

	Fmin, Key and isBCNF	
1	<b>R(Patient)</b> PID→{First_name,Middle_name,Last_name,Gender,Dob,Area,City,Country}	Key = PID isBCNF = True
2	<b>R(Bill)</b> Bill_no→{PID,Doctor_charge,Lab_charge,Medicine_charge,Room_charge,Operation_charge,No_of_days,Insurance_no}	Key = Bill_no isBCNF = True
3	<b>R(Insurance)</b> insurance_no→{policy_no,publish_date,insurance_company,expiry_date,med_coverage,insurance_plan}	Key = insurance_no isBCNF = True
4	<b>R(Test_Details)</b> Test_code→{Test_charge,test_type,category}	Key = Test_code isBCNF = True
5	<b>R(Lab_report)</b> Lab_report_id→{PID,test_code,Date,Weight,Height,Category,Temperature,Patient_Type,Blood_Pressure,Test_Result}	Key = Lab_report_id isBCNF = True
6	<b>R(Appointment)</b> Apid→{Apmnt_time, Apmnt_date, Doc_ID, PID, Apmnt_Description, Apmnt_created}	Key = Apid isBCNF = True
7	<b>R(Doctor)</b> DocID→{Fname, Lname, Speciality}	Key = DocID isBCNF = True
8	<b>R(Patient_report)</b> Report_id→{Report_date, DocID, PID, Diagnosis, Reference}	Key = Report_id isBCNF = True
9	<b>R(Prescription_details)</b> {Report_id, Medicine_id} → {Report_id, Medicine_id}	Key = {Report_id, Medicine_id} isBCNF = True
10	<b>R(Patient_phone)</b> {PID,phone_no}→{phone_type}	Key = {PID,phone_no} isBCNF = True
11	<b>R(Patient_email)</b> {PID,Email}→{email_type}	Key = {PID,Email} isBCNF = True
12	<b>R(Room_allotment)</b> N/A	Key = {Room_no, Bed_no, PID} isBCNF = N/A
13	<b>R(Rooms)</b> {Room_no, Bed_no} → {Room_type}	Key = {Room_no, Bed_no} isBCNF = True
14	<b>R(Medicine)</b> Med_id →{Med_name, med_Description, Med_cost}	Key = Med_id isBCNF = True
15	<b>R(Medicine_Details)</b> {Med_id, Production_date}→{Expiry_id, Quantity, Company, Country}	Key = {Med_id, Production_date} isBCNF = True
16	<b>R(Supplier)</b> Supplier_id →{Supplier_company, City, Area, Country}	Key = Supplier_id isBCNF = True
17	<b>R(Supplier_email)</b> {Supplier_id,email} → {email_type}	Key = {Supplier_id,email} isBCNF = True
18	<b>R(Supplier_contact)</b> {Supplier_id,phone} → {phone_type}	Key = {Supplier_id,phone} isBCNF = True

19	<b>R(Payroll)</b> ID → {net_salary, hourly_salary, bonus_salary, compensation, salary, account_no, IBAN}	Key = ID isBCNF = True
20	<b>R(Employee_details)</b> ID → {fname, minit, lname, dob, gender, dept_id, is_dept_id_mngr, area, city, country}	Key = ID isBCNF = True
21	<b>R(Department)</b> dept_id → {dept_name}	Key = dept_id isBCNF = True
22	<b>R(Employee_phone)</b> {ID, phone_no} → {phone_type}	Key = {ID, phone_no} isBCNF = True
23	<b>R(Employee_email)</b> {ID, email} → {email_type}	Key = {ID, email} isBCNF = True

