**UNIVERSITI TUNKU ABDUL RAHMAN**



**Faculty of Information and Communication Technology (FICT)**

**UCCD2203 DATABASE SYSTEMS**

**Group Assignment**

**Session 202101**

Deadline: Saturday 27 March 2021 (Week 10)

Time: before 5.00 pm

Submission channel: a hyperlink on WBLE

|  |  |
| --- | --- |
| **Programme (**IA/IB/CS/CN/CT**):** | **CS** |
| **Group Number (example G01) :** | **G49** |
| **Group leader name:** | **TAN XI EN** |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | **Name**  **(in ascending order)** | **Student ID** | **UTAR email address** | **Practical Group** | **Signature\*\*** |
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| 2 | YEOH SIOW POO | 1802886 | ysiowpoo@1utar.my | P (6) |  |
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Note:

The assignment grouping can be from different tutorial groups but must be from the same programme i.e. IA student work with IA student

\*\*All members should attach their individual signature confirming that the report is not plagiarized

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Assignment Marking Scheme** | | | | | | |  |
| **PART 1: (Group Assessment - 50%)** | | | | | | | **Marks** |
| **1.** | **Scope of Work (5 marks)**  Analyse requirements study (briefly explain the requirements/ office / business rules in the system).  PLEASE INCLUDE ANY ASSUMPTIONS THAT YOU MAKE. | | | | | |  |
| **2.** | **ER model** (**10 marks**)  You are required to design an ER diagram for the case study given, identify entities, identify relationships, identify associate attribute and determine keys.  Check your ERD with the transaction requirements stated in the case. | | | | | |  |
| **3.** | **Redesign and EER** (**10 marks**)  Redesign your ER diagram with the new requirements and extending the ERD to EER model, if any. | | | | | |  |
| **4.** | **Data Dictionary** (**10 marks**)  Based on EER diagram that you created in part 4, create a data dictionary for the solution. (Make sure the data types (Oracle) selected are appropriate) | | | | | |  |
| **5.** | **Tables and records** (**5 marks**)  Create all relations in ERD and insert the necessary records (Minimum 5 record for each table) | | | | | |  |
| **6.** | **Script** (**10 marks**)  You are required to submit the SQL schema script with proper codes. Should include Integrity and referential integrity constraints.   |  | | --- | | **Softcopy:** *Include the scripts in the submission* | | | | | | |  |
| **PART 1: Total Group Assessment - 50%** | | | | | | |  |
| **PART 2: (Individual Assessment - 50%)**  (Filled in all your group members name and ID) | | | | | | | |
| **Student Name** | | **1.** TAN XI EN | **2.** YEOH SIOW POO | **3.** FELIX LEN WEN JUN | **4.** YEW JEI WEY |  | |
| **Student ID** | | 1904098 | 1802886 | 1901121 | 1802520 |  | |
| **Queries**  **(30 marks)** | |  |  |  |  |  | |
| **Stored**  **Procedure**  **(10 marks)** | |  |  |  |  |  | |
| **Function**  **(10 marks)** | |  |  |  |  |  | |
| **PART 2: Total Individual Assessment – 50 marks** | |  |  |  |  |  | |
| **PART 1 + PART 2**  **= 100 marks** | |  |  |  |  |  | |
|  | | | | | | | | |

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# 1.0 Scope of Work

ABC hospital is a large hospital situated in Kuala Lumpur, Malaysia. Every day, there are many patients being admitted to ABC Hospital. To accomodate for the huge number of patients regularly being admitted into ABC Hospital, they have recruited many staff into their workforce. The staff can be classified into doctors and nurses. There are also many other staff working in other departments of the hospital.

ABC Hospital has many departments, For example, the HR department, Nursing Department, Pharmacy Department and many more. Each department contains one or many of its respective staff. Each department has their own name and description. The identities of each department is unique so that the departments are differentiable.

In ABC hospital, each staff belongs to only one department. The identities of each staff is unique so that admins are able to differentiate between the staff. Each staff have their own name, house address, phone number and hired date. The related entry of the staff should be stored within the staff table. In order to differentiate between Doctor, nurses and admin, each staff has an attribute called job position. The job position of the staff depends on its respective department. For example, a HR department would have admin, clerk staff members. A doctor's department would only have doctor staff and vice versa.

When a patient is admitted into ABC Hospital, they have to first fill up an admission form. The admission form is used to record the patient’s name and the patient’s admission date and time, the total admission fee and the bed number of the patient. The admission form has to be filled up each time the patient enters ABC Hospital.

After the patient is admitted into ABC Hospital, he or she is then assigned a doctor to care for and regulated for. Details such as First name, last name, social security number (SSN), gender, date of birth, phone number, email, address line, city, postcode, state, and country shall be recorded. The related entry of the patient shall be stored within the patient table. Each patient is unique and should not have duplicate entries. In case of existing patients, he or she does not need to make a new entry and the old record shall be used.

When the patient books a consultation with the doctor, it shall be recorded in the medical report of the patient. The date and time of the consultation will be recorded. The start time of the consultation is initially set by the doctor, whereas the end time of the consultation is recorded when the consultation ends. The patient’s information and the doctor information shall be recorded. The purpose of the consultation is to notify the doctor about the illness of the patient and allow the doctor to perform any medical check-up on the patient. Once the consultation is done, relevant info shall be recorded in the medical report of the patient.

When a new patient is admitted into ABC hospital, a medical report is generated. The medical report contains information such as patient information, affected disease, medicine information, prescribed medicine quantity and consultation information. The medical report shall record all consultations made by the patient. This is for doctors to be able to refer to any consultation made with the patient. Any medicine prescribed to a patient shall also be recorded in the medical report. This is to allow easy retrieval of billing fees. A medical report can have many medicines. A medical report also records the types of service used by the patient.

Any drug or medicine needs to be recorded in the Medical table of ABC Hospital. The name, description, manufacturer, dosage, quantity in stock and price per unit of medicine are recorded. The related entries are inserted into the medical table of ABC Hospital. Each Medicine is unique and requires a unique ID for identification. A medicine can be used in many medical reports.

ABC Hospital also contains many facilities. Each facility is unique and requires an ID to help differentiate among the various facilities in the hospital. The name, descriptions, quantity and floor of the facility is recorded into the facility table. Each facility provides special services for its patients. A facility contains many different types of services.

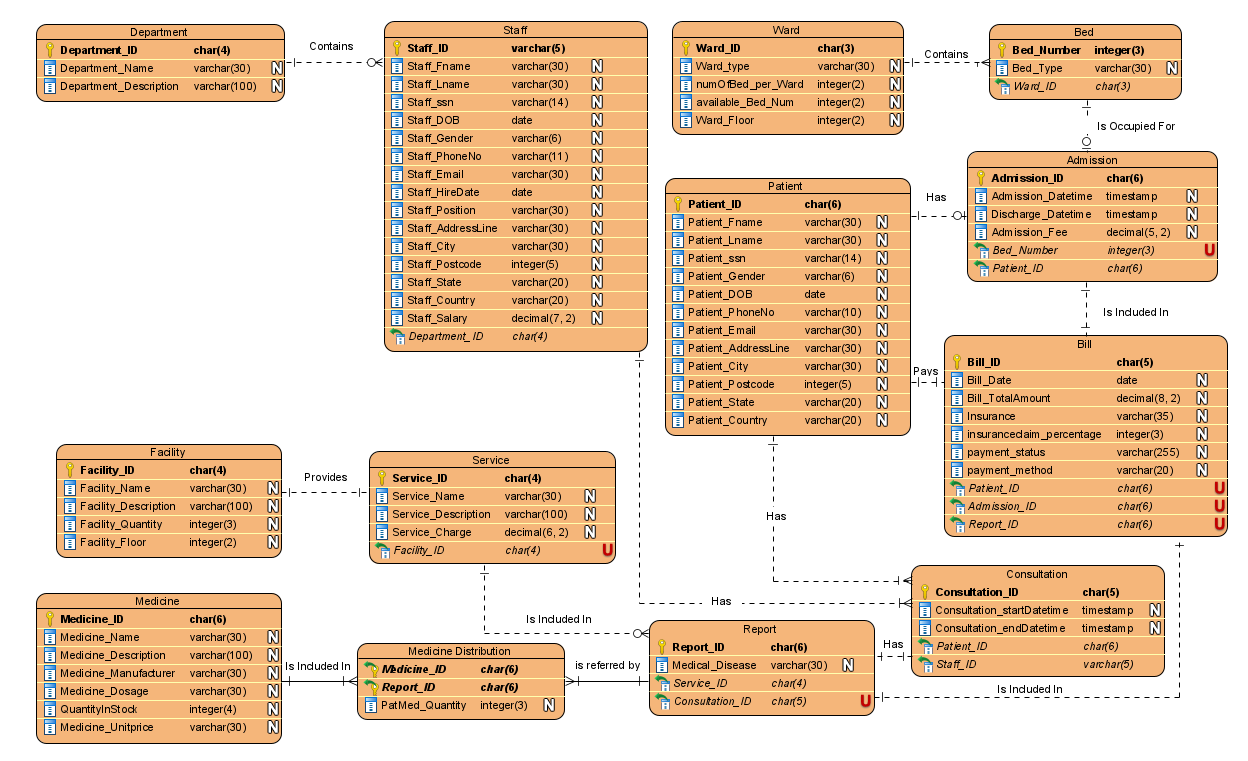
There are many different types of services being offered in ABC Hospital. Each service depends on its facility. A service only belongs to one facility. Services being offered in ABC Hospital include CT Scan EG Service, X-ray scanning and many more. Doctors determine which services should be offered to patients during consultation, and the service is recorded in the medical report of the patient.

