NN | A reference to the Appointment\_ID from the appointment entity. | 637 |
| Prescription\_Details | Varchar(max) | NN | This attribute gives the information about the medicines prescribed by the doctor | Oragel |

**7. Room** - This entity defines a physical space where a dental service will take place. The room and the unit number are represented over here. Contact information of the provider is not included in this entity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **Data Type** | **Constraints** | **Definition** | **Example** |
| Room\_ID | Int (3) | PK, NN | A unique ID is given to every location where the dental appointment will be held. | 3 |
| Features | Varchar(max) | Null | It gives information of the features of the room | Capacity |
| Location\_ID | Int | FK | This will be a reference to the location Id from the location entity | 234 |
| Room\_start | Time | NN | This attribute gives the information at what is the start time of the room availability | 10 AM |
| Room\_end | Time | NN | This attribute gives the information at what is the start time of the room availability | 4 PM |

**8. Dentist Schedule -** This entity holds the information about the schedule of the dentist for the day. All the appointments will be populated in this table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **Data Type** | **Constraints** | **Definition** | **Example** |
| Dentist\_ID | Int | FK,NN | This will be a reference to the Dentist\_ID from the dentist entity. | 3 |
| Patient\_ID | Int | FK,NN | This will be a reference to patient ID from a patient entity | Capacity |
| Room\_Number | Int | FK,NN | This will be a reference to the Room Number from the Room entity | 234 |
| Time | Timestamp | NN | This attribute gives the information about the treatment time and date | 2021-01-01  03:00:00 |
| Treatment\_ID | Int | FK, NN | This is about the Treatment\_ID present in the Treatment entity | 24 |

**9. Equipment -** This entity holds information about all the equipment in the dental office.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **Data Type** | **Constraints** | **Definition** | **Example** |
| Equipment\_ID | Int | PK,NN | A unique ID is assigned to each equipment piece. | 32698 |
| Equipment\_Description | Varchar(max) | NN | Information about the equipment and other useful data like safety instructions. | Curette |
| Equipment\_Price | Float | NN | Cost of the equipment piece. | 200$ |
| Maintenance\_Date | Date | NN | Due date of maintenance for the equipment. | 12/21/2021 |
| Warranty | Int | NN | Warranty in the form of the number of years. | 2 |
| Room\_Number | Int | FK, NN | The room which places the equipment. | 3 |

**10. Supplies -** This entity describes all the supplies that are required at a dentist’s office but for which a patient does not pay. The cost of these supplies won’t appear in a patient’s billing statement.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **Data Type** | **Constraints** | **Definition** | **Example** |
| Supply\_ID | Int | PK,NN | A unique number is given to every type of supply. | All gloves will be under unique ID 4 |
| Item\_Name | Varchar(30) | NN | Name of the supply. | Gloves, Syringes |
| Item\_Price | Float | NN | Cost of the supplies. | 200$ |
| Purchase\_Date | Date | NN | Purchase date of supplies. | 12/25/2021 |
| Quantity | Int | NN | The available quantity of supplies. | 10 |
| Location\_ID | Int | FK,NN | Location of the supplies. | 234 |

**11. Present Mouth State -** This entity describes the state of the mouth of the patient during his first visit. Any prior treatments done to repair the state are not recorded in this entity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **Data Type** | **Constraints** | **Definition** | **Example** |
| Mouth\_state\_ID | Int | PK,NN | A unique number is given present mouth state | 001 |
| Present\_No\_Teeth | Int | NN | The total number of teeth present in the patient's mouth during the first visit. | 32 |
| General\_Mouth\_Condition | Varchar(max) | NN | General description of patient’s mouth. | The patient has crooked front teeth |
| Plaque | Boolean(1) | NN | Presence of plaque on teeth of the patient. | No |
| Stains | Boolean(1) | NN | Presence of stains on the teeth of the patient. | Yes |
| Abscess | Boolean(1) | NN | Presence of abscess on the teeth of the patient. | Yes |
| Condition\_Of\_Abscess | Varchar(70) | NN | Description of the state of the abscess in the patient's mouth. | Severe |
| Contact\_Point | Varchar(70) | NN | It is the point when teeth erupt and acquire proximal contact with the adjacent tooth. | 2nd molar contact point is a straight line |
| Occlusion | Varchar(70) | NN | The way the teeth meet is when the lower jaw(mandible) and upper jaw(maxilla) come together. | Normal |
| Patient\_ID | Int | FK,NN | Patient ID from the patient entity | 12 |

