Assignment 2

Database – BSE 4A

Instructor: Dr. Rab Nawaz Jadoon

Spring 2023

Due Date: 04-05-2023

Task:

1. Generate/develop the ERD after analyzing the following schema entities.
2. ERD (with complete cardinalities and associations)

**4[A]**

## Data Design

### **A.4.1 Conversion from conceptual data model into Data Base Structure.**

**1-Table Name:** Disease

**Primary key:** Disease

**Description:** This table is used to store the names of all diseases

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Diseaseid | Number | 10 | Disease no |
| Disname | Varchar2 | 30 | Name of Disease |

**2-Table Name:** Patient\_Disease

**Primary key:** Addno, Diseaseid, Docid, disdate, Scheduleid.

**Description:** This table contains information’s of patient diseases.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Diseaseid | Number | 10 | Disease no |
| Docid | Varchar2 | 15 | Doctor id |
| Disdate | Date | - | Date |
| Scheduleid | Number | 3 | Schedule number |

**3-Table Name:** Contact

**Primary key:** Docid, Contact-no.

**Foreign key:** Docid, References Doctor (Docid)

**Description:** This table contains information of Doctor contact numbers

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Docid | Varchar2 | 15 | Doctor id |
| Device | Char | 8 | Name of Device |
| Contact\_no | Varchar2 | 25 |  |

**4-Table Name:** Alergic\_history

**Primary key:** Addno, Alergicdate, Docid.

**Foreign key:** (Addno) References patient (addno)

**Foreign key:** (Docid) references doctor (Docid)

**Description:** This table contains the information’s of patient allergic histories.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Addno number |
| Alergicdate | Date | - | History date |
| Alergichis | Varchar2 | 200 | Allergic History |
| Docid | Varchar2 | 15 | Doctor id |

**5-Table Name:** Complaints

**Primary key:** Addno, Docid, Hisdate

**Foreign key:** (Addno) References Patient (Addno),

**Foreign key:** (Docid) References Doctor (Docid)

**Description:** This table contains the information of patient complaints or physical problems.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Add number |
| Hisdate | Date | - | Date of History |
| Complaints | Varchar2 | 500 | Complaints |
| Docid | Varchar2 | 15 | Doctor id |

**6-Table Name:** Drug His

**Primary key:** addno, nicno, drugdate.

**Foreign key:** (addno) references patient (addno),

**Foreign key:** (Docid) references doctor (Docid).

**Description:** This table contains the information of patient medicines, which is given during his/her treatment.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Drugdate | Date | - | Date of History |
| Drugexplanation | Varchar2 | 500 | Complaints |
| Docid | Varchar2 | 15 | Doctor id |

**7-Table Name:** Family His

**Primary key:** Addno, Docid, Date1

**Foreign key:** (Addno) References Patient (Addno)

**Foreign key:** (Docid) References Doctor (Docid)

**Description:** This table contains the information’s of Patient Family Histories.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Docid | Varchar2 | 15 | Doctor id |
| Date1 | Date | - | Date |
| Diabeats | Char | 2 | Disease name |
| Hypertension | Char | 2 | Disease name |
| Asthna | Char | 2 | Disease name |
| Tb | Char | 2 | Disease name |
| Description | Varchar2 | 40 | Other information |

**8-Table Name:** His\_of\_illness

**Primary key:** addno, alergicdate

**Foreign key:** (addno) references patient (addno),

**Foreign key:** (Docid) references doctor (Docid).

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data Type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Docid | Varchar2 | 15 | Doctor id |
| Alergicdate | Date | - | Date |
| Alergichis | Varchar2 | 200 | History name |

**Description:** This table contains the information’s of patient complaints descriptions.

**9-Table Name:** Past\_His

**Primary key:** Addno, Docid, Pasthisdate

**Foreign key:** (Addno) references patient (Addno),

**Foreign key:** (Docid) references doctor (Docid),

**Description:** This table contains the information’s of patient past histories

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Docid | Varchar2 | 15 | Doctor id |
| PastHisDate | Date |  | Date of History |
| Any\_Hospitalization | Varchar2 | 2 | Disease name |
| Any Surgical | Varchar2 | 2 | Disease name |
| Tb | Varchar2 | 2 | Disease name |
| Hypertension | Varchar2 | 2 | Disease name |
| Asthma | Varchar2 | 2 | Disease name |
| Diabetes | Varchar2 | 2 | Disease name |
| Explanation |  | 1000 | More explanation |