When a patient is admitted into the hospital, he or she will take up an empty bed. The bed number will be recorded in the admission form of the patient. After the bed number is recorded, the ward information of that bed and the bed type will be recorded as well. Each patient can choose the bed type, for example, general ward bed or semi-automated electric bed. Some patients who need intensive care will be assigned to specialty hospital beds like cardiac beds or ICU beds. Each bed is unique and has to be uniquely identified using a bed number. The related entry is stored in the bed table.

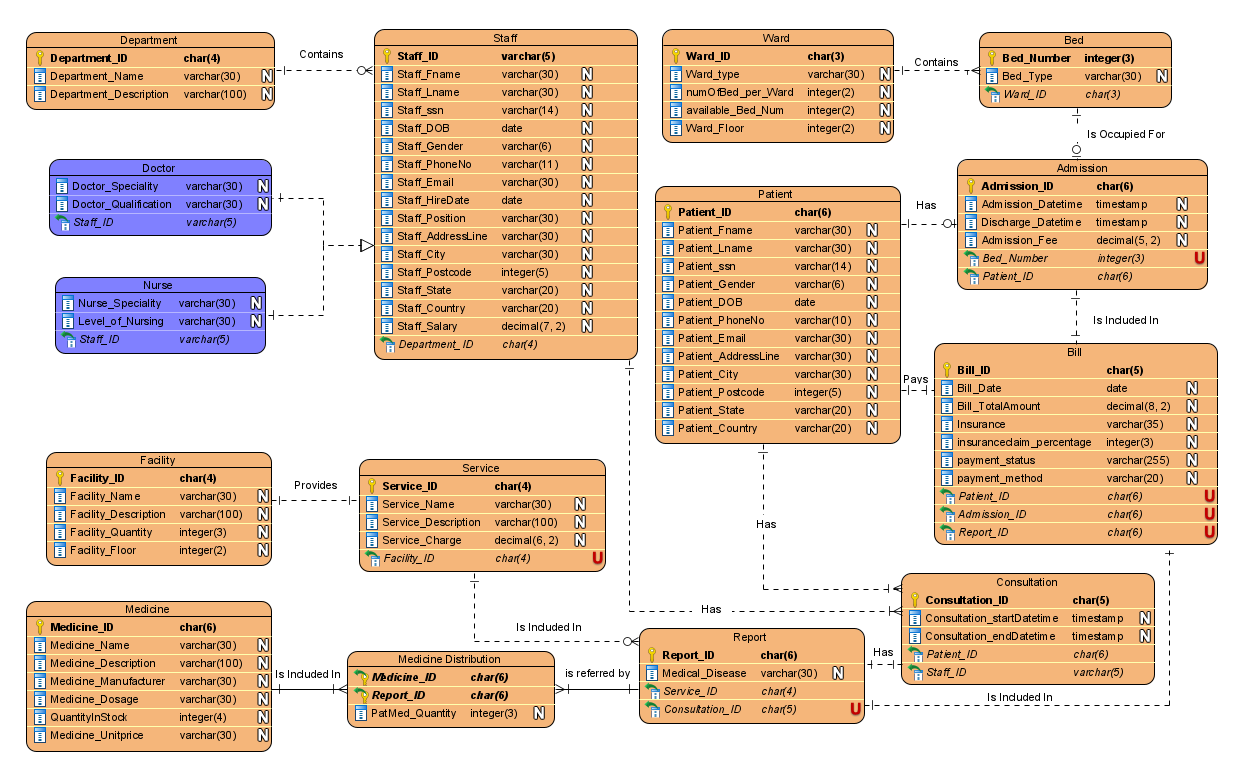
However, before a patient is admitted into the hospital, hospital ABC needs to check which ward is still available for the new patient. When patients are recovering, they are all sleeping in the ward of ABC Hospital. Each ward is unique and must be uniquely identified using ward id. Each ward can only contain a limited number of beds, and its respective bed number. Each ward also records the floor it is currently situated in ABC Hospital. Related entries are all stored in the ward table.

When the patient has recovered and can finally be discharged from the hospital, a bill is produced for the patient. A patient has only one bill. The bill records information such as date the bill is issued and the total fee amount. The payment status of the bill is by default set to not paid. Each bill is unique and has to be uniquely identified by Bill ID. The total amount of the bill consists of admission fee and medicine fee. Once the patient pays the bill, he is allowed to leave ABC hospital. The payment method is recorded within the bill. The payment status is also updated once the patient pays the full amount of the bill. In case the illness of the patient is severe, insurance claim is possible. If insurance is used to pay the bill, the insurance company is recorded in the bill. The insurance claim percentage is also shown in the bill.

# 2.0 ER model



# 3.0 Redesign and EER



# 4.0 Data Dictionary

**Department Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Department\_ID | Char | 5 | D1001 | Not |
|  | Department\_Name | Varchar2 | 20 | Nursing | Null |
|  | Department\_Description | Varchar2 | 50 | Description of department | Null |

**Staff Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Staff\_ID | Char | 5 | S1001 | Not |
|  | Staff\_Fname | Varchar2 | 15 | Ying Qian | Null |
|  | Staff\_Lname | Varchar2 | 15 | Kang | Null |
|  | Staff\_ssn | Varchar2 | 14 | 900224-08-3434 | Null |
|  | Staff\_DOB | Date | MM/DD/YYYY | 02/24/1990 | Null |
|  | Staff\_Gender | Varchar2 | 6 | Female | Null |
|  | Staff\_PhoneNo | Varchar2 | 12 | 0124567833 | Null |
|  | Staff\_Email | Varchar2 | 30 | yqian@gmail.com | Null |
|  | Staff\_HireDate | Date | MM/DD/YYYY | 12/31/2020 | Null |
|  | Staff\_Position | Varchar2 | 20 | Nurse | Null |
|  | Staff\_AddressLine | Varchar2 | 40 | 26, Taman Baru | Null |
|  | Staff\_City | Varchar2 | 20 | Parit Buntar | Null |
|  | Staff\_Postcode | Number | 5 | 34200 | Null |
|  | Staff\_State | Varchar2 | 20 | Perak | Null |
|  | Staff\_Country | Varchar2 | 15 | Malaysia | Null |
|  | Staff\_Salary | Decimal | 8,2 | RM4500.00 | Null |
| **FK** | Department\_ID | Char | 5 | D1001 | Not |

**Doctor Table (**MD -Doctorate of Medicine**)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Staff\_ID | Char | 5 | S1003 | Not |
|  | Doctor\_Specialty | Varchar2 | 20 | Neurology | Null |
|  | Doctor\_Qualification | Varchar2 | 20 | MD | Null |

**Nurse Table (**RN – Registered nurse**)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Staff\_ID | Char | 5 | S1001 | Not |
|  | Nursing\_Specialty | Varchar2 | 20 | Emergency | Null |
|  | Level\_Of\_Nursing | Varchar2 | 17 | RN | Null |