**12. Patient Address -** This is an associative entity as a patient can have multiple addresses so they are being tracked. Hence one to many relationships exists between patient and address entity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **Data Type** | **Constraints** | **Definition** | **Example** |
| Patient\_ID | Int | FK,NN | The ID of the patient from the patient entity. | 12 |
| Address\_ID | Int | FK,NN | The ID of address from address entity. | 9 |

**13. Address -** This entity holds the address of the patient. A patient can have more than one address and can be stored in the database.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attributes** | **DataType** | **Constraints** | **Definition** | **Example** |
| Address\_ID | Int | PK,NN | A unique ID is given to the address of the patient. | 27 |
| Street\_Name1 | Varchar(50) | NN | A name of the street in the address if the patient. | Tremont Street |
| Street\_Name2 | Varchar(50) | NN | A name of the street in the address (if the patient has more than one address.) | St. Alphonsus Street |
| City1 | Varchar (15) | NN | It’s the name of the city in the address of the patient. | Boston |
| City2 | Varchar(15) | NN | It’s the name of the city in the address of the patient. (If a patient has more than one address). | Boston |
| State1 | Varchar(20) | NN | It’s the name of the state in the address of the patient. | Massachusetts |
| State2 | Varchar(20) | NN | It’s the name of the state in the address of the patient (If a  the patient has more than one address). | Massachusetts |
| ZipCode1 | Int | NN | It’s the postal code of the area in the address. | 02120 |
| ZipCode2 | Int | **NN** | It’s the postal code of the area in the address. (if the patient has more than one address) | 02122 |

**14. Problem Catalog-** It contains a list of all possible problems normally found on teeth or in the mouth.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attributes** | **DataType** | **Constraints** | **Definition** | **Example** |
| Problem\_ID | Int | PK, NN | A unique ID is given to every possible problem in the catalog. | 27 |
| Problem\_Name | Varchar (200) | NN | It’s the name of the possible problems in the patient’s mouth. | Tooth erosion. |

**15. Tooth-** The tooth entity is a simple dictionary that is used later when the dentist specifies which tooth was the problem. Treatment can be performed on a single tooth or a set of teeth.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attributes** | **DataType** | **Constraints** | **Definition** | **Example** |
| Tooth\_ID | Int | PK, NN | A unique ID is given to every possible problem in the catalog. | 3 ot D(If baby tooth) |
| Tooth\_Description | Varchar(max) | NN | It’s the description used for the tooth getting work done. | The half tooth is broken. |

**16. Problem Detected-** This entity holds the references to entities like Tooth, problem Catalog, and appointment table. This entity gives information about the problem which has been detected on a tooth.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attributes** | **DataType** | **Constraints** | **Definition** | **Example** |
| Problem\_Detected\_ID | Int | PK, NN | A unique ID is given to every problem detected in the patient’s mouth. | 33 |
| Treatment\_ID | Int | FK,NN | This is about the Treatment\_ID present in the Treatment entity. | 24 |
| Tooth\_ID | Int | FK,NN | This is about the Tooth\_ID present in the Tooth entity. |  |
| Problem\_ID | Int | FK,NN | This is about the Problem\_ID present in the Problem entity. |  |
| Appointment\_ID | Int | FK,NN | This is about the Appointment\_ID present in the Appointment entity. |  |
| Dentist\_ID | Int | FK,NN | This is about the Dentist\_ID present in the Dentist entity. |  |
| Patient\_ID | Int | FK,NN | This is about the Patient\_ID present in the Patient entity. |  |
| Room\_ID | Int | FK,NN | This is about the Room\_ID present in the Room entity. |  |

**17. Treatment**- This entity holds the references to entities like Treatment Catalog

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attributes** | **DataType** | **Constraints** | **Definition** | **Example** |
| Treatment\_ID | Int | PK | A unique ID is given to every treatment in the catalog. | 24 |
| Treatment\_Catalog\_ID | Int | FK | This is about the Treatment\_Catalog\_ID present in the Treatment Catalog entity. | 27 |

**18. Treatment Catalog** - An organized collection of all the different types of treatments available in a dental system. A cost can be associated with every treatment. Information about the dentist and the patient is not represented here.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attributes** | **DataType** | **Constraints** | **Definition** | **Example** |
| Treatment\_\_Catalog\_ID | Int | PK | A unique ID is given to every treatment name in the catalog. | 27 |
| Treatment\_Name | Varchar(200) | NN | It’s the name of the treatment available in the Dental Office. | Root Canal |
| Description | Varchar(max) | NN | Description for every treatment in the catalog. | Braces – A dental brace is a device used to correct the alignment of teeth and bite-related problems. |
| Price | Int | NN | Cost of each treatment | $500 |