**10-Table Name:** Personal\_His

**Primary key:** Addno, Docid, P\_Date

**Foreign key:** (Addno) References Patient (Addno),

**Foreign key:** (Docid) References Doctor (Docid),

**Description:** This table contains the information of personal history of patient.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Docid | Varchar2 | 15 | Doctor id |
| P\_Date | Date |  | Date of History |
| Maritalstatus | Varchar2 | 2 | Married /Not married |
| No\_Child | Varchar2 | 2 | Number of Childs |
| Anyaddiction | Varchar2 | 15 | Disease name |
| Eating Habit | Varchar2 | 15 | Eating habits |
| Bowel Habit | Varchar2 | 2 | Bowel habit |
| Explanation |  | 500 | More expln |

**11-Table Name:** Gen\_Phy\_Examination

**Primary key:** Addno, Docid, Hisdate

**Foreign key:** (Addno) References Patient (Addno),

**Foreign key:** (Docid) References Doctor (Docid),

**Description:** This table contains the information about General physical examination of patient.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Docid | Varchar2 | 15 | Doctor id |
| His\_Date | Date |  | Date of History |
| Anemia | Varchar2 | 4 | Disease name |
| Clussing | Varchar2 | 4 | Disease name |
| Candice | Varchar2 | 4 | Disease name |
| Kiohnyclia | Varchar2 | 4 | Disease name |
| Leuconyclia | Varchar2 | 4 | Disease name |
| Hydration | Varchar2 | 4 | Disease name |
| Jvp | Varchar2 | 4 | Disease name |
| Cyanosis | Varchar2 | 4 | Disease name |
| Explanation | Varchar2 | 200 | More explanation |

**12-Table Name:** Electrelogicalfindings

**Primary key:** Addno, Docid, Invesdate

**Foreign key:** (Addno) References Patient (Addno),

**Foreign key:** (Docid) References Doctor (Docid),

**Description:** This table contains the information’s of patient Electrelogicalfindings

|  |  |  |  |
| --- | --- | --- | --- |
| **Fieldname** | **Data Type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Docid | Varchar2 | 15 | Doctor id |
| Invesdate | Date | 15 | Finding date |
| Findings | Varchar2 | 200 | Findings |

**13-Table Name:** HEAMLOGICAL\_INVES

**Primary key:** Addno, Docid, Invesdate

**Foreign key:** (Addno) References Patient (Addno),

**Foreign key:** (Docid) References Doctor (Docid),

**Description:** This table contains the information about the heamablogical investigation of patient.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Docid | Varchar2 | 15 | Doctor id |
| Invesdate | Date |  | Date of History |
| Peripheral\_Smearreport | Varchar2 | 4 | Test name |
| HB | Varchar2 | 4 | Test name |
| Tic | Varchar2 | 4 | Test name |
| Platelets | Varchar2 | 4 | Test name |
| Rebic\_Count | Varchar2 | 4 | Test name |
| ESR |  | 4 | Test name |

**14-Table Name:** Systemic Examined

**Primary key:** Addno, Docid, Hisdate

**Foreign key:** (Addno) References Patient (Addno).

**Foreign key: (**Docid) References Doctor (Docid).

**Description:** This table contains the information’s of different humans systems

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Docid | Varchar2 | 15 | Doctor id |
| Hisdate | Date |  | Date of History |
| Cardiovascularsystem | Varchar2 | 500 | Human system name |
| Respiratotysystem | Varchar2 | 500 | Human system name |
| Gastrointestinalsystem | Varchar2 | 500 | Human system name |
| Centralnervious\_system | Varchar2 | 500 | Human system name |
| Rheumologicalsystem | Varchar2 | 500 | Human system name |
| ESR |  | 500 | Human system name |