**Patient Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Patient\_ID | Char | 5 | P1001 | Not |
|  | Patient\_Fname | Varchar2 | 15 | Joshua | Null |
|  | Patient\_Lname | Varchar2 | 15 | Leong | Null |
|  | Patient\_ssn | Varchar2 | 14 | 790106-08-4564 | Null |
|  | Patient\_Gender | Date | MM/DD/YYYY | 01/06/1979 | Null |
|  | Patient\_DOB | Varchar2 | 6 | Male | Null |
|  | Patient\_PhoneNo | Varchar2 | 12 | 0169459875 | Null |
|  | Patient\_Email | Varchar2 | 30 | joshual@gmail.com | Null |
|  | Patient\_AddressLine | Varchar2 | 40 | 16, Taman Siput | Null |
|  | Patient\_City | Varchar2 | 20 | Parit Buntar | Null |
|  | Patient\_Postcode | Number | 5 | 34200 | Null |
|  | Patient\_State | Varchar2 | 20 | Perak | Null |
|  | Patient\_Country | Varchar2 | 15 | Malaysia | Null |

**Consultation Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Consultation\_ID | Char | 5 | C1001 | Not |
|  | Consultation\_startDatetime | Timestamp | MM/DD/YYYY HH24:MI:SS | 02/16/2021 10:40:00 | Null |
|  | Consultation\_endDatetime | Timestamp | MM/DD/YYYY HH24:MI:SS | 02/16/2021 12:25:00 | Null |
| **FK1** | Staff\_ID | Char | 5 | S1015 | Not |
| **FK2** | Patient\_ID | Char | 5 | P1001 | Not |

**Facility Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Facility\_ID | Char | 5 | F1001 | Not |
|  | Facility\_Name | Varchar2 | 20 | CT Scanner | Null |
|  | Facility\_Description | Varchar2 | 50 | Description of facility | Null |
|  | Facility\_Quantity | Number | 3 | 15 | Null |
|  | Facility\_Floor | Number | 2 | 1 | Null |

**Service Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Service\_ID | Char | 6 | SE1001 | Not |
|  | Service\_Name | Varchar2 | 20 | CT Scan | Null |
|  | Service  \_Description | Varchar2 | 55 | Description of service | Null |
|  | Service\_Charge | Decimal | 5,2 | 900.00 | Null |
| **FK** | Facility\_ID | Char | 5 | F1001 | Not |

**Medicine Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Medicine\_ID | Char | 5 | M1001 | Not |
|  | Medicine\_Name | Varchar2 | 20 | Allopurinol | Null |
|  | Medicine\_Description | Varchar2 | 52 | Description of medicine | Null |
|  | Medicine\_Manufacturer | Varchar2 | 15 | Zyloprim | Null |
|  | Medicine\_Dosage | Varchar2 | 20 | 100mg per tablet | Null |
|  | QuantityInStock | Number | 4 | 300 | Null |
|  | Medicine\_Unitprice | Decimal | 5,2 | 20.00 | Null |

**Report Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Report\_ID | Char | 5 | R1001 | Not |
| **FK1** | Consultation\_ID | Char | 5 | C1001 | Not |
| **FK2** | Service\_ID | Char | 6 | SE1001 | Null |
|  | Medical\_Disease | Varchar2 | 25 | Heart Attack | Null |

**Medicine\_Distribution Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK, FK1** | Medicine\_ID | Char | 5 | M1001 | Not |
| **PK, FK2** | Report\_ID | Char | 5 | R1005 | Not |
|  | PatMed\_Quantity | Number | 2 | 3 | Null |

**Ward Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Ward\_ID | Char | 5 | W1001 | Not |
|  | Ward\_type | Varchar2 | 20 | General Ward | Null |
|  | NumOfBed\_per\_ward | Number | 2 | 6 | Null |
|  | Available\_Bed\_Num | Number | 2 | 2 | Null |
|  | Ward\_Floor | Number | 2 | 1 | Null |

**Bed Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Bed\_Number | Number | 3 | 101 | Not |
|  | Bed\_Type | Varchar2 | 30 | General Ward Bed | Null |
| **FK** | Ward\_ID | Char | 5 | W1001 | Not |

**Admission Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Admission\_ID | Char | 6 | AD1001 | Not |
|  | Admission\_Datetime | Timestamp | MM/DD/YYYY HH24:MI:SS | 02/16/2021 10:45:15 | Null |
|  | Discharge\_Datetime | Timestamp | MM/DD/YYYY HH24:MI:SS | 22/02/2021 12:40:45 | Null |
|  | Admission\_Fee | Decimal | 6, 2 | 560.00 | Null |
| **FK1** | Bed\_Number | Number | 3 | 107 | Not |
| **FK2** | Patient\_ID | Char | 5 | P1001 | Not |

**Bill Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key** | **Column name** | **Data Type** | **Length** | **Example** | **Null** |
| **PK** | Bill\_ID | Char | 5 | B1001 | Not |
|  | Bill\_Date | Date | MM/DD/YYYY | 02/22/2021 | Null |
|  | Bill\_TotalAmount | Decimal | 8,2 | 1185.00 | Null |
|  | Insurance | Varchar2 | 35 | AXA Medical Insurance | Null |
|  | Insuranceclaim\_percentage | Number | 3 | 100 | Null |
|  | Payment\_method | Varchar2 | 20 | Credit Card | Null |
|  | Payment\_status | Varchar2 | 35 | Completed | Null |
| **FK1** | Report\_ID | Char | 5 | R1001 | Not |
| **FK2** | Admission\_ID | Char | 6 | AD1001 | Not |
| **FK3** | Patient\_ID | Char | 5 | P1001 | Not |

# 5.0 Tables and records

**Department Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Department\_ID | D1001 | D1002 | D1003 | D1004 | D1005 |
| Department\_Name | Nursing | Pharmacy | Medical | Financial | Admission |
| Department\_Description | Provide better patient care | Responsible for managing drugs | Provide treatment based on the disease of patient | In charge the overall finances of hospital | Manage the stuff of hospital admission |