**19. Treatment Steps-** This entity holds the order of the treatment’s steps. This entity will connect steps with treatments.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **DataType** | **Constraints** | **Definition** | **Example** |
| Treatment\_Step\_ID | Int | PK,NN | A unique ID is given to every step performed in the catalog | 13 |
| Order | Int | NN | It’s a number that defines the order of steps in treatment | 5 |
| Treatment\_ID | Int | FK,NN | This is the reference to the Treatment\_ID present in the Treatment entity | 24 |

**20. Insurance -** This entity holds the information about the insurance plans a patient has. A person can have one or more insurance plans but a maximum of three.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **DataType** | **Constraints** | **Definition** | **Example** |
| Insurance\_ID | Int | PK, NN | A unique ID is given to every insurance the patient has. | 2134 |
| Description | Varchar(max) | NN | Details about the insurance covers, the coverage amount, how much is the cover, etc. | This insurance covers 70% of the cost for braces up to a $1000. |
| Insurance\_Company\_Name | Varchar (100) | NN | Contains the name of the insurance company | Sunshine Insurance |
| Patient\_ID | Int | FK | This will be a reference to the Patient\_ID from the Patient entity |  |
| Payment\_ID | Int | FK | This will be a reference to the Payment\_ID from the Payment entity |  |

**21. Invoice -** A bill generated for the treatment taken by the patient. This entity is represented by the list of the treatments that the patient has undergone and the associated price total for those treatments.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **DataType** | **Constraints** | **Definition** | **Example** |
| Invoice\_number | Int | PK,NN | A unique number is given to every invoice generated after an appointment has been completed | 856944 |
| Description | Varchar(max) | NN | Details about the treatment done, the cost associated with the treatment, and the payment details. | New braces added. Total cost $500 and payment received. |
| Invoice\_Amount | Float | NN | Amount to be paid to the dentist's office. |  |
| Date\_of\_Generation | Date | NN | It is the date at which the invoice has been generated | 12/12/2021 |
| Appointment\_ID | Int | FK | This will be a reference to the Appointment\_ID from the Appointment entity. |  |

**22. Payment -** This entity tracks the details of the payments made by a patient for the dental services. The types of payments by which the patient can pay are included here.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **DataType** | **Constraints** | **Definition** | **Example** |
| Payment\_ID | Int | PK | A unique ID is assigned to each payment done for the generated invoice. | 32 |
| Patient\_ID | Int | FK | A reference to Patient\_ID in the Patient table | 12 |
| Payment\_Status | Varchar(10) | NN | Status for the invoice if the payment is made or not. | Pending |
| Payment\_Type | Varchar (30) | NN | The mode of payment used to pay the bill. | Cash |
| Invoice\_Number | Int | FK, NN | A reference to the Invoice\_ID from the invoice entity. |  |

**23. Drug Catalog-** This entity is a directory of all the drugs from which a Dentist will prescribe drugs to the patient.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attributes** | **DataType** | **Constraints** | **Definition** | **Example** |
| Drug\_ID | Int | PK | Contains the identification number used to identify each drug present in the catalog. | 124 |
| Drug\_Name | Varchar(100) | NN | Contains the name of the drug present in the drug catalog. | Aspirin |
| Prescription\_ID | Int | FK,NN | This will be a reference to the Prescription\_ID from the Patient entity. | 122 |

**24. Appointment Status History-** This table is used to store data about the statuses that the visit went through. The thought is that we add status manually after certain actions are completed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attributes** | **DataType** | **Constraints** | **Definition** | **Example** |
| Appointment\_History\_ID | Int | PK, NN | Contains the identification number used to identify each Appointment History. | 121 |
| Status | Varchar(max) | NN | Status of the data after the visit went through. | 3 steps have been performed in the last visits. |
| Dentist\_ID | Int | FK,NN | This will be a reference to the Dentist\_ID from the Dentist entity. | 101 |
| Patient\_ID | Int | FK,NN | This will be a reference to the Patient\_ID from the Patient entity. | 12 |
| Appointment\_ ID | Int | FK,NN | This will be a reference to the Appointment\_ID from the Appointment entity. | 637 |
| Room\_ID | Int | FK,NN | This will be a reference to the Room\_ID from the Room entity. | 3 |

# 6: ER DIAGRAM:

**Diagram, schematic

Description automatically generated**