**15-Table Name:** Radiological\_Inves.

**Primary key:** Addno, Docid, Invesdate.

**Foreign key:** (Addno) References Patient (Addno).

**Foreign key:** (Docid) References Doctor (Docid).

**Description:** This table contains the information’s of all machines tests.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Docid | Varchar2 | 15 | Doctor id |
| Invesdate | Date |  | Date of History |
| Chest\_Xray | Varchar2 | 150 | Test name |
| Ultrasound | Varchar2 | 200 | Test name |
| Echo | Varchar2 | 150 | Test name |
| CT\_Scan | Varchar2 | 200 | Test name |
| Bariumsludir | Varchar2 | 400 | Test name |
| Mri |  | 200 | Test name |

**16-Table Name:** Biochemicaltests.

**Primary key:** Biotestno.

**Description:** This table contains the information’s of all Biochemical tests.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Biotestno | Number | 10 | Test numbers |
| Biotestname | Varchar2 | 30 | Test names |

**17-Table Name:** Chemicaltests.

**Primary key:** Testno.

**Description:** This table contains the names of all Chemical tests.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Testno | Number | 6 | Test number |
| Testname | Varchar2 | 20 | Test name |
| Unit | Varchar2 | 12 | Unit of test |
| Refvalues | Varchar2 | 15 | Ranges of test values |

**18-Table Name:** Lab.

**Primary key:** Labid.

**Description:** This table contains the information of laboratories where patient takes their Tests.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Labid | Varchar2 | 10 | Lab number |
| LabName | Varchar2 | 50 | Laboratory name |
| Address | Varchar2 | 50 | Address of laboratory |
| Phone | Varchar2 | 15 | Phone of laboratory |

**19-Table Name:** Patient\_Biochemicaltests.

**Primary key:** Addno, Docid, Labid, Biotestno, B\_date, Time.

**Description:** This table contains the information’s of patient Biochemical tests.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Docid | Varchar2 | 15 | Doctor id |
| B\_Date | Date |  | Date of Test |
| LabId | Varchar2 | 30 | Laboratory number |
| BioTestno | Varchar2 | 30 | Test number |
| Time | Varchar2 | 10 | Time of test |
| Val | Varchar2 | 10 | Tests values |
| Remarks | Char | 10 | Remark about test value |

**20-Table Name:** Patient\_Chemicaltests.

**Primary key:** Addno, Time, Chtestdate, Labid, Testno, Docid.

**Description:** This table contains the information’s about patient chemical tests.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Docid | Varchar2 | 15 | Doctor id |
| ChTestDate | Date |  | Date of Test |
| LabId | Varchar2 | 30 | Laboratory number |
| Testno | Varchar2 | 30 | Test number |
| Time | Varchar2 | 10 | Time of test |
| Result | Varchar2 | 6 | Tests values |
| Remarks | Char | 10 | Remark about test value |

**21-Table Name:** Bp\_Pulse

**Primary key:** Addno, Bpdate, Time, Nurseid

**Foreign key:** (Addno) References Patient (Addno),

**Foreign key:** (Nurseid) References Nurse (Nurseid),

**Description:** This table contains the information of patient daily Blood pressure, Pulse etc information.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient addno |
| Docid | Varchar2 | 15 | Doctor id |
| BpDate | Date |  | Date of Test |
| Pulse | Varchar2 | 7 | Laboratory number |
| B-P | Varchar2 | 8 | Patient Blood Pressure |
| Time | Varchar2 | 8 | Time of checking |
| Respiration | Varchar2 | 8 | Respiration of patient |
| Temp | Varchar2 | 6 | Temperature of patient |
| Remarks | Varchar2 | 10 | Remarks after checking |
| Nurseid | Varchar2 | 15 | Nurse number |

**22-Table Name:** Doctor\_Schedule

**Primary key:** Docid, Scheduleid, Fromdate

**Description:** This table contains the information of Doctor working Schedule.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Docid | Varchar2 | 15 | Doctor id |
| Scheduleid | Number | 3 | Schedule number |
| FromDate | Date | - | Start Date of duty |
| ToDate | Date | - | End Date of duty |

**23-Table Name:** Nurse\_Schedule.

**Primary key:** Nurseid, Scheduleid, Fromdate.

**Description:** This table contains the information of Nurse working Schedule.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Nurseid | Varchar2 | 15 | Nurse number |
| Scheduleid | Number | 3 | Schedule number |
| FromDate | Date | - | Start Date of duty |
| ToDate | Date | - | End Date of duty |