**Staff Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Staff\_ID | S1001 | S1002 | S1003 | S1004 | S1005 |
| Staff\_Fname | Ying Qian | Steven | Wen Lui | Pei Wen | Wen Qi |
| Staff\_Lname | Kang | Cheong | Law | Peng | Looi |
| Staff\_ssn | 900224-08-3434 | 850314-08-0988 | 890924-14-7114 | 901204-01-0313 | 880526-02-4114 |
| Staff\_DOB | 02/24/1990 | 03/14/1985 | 09/24/1989 | 12/04/1990 | 05/26/1988 |
| Staff\_Gender | Female | Male | Male | Female | Female |
| Staff\_PhoneNo | 0124567833 | 0116787412 | 0164786231 | 0175476345 | 0127368932 |
| Staff\_Email | yqian@gmail.com | stevenc@gmail.com | wxuan@gmail.com | pwen@gmail.com | wqi@gmail.com |
| Staff\_HireDate | 12/31/2020 | 01/08/2021 | 01/12/2021 | 01/24/2021 | 01/24/2021 |
| Staff\_Position | Nurse | Pharmacist | Doctor | Doctor | Finance Staff |
| Staff\_AddressLine | 26, Taman Baru | 27, Tanjung Bunga | 27, Taman Bayu Perdana | 25, Jalan Setia Tropika 4/5 | 5, Taman Selasih |
| Staff\_City | Parit Buntar | Parit Buntar | Klang | Johor Bahru | Kulim |
| Staff\_Postcode | 34200 | 34200 | 42000 | 81200 | 09000 |
| Staff\_State | Perak | Perak | Selangor | Johor | Kedah |
| Staff\_Country | Malaysia | Malaysia | Malaysia | Malaysia | Malaysia |
| Staff\_Salary | 4500.00 | 6200.00 | 24000.00 | 26000.00 | 3500.00 |
| Department\_ID | D1001 | D1002 | D1003 | D1003 | D1004 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 6** | **Record 7** | **Record 8** | **Record 9** | **Record 10** |
| Staff\_ID | S1006 | S1007 | S1008 | S1009 | S1010 |
| Staff\_Fname | Daniel | Mun Yi | Ivan | Joanne | Xin Yuan |
| Staff\_Lname | Tan | Lee | Liew | Chuah | Yong |
| Staff\_ssn | 870104-05-1122 | 891016-14-0477 | 920626-14-5673 | 910726-14-4345 | 901123-07-1143 |
| Staff\_DOB | 01/04/1987 | 10/16/1989 | 06/26/1992 | 07/26/1991 | 11/23/1990 |
| Staff\_Gender | Male | Female | Male | Female | Female |
| Staff\_PhoneNo | 0187635468 | 0194539078 | 0139564832 | 0178675653 | 0164878955 |
| Staff\_Email | dtan@gmail.com | Munyi@gmail.com | Ivanliew@gmail.com | joannec@gmail.com | xinyuan@gmail.com |
| Staff\_HireDate | 01/28/2021 | 01/29/2021 | 01/29/2021 | 02/01/2021 | 02/02/2021 |
| Staff\_Position | Doctor | Nurse­ | Nurse­ | Nurse | Pharmacist |
| Staff\_AddressLine | 5502, Jalan TS 2/2i, Taman Semarak | Jalan Puteri 1/4, Bandar Puteri | No.5A Jalan 14/20 Seksyen 14 | 12A Jalan Ss 21/62 Damansara Utama | 2690 Kampung Teluk |
| Staff\_City | Nilai | Puchong | Petaling Jaya | Petaling Jaya | Butterworth |
| Staff\_Postcode | 71800 | 47100 | 47400 | 47400 | 13800 |
| Staff\_State | Negeri Sembilan | Selangor | Selangor | Selangor | Penang |
| Staff\_Country | Malaysia | Malaysia | Malaysia | Malaysia | Malaysia |
| Staff\_Salary | 23000.00 | 3800.00 | 3400.00 | 3400.00 | 5200.00 |
| Department\_ID | D1003 | D1001 | D1001 | D1001 | D1002 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 11** | **Record 12** | **Record 13** | **Record 14** | **Record 15** |
| Staff\_ID | S1011 | S1012 | S1013 | S1014 | S1015 |
| Staff\_Fname | Ivy | Wei Hang | Wein Yong | Josephine | Alex |
| Staff\_Lname | Chin | Yew | Muck | Kwan | Khoo |
| Staff\_ssn | 930123-01-5872 | 920526-01-6768 | 941208-14-6765 | 880412-14-7879 | 891028-07-0434 |
| Staff\_DOB | 01/23/1993 | 05/26/1992 | 12/08/1994 | 04/12/1988 | 10/28/1989 |
| Staff\_Gender | Female | Male | Female | Female | Male |
| Staff\_PhoneNo | 0147987493 | 0173465834 | 0182326435 | 0175476345 | 0167897990 |
| Staff\_Email | ivychin@gmail.com | weihangy@gmail.com | weinyong@gmail.com | josephinek@gmail.com | alexkhoo@gmail.com |
| Staff\_HireDate | 02/02/2021 | 02/10/2021 | 02/10/2021 | 02/12/2021 | 02/15/2021 |
| Staff\_Position | Nurse | Admission Staff | Admission Staff | Doctor | Doctor |
| Staff\_AddressLine | Jalan Laksamana 2, Taman Ungku | Jalan Dataran 3/2, Taman Kempas | No.33, Jalan Duku Taman Gembire | Jalan Wawasan 3/7, Bandar Puchong | No.229, Jalan Bayan Lepas |
| Staff\_City | Johor Bahru | Johor Bahru | Klang | Puchong | Bayan Lepas |
| Staff\_Postcode | 81300 | 81300 | 42000 | 47160 | 11900 |
| Staff\_State | Johor | Johor | Selangor | Selangor | Pulau Pinang |
| Staff\_Country | Malaysia | Malaysia | Malaysia | Malaysia | Malaysia |
| Staff\_Salary | 6400.00 | 3250.00 | 3300.00 | 32000.00 | 42000.00 |
| Department\_ID | D1001 | D1005 | D1005 | D1003 | D1003 |

**Doctor Table (**MD -Doctorate of Medicine, MRAD – Master of radiology, MRCP(UK)**)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Staff\_ID | S1003 | S1004 | S1006 | S1014 | S1015 |
| Doctor\_Specialty | Neurology | Respiratory Medicine | Nephrology | Ophthalmology | Cardiology |
| Doctor\_Qualification | MD | MD | MD | MRAD | MRCP |

**Nurse Table (**RN – Registered nurse, MSN – Master of Science on Nursing**)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Staff\_ID | S1001 | S1007 | S1008 | S1009 | S1011 |
| Nursing\_Specialty | Emergency | Dermatology | Haematology | Neuroscience | Critical Care |
| Level\_Of\_Nursing | RN | RN | RN | RN | MSN |

**Patient Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Patient\_ID | P1001 | P1002 | P1003 | P1004 | P1005 |
| Patient\_Fname | Joshua | Emily | Ashley | David | Aaron |
| Patient\_Lname | Leong | Teoh | Den | Ooi | Liew |
| Patient\_ssn | 790106-08-4564 | 900423-05-8790 | 760626-14-6869 | 861027-08-7892 | 950607-08-3423 |
| Patient\_Gender | 01/06/1979 | 04/23/1990 | 06/26/1976 | 10/27/1986 | 06/07/1995 |
| Patient\_DOB | Male | Female | Female | Male | Male |
| Patient\_PhoneNo | 0169459875 | 0117678990 | 0185765765 | 0196876784 | 0116767832 |
| Patient\_Email | joshual@gmail.com | emilyteoh@gmail.com | ashleyden@gmail.com | davidooi@gmail.com | aaronliew@gmail.com |
| Patient\_AddressLine | 16, Taman Siput | 19-1, Taman Mawar | 90, Jalan Permai | 74, Jalan Kangsar | 20-26, Jalan Ali Pitchay |
| Patient\_City | Parit Buntar | Bukit Kikir | Gelugor | Kuala Kangsar | Ipoh |
| Patient\_Postcode | 34200 | 72200 | 11700 | 30300 | 30250 |
| Patient\_State | Perak | Negeri Sembilan | Pulau Pinang | Perak | Perak |
| Patient\_Country | Malaysia | Malaysia | Malaysia | Malaysia | Malaysia |
| Staff\_ID | S1015 | S1004 | S1014 | S1003 | S1006 |

**Consultation Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Consultation\_ID | C1001 | C1002 | C1003 | C1004 | C1005 |
| Consultation\_startDatetime | 02/16/2021 10:40:00 | 02/16/2021 13:38:00 | 02/16/2021 14:15:00 | 02/18/2021 14:30:00 | 02/18/2021 15:45:00 |
| Consultation\_endDatetime | 02/16/2021 12:25:00 | 02/16/2021 14:40:00 | 02/16/2021 15:18:00 | 02/18/2021 16:00:00 | 02/18/2021 17:15:00 |
| Staff\_ID | S1015 | S1004 | S1014 | S1003 | S1006 |
| Patient\_ID | P1001 | P1002 | P1003 | P1004 | P1005 |

**Facility Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Facility\_ID | F1001 | F1002 | F1003 | F1004 | F1005 |
| Facility\_Name | CT Scanner | ECG Machine | Ophthalmoscope | Incentive Spirometer | X – ray Machine |
| Facility\_Description | To make CT scan | To record any electrical activity within the heart | To examine the lens for signs of a cataract | To recover our lung after lung surgery. | To make x-ray scan |
| Facility\_Quantity | 15 | 15 | 20 | 30 | 15 |
| Facility\_Floor | 1 | 2 | 3 | 4 | 1 |

**Service Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Service\_ID | SE1001 | SE1002 | SE1003 | SE1004 | SE1005 |
| Service\_Name | CT Scan | ECG Service | Ophthalmic Service | Spirometry | X-ray Scanning |
| Service  \_Description | To see inside the body more details. | A procedure to probe for any abnormalities of heart. | To provide an eye health-care service. | To measure the air, breathe out in one forced breath. | To see inside the body. |
| Service\_Charge | 900.00 | 400.00 | 250.00 | 150.00 | 80.00 |
| Facility\_ID | F1001 | F1002 | F1003 | F1004 | F1005 |

**Medicine Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Medicine\_ID | M1001 | M1002 | M1003 | M1004 | M1005 |
| Medicine\_Name | Allopurinol | Inbrija | Isoniazid | Aspirin | Tobradex Eye Drops |
| Medicine\_Description | Is used for renal impairment | Is used for Parkinson’s disease | Is used for tuberculosis | Is used for heart attack | To prevent eye inflammation after cataract surgery |
| Medicine\_Manufacturer | Zyloprim | Accorda | Lexicare | Wellona Pharma | Alcon |
| Medicine\_dosage | 100mg per tablet | 42mg per capsule | 300mg per tablet | 75mg per tablet | 5ml |
| QuantityInStock | 300 | 200 | 250 | 250 | 300 |
| Medicine\_Unitprice | 20.00 | 92.50 | 35.56 | 45.00 | 22.00 |