DDL Script:

```
create schema G1_15;
set search_path to G1_15;
```

```
-- 1
create table patient(
    PID varchar(10) Primary Key,
    Fname varchar(20),
    Mname varchar(20),
    Lname varchar(20),
    Gender char,
    Dob date,
    Area Text,
    City varchar(20),
    Country varchar(20)
);
```

```
-- 2
create table Test_Details(
    Test_code varchar(10) Primary Key,
    Test_charge decimal(10, 2),
    Test_type varchar(30),
    Category varchar(20)
);
```

```
-- 3
create table Lab_report(
    Lab_Report_id varchar(10) Primary Key,
    PID varchar(10) references patient(PID) on update cascade on delete cascade,
    Test_code varchar(10) references Test_Details(Test_code) on update cascade on delete cascade,
    Report_date timestamp,
    weight decimal(3,2),
    height decimal(3,2),
    Temperature decimal(3,2),
    Category varchar(10),
    Patient_Type varchar(30),
    Blood_Pressure varchar(20),
    Test_result Text
);
```

```
-- 4
create table Rooms(
    Room_no varchar(5),
    Bed_no int,
    Room_type varchar(20),
    Primary key(Room_no, Bed_no)
);
```

```
-- 5
create table Room_Allotment(
    Room_no varchar(5),
    Bed_no int,
    PID varchar(10),
    Primary key(Room_no, Bed_no),
    Unique(PID),
    Foreign key(PID) references patient(PID),
    Foreign key(Room_no,Bed_no) references Rooms(Room_no,Bed_no)
);
```

```
-- 6
create table Patient_Phone(
    PID varchar(10) references patient(PID),
    phone_no numeric(10, 0),
    phone_type varchar(10),
    Primary key(PID, phone_no)
);
```

```
-- 7
create table Patient_Email(
    PID varchar(10) references patient(PID),
    email varchar(30),
    email_type varchar(10),
    Primary key(PID, email)
);
```

```
-- 8
create table Doctor(
    DocID varchar(10) Primary Key,
    FName varchar(20),
    Lname varchar(20),
    Speciality varchar(30)
);
```

```
-- 9
create table Appointment(
    Apid varchar(10) Primary Key,
    Apmnt_time time,
    Apmnt_date date,
    DocID varchar(10) references Doctor(DocID),
    PID varchar(10) references patient(PID),
    Apmnt_description Text,
    Apmnt_created timestamp DEFAULT CURRENT_TIMESTAMP
);
```

```
-- 10
create table Patient_Report(
    Report_id varchar(10) Primary Key,
    Report_date date,
    DocID varchar(10) references Doctor(DocID),
    PID varchar(10) references patient(PID),
    Diagnosis text,
    Reference text
);
```

```
-- 11
Create table Medicine(
    Med_ID varchar(10) Primary key,
    Med_name varchar(30),
    Med_description Text,
    Med_cost numeric(5,2)
);
```

```
-- 12
create table Prescription_Details(
    Report_id varchar(10) references Patient_Report(Report_id),
    Med_ID varchar(10) references Medicine(Med_ID),
    Primary key(Report_id, Med_ID)
);
```

```
-- 13
Create table supplier (
    Supplier_ID varchar(10) Primary Key,
    Supplier_company varchar(30),
    Area Text,
    City varchar(20),
    Country varchar(20)
);
```

```
-- 14
Create table Medicine_Details (
    Med_ID varchar(10) References medicine(Med_ID),
    Production_date date ,
    Expiry_date date,
    Quantity int,
    Company varchar(20),
    Country varchar(20),
    supplier_id varchar(10) references supplier(supplier_id),
    Primary key(Med_ID,Production_date)
);
```

```
-- 15
Create table supplier_email (
    Supplier_ID varchar(10) References supplier(supplier_id),
    Email varchar(30),
    Email_type varchar(10),
    Primary key(Email,supplier_id)
);
```

```
-- 16
Create table supplier_contact (
    Supplier_ID varchar(10) References supplier(supplier_id),
    phone_no numeric(10,0),
    phone_type varchar(10),
    Primary key(phone_no,supplier_id)
);
```

```
-- 17
create table Insurance(
    Insurance_no varchar(10) Primary Key,
    policy_no varchar(20),
    publish_date date,
    Insurance_company varchar(30),
    in_expiry_date date,
    med_coverage numeric(10, 2),
    insurance_plan text
);
```

```
-- 18
create table Bill(
    Bill_no varchar(10) Primary key,
    PID varchar(10) references patient(PID),
    Doctor_charge decimal(10, 2),
    Lab_charge decimal(10, 2),
    Medicine_charge decimal(10, 2),
    Room_charge decimal(10, 2),
    Operation_charge decimal(10, 2),
    No_of_days int,
```

```
Insurance_no varchar(20) references Insurance(Insurance_no)
);
```

```
-- 19
Create table Department(
    dept_id varchar(10) Primary key,
    dept_name varchar(30)
);
```

```
-- 20
Create table Employee_details(
    ID varchar(10) Primary key,
    fname varchar(20),
    minit char,
    lname varchar(20),
    dob date,
    gender char,
    dept_id varchar(10) References Department(dept_id),
    is_dept_id_mgr bool,
    area Text,
    city varchar(20),
    country varchar(20)
);
```

```
-- 21
Create table Payroll (
    ID varchar(20) Primary key References Employee_Details(ID),
    Account_no varchar(20),
    IBAN varchar(20),
    net_salary numeric(10,2),
    hourly_salary numeric(10,2),
    compensation numeric(10,2),
    salary numeric(10,2)
);
```

```
-- 22
Create table Employee_Phone(
    ID varchar(10) References Employee_Details(ID),
    phone_no numeric(10,0),
    phone_type varchar(10),
    Primary key(ID,phone_no)
);
```

```
-- 23
Create table Employee_Email(
    ID varchar(10) References Employee_Details(ID),
    email varchar(30),
    email_type varchar(10),
    Primary key(ID,email)
);
```