**24-Table Name:** Schedule.

**Primary key:** Scheduleid.

**Description:** This table contains the information of Timetable.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Scheduleid | Number | 3 | Schedule number |
| Schedulename | Varchar2 | 8 | Schedule name |
| Fromtime | Date | - | Start Time |
| Totime | Date | - | End Time |

**25-Table name:** Doctor

**Primary key:** Docid

**Description:** This table contains the information of all Doctor which do their job in the Ward.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Docid | Number | 15 | Doctor id |
| Name | Varchar2 | 20 | Doctor Name |
| Address | Date | 50 | Doctor Address |
| Sex | Date | 7 | Sex |
| Specialist |  | 20 | Specialization |

**26-Table name:** Patient

**Primary key:** Addno

**Description:** This table contains the information of all patient records.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient admission number |
| Name | Varchar2 | 20 | Patient Name |
| Fathername | Varchar2 | 20 | Father Name |
| Age | Varchar2 | 3 | Age of patient |
| Sex | Char | 7 | Gender |
| Phone | Varchar2 | 15 | Phone |
| Bloodgroup | Varchar2 | 7 | Blood group of patient |
| Address | Varchar2 | 50 | Patient address |

**27-Table name:** Nurse

**Primary key:** Nurseid

**Description:** This table contains the information of all Nurses records.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Nurseid | Varchar2 | 15 | Nurse number |
| Name | Varchar2 | 20 | Nurse Name |
| Sex | Varchar2 | 7 | Gender |
| Phone | Varchar2 | 15 | Nurse phone |
| Address | Varchar2 | 50 | Nurse address |

**28-Table name:** Treatment

**Primary key:** Treatmentid

**Description:** This table contains the information of all medicines records.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Treatmentid | Varchar2 | 10 | Medicine number |
| Medicine | Varchar2 | 50 | Medicine Name |
| Unit | Varchar2 | 15 | Weight |
| Companyname | Varchar2 | 30 | Company name which  Made the medicines |

**29-Table name:** Patient Treatment.

**Primary key:** Treatmentid, Addno, Docid, Treatmentdate

**Description:** This table contains the information of all medicines records.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient admission  Number |
| Docid | Varchar2 | 15 | Doctorid |
| Treatmentid | Varchar2 | 10 | Medicine Name |
| Investigation | Varchar2 | 18 | Doctor diagnosis |
| Treatmentdate | Date |  | Medicine Date |
| Remarks | Varchar2 | 20 | After giving medicines and gives remarks |

**30-Table name:** Bed

**Primary key:** Bedno

**Description:** This table contains the information of all beds record, which is used in the ward.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Bedno | Number | 3 | Bed Number |
| Status | Char | 4 | Means which is empty  Or full |

**31-Table name:** Patient\_Bed.

**Primary key:** Bedno

**Description:** This table contains the information of all beds record, which is used in

The ward.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Patient admission  Number |
| Bedno | Number | 3 | Bed Number |
| Doa | Date |  | Date Of Admission |
| Dod | Date |  | Date Of Discharge |
| Condition | Char | 10 | Patient Condition |
| Deathtime | Varchar2 | 10 | Patient Death Time |
| Addnotime | Varchar2 | 10 | Admission Time |

**32-Table name:** Urineanalysis

**Primary key:** Addno, Docid, Invesdate.

**Foreign key:** (Addno) References Patient (Addno).

**Foreign key:** (Docid) References Doctor (Docid).

**Description:** This table contains the information of urine system.

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Name** | **Data type** | **Size** | **Description** |
| Addno | Varchar2 | 15 | Admission no |
| Docid | Varchar2 | 15 | Doctor id |
| Invesdate | Date | - | History Date |
| Protein | Varchar2 | 10 |  |
| Glucose | Varchar2 | 10 |  |
| Carts | Varchar2 | 10 |  |
| Purcells | Varchar2 | 10 |  |
| Rbcs | Varchar2 | 10 |  |
| Epicells | Varchar2 | 10 |  |
| Crystab | Varchar2 | 10 |  |