**Report Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Report\_ID | R1001 | R1002 | R1003 | R1004 | R1005 |
| Consultation\_ID | C1001 | C1002 | C1003 | C1004 | C1005 |
| Service\_ID | SE1002 | SE1004 | SE1003 | SE1001 | SE1001 |
| Medical\_Disease | Heart Attack | Tuberculosis | Cataract | Parkinson disease | Kidney Stones |

**Medicine\_Distribution table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Medicine\_ID | M1001 | M1002 | M1003 | M1004 | M1005 |
| Report\_ID | R1005 | R1004 | R1002 | R1001 | R1003 |
| PatMed\_Quantity | 3 | 2 | 2 | 5 | 3 |

**Ward Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Ward\_ID | W1001 | W1002 | W1003 | W1004 | W1005 |
| Ward\_type | General Ward | Semi-special Ward | Special Ward | Special Ward | ICU Ward |
| NumOfBed\_per\_ward | 6 | 4 | 2 | 4 | 1 |
| Available\_Bed\_Num | 2 | 3 | 2 | 3 | 0 |
| Ward\_Floor | 1 | 2 | 3 | 3 | 4 |

**Bed Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Bed\_Number | 101 | 102 | 103 | 104 | 105 |
| Bed\_Type | General Ward Bed | General Ward Bed | Semi-Automated Electric Bed | Semi-Automated Electric Bed | Semi-Automated Electric Bed |
| Ward\_ID | W1001 | W1001 | W1002 | W1002 | W1003 |

**Admission Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Admission\_ID | AD1001 | AD1002 | AD1003 | AD1004 | AD1005 |
| Admission\_Datetime | 02/18/2021 10:45:15 | 02/21/2021 13:40:18 | 02/22/2021 15:25:10 | 02/25/2021 11:30:35 | 02/28/2021 14:48:30 |
| Discharge\_Datetime | 03/02/2021 012:40:45 | 03/04/2021 14:35:30 | 03/01/2021 13:25:40 | 03/06/2021 14:30:25 | 03/09/2021 15:00:00 |
| Admission\_Fee | 560.00 | 060.00 | 250.00 | 1800.00 | 720.00 |
| Bed\_Number | 107 | 103 | 101 | 110 | 104 |
| Patient\_ID | P1001 | P1002 | P1003 | P1004 | P1005 |

**Bill Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Record 1** | **Record 2** | **Record 3** | **Record 4** | **Record 5** |
| Bill\_ID | B1001 | B1002 | B1003 | B1004 | B1005 |
| Bill\_Date | 02/22/2021 | 02/25/2021 | 03/01/2021 | 03/01/2021 | 03/09/2021 |
| Bill\_TotalAmount | 1185.00 | 821.12 | 566.00 | 2885.00 | 1680.00 |
| Payment\_status | Completed | Pending | Declined | Completed | Declined |
| Insurance | AXA Medical Insurance | Great Eastern Health Insurance | Great Eastern Health Insurance | No insurance found | No insurance found |
| Insuranceclaim\_percentage | 100 | 50 | 70 | 0 | 0 |
| Payment\_method | Credit Card | Online Banking | e-Wallet | Debit Card | Credit Card |
| Report\_ID | R1001 | R1002 | R1003 | R1004 | R1005 |
| Admission\_ID | AD1001 | AD1002 | AD1003 | AD1004 | AD1005 |
| Patient\_ID | P1001 | P1002 | P1003 | P1004 | P1005 |

# 6.0 Script

DROP TABLE Department CASCADE CONSTRAINTS;

DROP TABLE Staff CASCADE CONSTRAINTS;

DROP TABLE Doctor CASCADE CONSTRAINTS;

DROP TABLE Nurse CASCADE CONSTRAINTS;

DROP TABLE Patient CASCADE CONSTRAINTS;

DROP TABLE Consultation CASCADE CONSTRAINTS;

DROP TABLE Facility CASCADE CONSTRAINTS;

DROP TABLE Service CASCADE CONSTRAINTS;

DROP TABLE Medicine CASCADE CONSTRAINTS;

DROP TABLE Report CASCADE CONSTRAINTS;

DROP TABLE Medicine\_Distribution CASCADE CONSTRAINTS;

DROP TABLE Ward CASCADE CONSTRAINTS;

DROP TABLE Bed CASCADE CONSTRAINTS;

DROP TABLE Admission CASCADE CONSTRAINTS;

DROP TABLE Bill CASCADE CONSTRAINTS;

create table Department(

    department\_id char(5) not null,

    department\_name varchar(20),

    department\_description varchar2(50),

    constraint department\_id\_pk primary key(department\_id)

);

create table Staff(

    staff\_id char(5) not null,

    staff\_fname varchar2(15),

    staff\_lname varchar2(15),

    staff\_ssn varchar2(14),

    staff\_dob date,

    staff\_gender varchar2(6),

    staff\_phoneNo varchar2(12),

    staff\_email varchar2(30),

    staff\_hireDate date,

    staff\_position varchar2(20),

    staff\_addressLine varchar2(40),

    staff\_city varchar2(20),

    staff\_postcode number(5),

    staff\_state varchar2(20),

    staff\_country varchar2(15),

    staff\_salary decimal(8,2),

    department\_id char(5),

    constraint department\_id\_fk foreign key(department\_id) references Department(department\_id),

    constraint staff\_id\_pk primary key (staff\_id),

    check(staff\_gender in ('Male', 'Female'))

);

create table Doctor(

    doctor\_specialty varchar2(20),

    doctor\_qualification varchar2(20),

    staff\_id char(5) not null,

    constraint doctor\_id\_fk foreign key(staff\_id) references Staff(staff\_id)

);

create table Nurse(

    nursing\_specialty varchar2(20),

    level\_Of\_Nursing varchar2(17),

    staff\_id char(5) not null,

    constraint nurse\_id\_fk foreign key(staff\_id) references Staff(staff\_id)

);

create table Patient(

    patient\_id char(5) not null,

    patient\_fname varchar2(15),

    patient\_lname varchar2(15),

    patient\_ssn varchar2(14),

    patient\_dob date,

    patient\_gender varchar2(6),

    patient\_phoneNo varchar2(12),

    patient\_email varchar2(30),

    patient\_addressLine varchar2(40),

    patient\_city varchar2(20),

    patient\_postcode number(5),

    patient\_state varchar2(20),

    patient\_country varchar2(15),

    staff\_id char(5) not null,

    constraint staff\_id\_fk foreign key(staff\_id) references Staff(staff\_id),

    constraint patient\_id\_pk primary key (patient\_id),

    check(patient\_gender in ('Male', 'Female'))

);

create table Consultation(

    consultation\_id char(5) not null,

    consultation\_startDatetime timestamp,

    consultation\_endDatetime timestamp,

    staff\_id char(5) not null,

    patient\_id char(5) not null,

    constraint staffs\_id\_fk foreign key(staff\_id) references Staff(staff\_id),

    constraint patient\_id\_fk foreign key(patient\_id) references Patient(patient\_id),

    constraint consultation\_id\_pk primary key (consultation\_id)

);

create table Facility(

    facility\_id char(5) not null,

    facility\_name varchar2(20),

    facility\_description varchar2(50),

    facility\_quantity number(3),

    facility\_floor number(2),

    constraint facility\_id\_pk primary key (facility\_id)

);

create table Service(

    service\_id char(6) not null,

    service\_name varchar2(20),

    service\_description varchar2(55),

    service\_charge decimal(5,2),

    facility\_id char(5) not null unique,

    constraint facility\_id\_fk foreign key(facility\_id) references Facility(facility\_id),

    constraint service\_id\_pk primary key (service\_id)

);

create table Medicine(

    medicine\_id char(5) not null,

    medicine\_name varchar2(20),

    medicine\_description varchar2(52),

    medicine\_manufacturer varchar2(15),

    medicine\_dosage varchar2(20),

    quantityInStock number(4),

    medicine\_Unitprice decimal(5,2),

    constraint medicine\_id\_pk primary key (medicine\_id)

);

create table Report(

    report\_id char(5) not null,

    consultation\_id char(5) not null unique,

    service\_id char(6),

    medical\_disease varchar2(25),

    constraint consultation\_id\_fk foreign key(consultation\_id) references Consultation(consultation\_id),

    constraint service\_id\_fk foreign key(service\_id) references Service(service\_id),

    constraint report\_id\_pk primary key (report\_id)

);

create table Medicine\_Distribution(

    medicine\_id char(5) not null,

    report\_id char(5) not null,

    patMed\_quantity number(2),

    constraint medicine\_id\_fk foreign key(medicine\_id) references Medicine(medicine\_id),

    constraint report\_id\_fk foreign key(report\_id) references Report(report\_id),

    constraint mdID\_mID\_rID\_pk primary key (medicine\_id, report\_id)

);

create table Ward(

    ward\_id char(5) not null,

    ward\_type varchar2(20),

    numOfBed\_per\_ward number(2),

    available\_Bed\_Num number(2),

    ward\_Floor number(2),

    constraint ward\_id\_pk primary key (ward\_id)

);

create table Bed(

    bed\_Number number(3) not null,

    bed\_Type varchar2(30),

    ward\_id char(5) not null,

    constraint ward\_id\_fk foreign key(ward\_id) references Ward(ward\_id),

    constraint bed\_Number\_pk primary key (bed\_Number)

);

create table Admission(

    admission\_id char(6) not null,

    admission\_datetime timestamp,

    discharge\_datetime timestamp,

    admission\_fee decimal(6,2),

    bed\_Number number(3) not null unique,

    patient\_id char(5) not null,

    constraint bed\_Number\_fk foreign key(bed\_Number) references Bed(bed\_Number),

    constraint patient1\_id\_fk foreign key(patient\_id) references Patient(patient\_id),

    constraint admission\_id\_pk primary key (admission\_id)

);

create table Bill(

    bill\_id char(5) not null,

    bill\_date date,

    bill\_TotalAmount decimal(8,2),

    payment\_status varchar2(35),

    insurance varchar2(35),

    insuranceclaim\_percentage number(3),

    payment\_method varchar2(20),

    report\_id char(5) not null unique,

    admission\_id char(6) not null unique,

    patient\_id char(5) not null unique,

    constraint reports\_id\_fk foreign key(report\_id) references Report(report\_id),

    constraint admissions\_fk foreign key(admission\_id) references Admission(admission\_id),

    constraint patient2\_id\_fk foreign key(patient\_id) references Patient(patient\_id),

    constraint bill\_id\_pk primary key (bill\_id),

    check(payment\_method in ('Debit Card', 'Credit Card', 'e-Wallet', 'Online Banking', 'Cash')),

    check(payment\_status in ('Declined', 'Pending', 'Completed'))

);

DROP SEQUENCE staff\_idseq;

CREATE SEQUENCE staff\_idseq START WITH 1001 MAXVALUE 9999 NOCYCLE;

---- inserting into Department table

Insert into Department values('D1001','Nursing','Provide better patient care');

Insert into Department values('D1002','Pharmacy','Responsible for managing drugs');

Insert into Department values('D1003','Medical','Provide treatment based on the disease of patient');

Insert into Department values('D1004','Financial','In charge the overall finances of hospital');

Insert into Department values('D1005','Admission','Manage the stuff of hospital admission');

---- inserting into Staff table

Insert into Staff values('S' || staff\_idseq.nextval,'Ying Qian','Kang','900224-08-3434',to\_date('02/24/1990','MM/DD/YYYY'),'Female','0124567833','yqian@gmail.com',to\_date('12/31/2020','MM/DD/YYYY'),'Nurse','26, Taman Baru', 'Parit Buntar', 34200, 'Perak', 'Malaysia', 4500.00, 'D1001');

Insert into Staff values('S' || staff\_idseq.nextval,'Steven','Cheong','850314-08-0988',to\_date('03/14/1985','MM/DD/YYYY'),'Male','0116787412','stevenc@gmail.com',to\_date('01/08/2019','MM/DD/YYYY'),'Pharmacist','27, Tanjung Bunga', 'Parit Buntar', 34200, 'Perak', 'Malaysia', 6200.00, 'D1002');

Insert into Staff values('S' || staff\_idseq.nextval,'Wen Lui','Law','890924-14-7114',to\_date('09/24/1989','MM/DD/YYYY'),'Male','0164786231','wxuan@gmail.com',to\_date('01/12/2018','MM/DD/YYYY'),'Doctor','27, Taman Bayu Perdana', 'Klang', 42000, 'Selangor', 'Malaysia', 24000.00, 'D1003');

Insert into Staff values('S' || staff\_idseq.nextval,'Pei Wen','Peng','901204-01-0313',to\_date('12/04/1990','MM/DD/YYYY'),'Female','0175476345','pwen@gmail.com',to\_date('01/24/2019','MM/DD/YYYY'),'Doctor','25, Jalan Setia Tropika 4/5', 'Johor Bahru', 81200, 'Johor', 'Malaysia', 26000.00, 'D1003');

Insert into Staff values('S' || staff\_idseq.nextval,'Wen Qi','Looi','880526-02-4114',to\_date('05/26/1988','MM/DD/YYYY'),'Female','0127368932','wqi@gmail.com',to\_date('01/24/2018','MM/DD/YYYY'),'Finance Staff','5, Taman Selasih', 'Kulim', 09000, 'Kedah', 'Malaysia', 3500.00, 'D1004');

Insert into Staff values('S' || staff\_idseq.nextval,'Daniel','Tan','870104-05-1122',to\_date('01/04/1987','MM/DD/YYYY'),'Male','0187635468','dtan@gmail.com',to\_date('01/28/2019','MM/DD/YYYY'),'Doctor','Jalan TS 2/2i, Taman Semarak', 'Nilai', 71800, 'Negeri Sembilan', 'Malaysia', 23000.00, 'D1003');

Insert into Staff values('S' || staff\_idseq.nextval,'Mun Yi','Lee','891016-14-0477',to\_date('10/16/1989','MM/DD/YYYY'),'Female','0194539078','Munyi@gmail.com',to\_date('01/29/2019','MM/DD/YYYY'),'Nurse','Jalan Puteri 1/4, Bandar Puteri', 'Puchong', 47100, 'Selangor', 'Malaysia', 3800.00, 'D1001');

Insert into Staff values('S' || staff\_idseq.nextval,'Ivan','Liew','920626-14-5673',to\_date('06/26/1992','MM/DD/YYYY'),'Male','0139564832','Ivanliew@gmail.com',to\_date('01/29/2018','MM/DD/YYYY'),'Nurse','No.5A Jalan 14/20 Seksyen 14', 'Petaling Jaya', 47400, 'Selangor', 'Malaysia', 3400.00, 'D1001');

Insert into Staff values('S' || staff\_idseq.nextval,'Joanne','Chuah','910726-14-4345',to\_date('07/26/1991','MM/DD/YYYY'),'Female','0178675653','joannec@gmail.com',to\_date('02/01/2017','MM/DD/YYYY'),'Nurse','12A Jalan Ss 21/62 Damansara Utama','Petaling Jaya', 47400, 'Selangor', 'Malaysia', 3400.00, 'D1001');

Insert into Staff values('S' || staff\_idseq.nextval,'Xin Yuan','Yong','901123-07-1143',to\_date('11/23/1990','MM/DD/YYYY'),'Female','0164878955','xinyuan@gmail.com',to\_date('02/02/2019','MM/DD/YYYY'),'Pharmacist','2690 Kampung Teluk', 'Butterworth', 13800, 'Penang', 'Malaysia', 5200.00, 'D1002');

Insert into Staff values('S' || staff\_idseq.nextval,'Ivy','Chin','930123-01-5872',to\_date('01/23/1993','MM/DD/YYYY'),'Female','0147987493','ivychin@gmail.com',to\_date('02/02/2019','MM/DD/YYYY'),'Nurse','Jalan Laksamana 2, Taman Ungku', 'Johor Bahru', 81300, 'Johor', 'Malaysia', 6400.00, 'D1001');

Insert into Staff values('S' || staff\_idseq.nextval,'Wei Hang','Yew','920526-01-6768',to\_date('05/26/1992','MM/DD/YYYY'),'Male','0173465834','weihangy@gmail.com',to\_date('02/10/2018','MM/DD/YYYY'),'Admission Staff','Jalan Dataran 3/2, Taman Kempas', 'Johor Bahru', 81300, 'Johor', 'Malaysia', 3250.00, 'D1005');

Insert into Staff values('S' || staff\_idseq.nextval,'Wein Yong','Muck','941208-14-6765',to\_date('12/08/1994','MM/DD/YYYY'),'Female','0182326435','weinyong@gmail.com',to\_date('02/10/2017','MM/DD/YYYY'),'Admission Staff','No.33, Jalan Duku Taman Gembire', 'Klang', 42000, 'Selangor', 'Malaysia', 3300.00, 'D1005');

Insert into Staff values('S' || staff\_idseq.nextval,'Josephine','Kwan','880412-14-7879',to\_date('04/12/1988','MM/DD/YYYY'),'Female','0175476345','josephinek@gmail.com',to\_date('02/12/2017','MM/DD/YYYY'),'Doctor','Jalan Wawasan 3/7, Bandar Puchong', 'Puchong', 47160, 'Selangor', 'Malaysia', 32000.00, 'D1003');

Insert into Staff values('S' || staff\_idseq.nextval,'Alex','Khoo','891028-07-0434',to\_date('10/28/1989','MM/DD/YYYY'),'Male','0167897990','alexkhoo@gmail.com',to\_date('02/15/2019','MM/DD/YYYY'),'Doctor','No.229, Jalan Bayan Lepas ', 'Bayan Lepas', 11900, 'Pulau Pinang', 'Malaysia', 42000.00, 'D1003');

---- inserting into Doctor table

Insert into Doctor values('Neurology','MD','S1003');

Insert into Doctor values('Respiratory Medicine','MD','S1004');

Insert into Doctor values('Nephrology','MD','S1006');

Insert into Doctor values('Ophthalmology','MRAD','S1014');

Insert into Doctor values('Cardiology','MRCP','S1015');

---- inserting into Nurse table

Insert into Nurse values('Emergency','RN','S1001');

Insert into Nurse values('Dermatology','RN','S1007');

Insert into Nurse values('Haematology','RN','S1008');

Insert into Nurse values('Neuroscience','RN','S1009');

Insert into Nurse values('Critical Care','MSN','S1011');

---- inserting into Patient table

Insert into Patient values('P1001', 'Joshua', 'Leong', '790106-08-4564', to\_date('01/06/1979','MM/DD/YYYY'), 'Male', '0169459875', 'joshual@gmail.com', '16, Taman Siput', 'Parit Buntar', 34200, 'Perak', 'Malaysia', 'S1015');

Insert into Patient values('P1002', 'Emily', 'Teoh', '900423-05-8790', to\_date('04/23/1990','MM/DD/YYYY'), 'Female', '0117678990', 'emilyteoh@gmail.com', '19-1, Taman Mawar', 'Bukit Kikir', 72200, 'Negeri Sembilan', 'Malaysia', 'S1004');

Insert into Patient values('P1003', 'Ashley', 'Den', '760626-14-6869', to\_date('06/26/1976','MM/DD/YYYY'), 'Female', '0185765765', 'ashleyden@gmail.com', '90, Jalan Permai', 'Gelugor', 11700, 'Penang', 'Malaysia', 'S1014');

Insert into Patient values('P1004', 'David', 'Ooi', '861027-08-7892', to\_date('10/27/1986','MM/DD/YYYY'), 'Male', '0196876784', 'davidooi@gmail.com', '74, Jalan Kangsar', 'Kuala Kangsar', 30300, 'Perak', 'Malaysia', 'S1003');

Insert into Patient values('P1005', 'Aaron', 'Liew', '950607-08-3423', to\_date('06/07/1995','MM/DD/YYYY'), 'Male', '0116767832', 'aaronliew@gmail.com', '20-26, Jalan Ali Pitchay', 'Ipoh', 30250, 'Perak', 'Malaysia', 'S1006');

Insert into Patient values('P1006', 'Julian', 'Soon', '940807-08-6742', to\_date('08/07/1994','MM/DD/YYYY'), 'Female', '0133243532', 'julians@gmail.com', '203 Taman Bahagia', 'Ipoh', 30250, 'Perak', 'Malaysia', 'S1004');

Insert into Patient values('P1007', 'Adrian', 'Foong', '890607-14-4546', to\_date('06/07/1989','MM/DD/YYYY'), 'Male', '0116767832', 'adrianf@gmail.com', 'Bayan Lepas Fiz Phase I', 'Bayan Lepas', 11900, 'Penang', 'Malaysia', 'S1015');

Insert into Patient values('P1008', 'Suria', 'Dana', '900814-08-7879', to\_date('08/14/1990','MM/DD/YYYY'), 'Female', '0147879546', 'suriad@gmail.com', '25-2 Taman Pelandok', 'Bkt Mertajam', 14000, 'Penang', 'Malaysia', 'S1003');

Insert into Patient values('P1009', 'Puspa', 'Sangkara', '881024-14-3454', to\_date('10/24/1988','MM/DD/YYYY'), 'Male', '0163248794', 'puspas@gmail.com', '13 Taman Desa', 'Petaling Jaya', 47301, 'Selangor', 'Malaysia', 'S1014');

Insert into Patient values('P1010', 'Lisa', 'Cheong', '860323-08-3423', to\_date('03/23/1986','MM/DD/YYYY'), 'Female', '0183463443', 'lisac@gmail.com', '49 Jln St John', 'Ipoh', 30250, 'Perak', 'Malaysia', 'S1015');

---- inserting into Consultation table

Insert into Consultation values('C1001', to\_timestamp('02/16/2021 10:40:00', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('02/16/2021 12:25:00', 'MM/DD/YYYY HH24:MI:SS'), 'S1015', 'P1001');

Insert into Consultation values('C1002', to\_timestamp('02/16/2021 13:38:00', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('02/16/2021 14:40:00', 'MM/DD/YYYY HH24:MI:SS'), 'S1004', 'P1002');

Insert into Consultation values('C1003', to\_timestamp('02/16/2021 14:15:00', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('02/16/2021 15:18:00', 'MM/DD/YYYY HH24:MI:SS'), 'S1014', 'P1003');

Insert into Consultation values('C1004', to\_timestamp('02/18/2021 14:30:00', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('02/18/2021 16:00:00', 'MM/DD/YYYY HH24:MI:SS'), 'S1003', 'P1004');

Insert into Consultation values('C1005', to\_timestamp('02/18/2021 15:45:00', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('02/18/2021 17:15:00', 'MM/DD/YYYY HH24:MI:SS'), 'S1006', 'P1005');

Insert into Consultation values('C1006', to\_timestamp('02/18/2021 16:50:00', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('02/18/2021 17:25:00', 'MM/DD/YYYY HH24:MI:SS'), 'S1004', 'P1006');

Insert into Consultation values('C1007', to\_timestamp('03/02/2021 13:40:00', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('03/02/2021 14:50:00', 'MM/DD/YYYY HH24:MI:SS'), 'S1015', 'P1007');

Insert into Consultation values('C1008', to\_timestamp('03/02/2021 15:25:00', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('03/02/2021 15:55:00', 'MM/DD/YYYY HH24:MI:SS'), 'S1003', 'P1008');

Insert into Consultation values('C1009', to\_timestamp('03/04/2021 14:45:00', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('03/04/2021 15:10:00', 'MM/DD/YYYY HH24:MI:SS'), 'S1014', 'P1009');

Insert into Consultation values('C1010', to\_timestamp('03/04/2021 16:30:00', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('03/04/2021 17:54:00', 'MM/DD/YYYY HH24:MI:SS'), 'S1015', 'P1010');

---- inserting into Facility table

Insert into Facility values('F1001', 'CT Scanner', 'To make CT scan', 15, 1);

Insert into Facility values('F1002', 'ECG Machine', 'To record any electrical activity within the heart', 15, 2);

Insert into Facility values('F1003', 'Opthalmoscope', 'To examine the lens for signs of a cataract', 20, 3);

Insert into Facility values('F1004', 'Incentive Spirometer', 'To recover our lung after lung surgery', 30, 4);

Insert into Facility values('F1005', 'X-ray Machine', 'To make x-ray scan', 15, 1);

---- inserting into Service table

Insert into Service values('SE1001', 'CT Scan', 'To see inside the body more details.', 900.00, 'F1001');

Insert into Service values('SE1002', 'ECG Service', 'A procedure to probe for any abnormalities of heart.', 400.00, 'F1002');

Insert into Service values('SE1003', 'Ophthalmic Service', 'To provide an eye health-care service.', 250.00, 'F1003');

Insert into Service values('SE1004', 'Spirometry', 'To measure the air, breathe out in one forced breath.', 150.00, 'F1004');

Insert into Service values('SE1005', 'X-ray Scanning', 'To see inside the body.', 80.00, 'F1005');

---- inserting into Medicine table

DROP SEQUENCE med\_idseq;

CREATE SEQUENCE med\_idseq START WITH 1001 MAXVALUE 9999 NOCYCLE;

Insert into Medicine values('M' || med\_idseq.nextval, 'Allopurinol', 'Is used for renal impairment', 'Zyloprim', '100mg per tablet', 300, 20.00);

Insert into Medicine values('M' || med\_idseq.nextval, 'Inbrija', 'Is used for Parkinson disease', 'Accorda', '42mg per capsule', 200, 92.50);

Insert into Medicine values('M' || med\_idseq.nextval, 'Isoniazid', 'Is used for tuberculosis', 'Lexicare', '300mg per tablet', 250, 35.56);

Insert into Medicine values('M' || med\_idseq.nextval, 'Aspirin', 'Is used for heart attack', 'Wellona Pharma', '75mg per tablet', 250, 45.00);

Insert into Medicine values('M' || med\_idseq.nextval, 'Tobradex Eye Drops', 'To prevent eye inflammation after cataract surgery', 'Alcon', '5ml', 300, 22.00);

---- inserting into Report table

Insert into Report values('R1001', 'C1001', 'SE1002', 'Heart Attack');

Insert into Report values('R1002', 'C1002', 'SE1004', 'Tuberculosis');

Insert into Report values('R1003', 'C1003', 'SE1003', 'Cataract');

Insert into Report values('R1004', 'C1004', 'SE1001', 'Parkinson disease');

Insert into Report values('R1005', 'C1005', 'SE1001', 'Kidney Stones');

Insert into Report values('R1006', 'C1006', '', 'Asthma');

Insert into Report values('R1007', 'C1007', 'SE1002', 'Heart Attack');

Insert into Report values('R1008', 'C1008', '', 'Parkinson Disease');

Insert into Report values('R1009', 'C1009', '', 'Cataract');

Insert into Report values('R1010', 'C1010', 'SE1002', 'Heart Attack');

---- inserting into Medicine\_Distribution table

Insert into Medicine\_Distribution values('M1001', 'R1005', 3);

Insert into Medicine\_Distribution values('M1002', 'R1004', 2);

Insert into Medicine\_Distribution values('M1003', 'R1002', 2);

Insert into Medicine\_Distribution values('M1004', 'R1001', 5);

Insert into Medicine\_Distribution values('M1005', 'R1003', 3);

Insert into Medicine\_Distribution values('M1003', 'R1006', 2);

Insert into Medicine\_Distribution values('M1004', 'R1007', 4);

Insert into Medicine\_Distribution values('M1002', 'R1008', 3);

Insert into Medicine\_Distribution values('M1005', 'R1009', 2);

Insert into Medicine\_Distribution values('M1004', 'R1010', 4);

---- inserting into Ward table

Insert into Ward values('W1001', 'General Ward', 6, 2, 1);

Insert into Ward values('W1002', 'Semi-special Ward', 4, 3, 2);

Insert into Ward values('W1003', 'Special Ward', 2, 2, 3);

Insert into Ward values('W1004', 'Special Ward', 4, 3, 3);

Insert into Ward values('W1005', 'ICU Ward', 1, 0, 4);

---- inserting into Bed table

Insert into Bed values(101, 'General Ward Bed', 'W1001');

Insert into Bed values(102, 'General Ward Bed', 'W1001');

Insert into Bed values(103, 'Semi-Automated Electric Bed', 'W1002');

Insert into Bed values(104, 'Semi-Automated Electric Bed', 'W1002');

Insert into Bed values(105, 'Semi-Automated Electric Bed', 'W1003');

Insert into Bed values(106, 'Semi-Automated Electric Bed', 'W1003');

Insert into Bed values(107, 'Cardiac Bed', 'W1004');

Insert into Bed values(108, 'Cardiac Bed', 'W1004');

Insert into Bed values(109, 'Cardiac Bed', 'W1004');

Insert into Bed values(110, 'ICU Bed', 'W1005');

---- inserting into Admission table

Insert into Admission values('AD1001', to\_timestamp('02/16/2021 10:45:15', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('02/22/2021 12:40:45', 'MM/DD/YYYY HH24:MI:SS'), 560.00, 107, 'P1001');

Insert into Admission values('AD1002', to\_timestamp('02/16/2021 13:40:18', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('02/25/2021 14:35:30', 'MM/DD/YYYY HH24:MI:SS'), 600.00, 103, 'P1002');

Insert into Admission values('AD1003', to\_timestamp('02/17/2021 15:25:10', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('02/21/2021 13:25:40', 'MM/DD/YYYY HH24:MI:SS'), 250.00, 101, 'P1003');

Insert into Admission values('AD1004', to\_timestamp('02/18/2021 11:30:35', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('03/01/2021 14:30:25', 'MM/DD/YYYY HH24:MI:SS'), 1800.00, 110, 'P1004');

Insert into Admission values('AD1005', to\_timestamp('02/19/2021 14:48:30', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('03/02/2021 12:24:32', 'MM/DD/YYYY HH24:MI:SS'), 720.00, 104, 'P1005');

Insert into Admission values('AD1006', to\_timestamp('02/20/2021 11:25:56', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('02/23/2021 15:47:24', 'MM/DD/YYYY HH24:MI:SS'), 240.00, 105, 'P1006');

Insert into Admission values('AD1007', to\_timestamp('03/02/2021 13:43:23', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('03/08/2021 10:23:54', 'MM/DD/YYYY HH24:MI:SS'), 560.00, 108, 'P1007');

Insert into Admission values('AD1008', to\_timestamp('03/02/2021 15:55:34', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('03/13/2021 16:35:23', 'MM/DD/YYYY HH24:MI:SS'), 720.00, 106, 'P1008');

Insert into Admission values('AD1009', to\_timestamp('03/06/2021 16:45:45', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('03/10/2021 18:23:56', 'MM/DD/YYYY HH24:MI:SS'), 250.00, 102, 'P1009');

Insert into Admission values('AD1010', to\_timestamp('03/07/2021 14:23:32', 'MM/DD/YYYY HH24:MI:SS'), to\_timestamp('03/13/2021 18:13:42', 'MM/DD/YYYY HH24:MI:SS'), 560.00, 109, 'P1010');

---- inserting into Bill table

Insert into Bill values('B1001', to\_date('02/22/2021', 'MM/DD/YYYY'), 1185.00, 'Completed', 'AXA Medical Insurance', '100', 'Credit Card', 'R1001', 'AD1001', 'P1001');

Insert into Bill values('B1002', to\_date('02/25/2021', 'MM/DD/YYYY'), 821.12, 'Pending', 'Great Eastern Health Insurance', '50', 'Online Banking', 'R1002', 'AD1002', 'P1002');

Insert into Bill values('B1003', '', 566.00, 'Declined', 'Great Eastern Health Insurance', '70', 'e-Wallet', 'R1003', 'AD1003', 'P1003');

Insert into Bill values('B1004', to\_date('03/01/2021', 'MM/DD/YYYY'), 2885.00, 'Completed', 'No insurance found', '0', 'Debit Card', 'R1004', 'AD1004', 'P1004');

Insert into Bill values('B1005', '', 1680.00, 'Declined', 'No insurance found', '0', 'Credit Card', 'R1005', 'AD1005', 'P1005');

Insert into Bill values('B1006', to\_date('02/23/2021', 'MM/DD/YYYY'), 311.12, 'Completed', 'Great Eastern Health Insurance', '100', 'e-Wallet', 'R1006', 'AD1006', 'P1006');

Insert into Bill values('B1007', to\_date('03/08/2021', 'MM/DD/YYYY'), 1140.00, 'Pending', 'No insurance found', '0', 'Credit Card', 'R1007', 'AD1007', 'P1007');

Insert into Bill values('B1008', to\_date('03/13/2021', 'MM/DD/YYYY'), 997.00, 'Pending', 'AXA Medical Insurance', '50', 'Credit Card', 'R1008', 'AD1008', 'P1008');

Insert into Bill values('B1009', to\_date('03/10/2021', 'MM/DD/YYYY'), 294.00, 'Completed', 'Great Eastern Health Insurance', '60', 'Cash', 'R1009', 'AD1009', 'P1009');

Insert into Bill values('B1010', '', 1140.00, 'Declined', 'AXA Medical Insurance', '80', 'Debit Card', 'R1010', 'AD1010', 'P1010');

# 7.0 Extra: Access Report

