| **USER(a)** | **user\_id** | **a1** |
| --- | --- | --- |
| **User-type** | **a2** |
| **email** | **a3** |
| **Password** | **a4** |
| **name** | **a5** |
| **Senior Doctor(b)** | **Sen-doc-id** | **a1** |
| **Surgery date** | **b1** |
| **Appointment time** | **b2** |
| **Research-Data-Id** | **b3** |
| **Junior Doctor(c)** | **Jundocid** | **a1** |
| **Appointment time** | **b2** |
| **Surgery date** | **b1** |
| **Research-data-id** | **b3** |
| **Patient(d)** | **Patientid** | **a1** |
| **Pat name** | **d1** |
| **Med History** | **d2** |
| **Insurance information** | **d3** |
| **Receptionist(e)** | **ReceptionistId** | **a1** |
| **Admitted\_patient data** | **e1** |
| **released *patient-data*** | **e2** |
| **appointment\_schedule** | **e3** |
| **Pharmacy(f)** | **User id** | **a1** |
| **Med-data** | **f1** |
| **Expiry data** | **f2** |
| **Meds in demand** | **f3** |
| **Nurse(g)** | **Nurse\_id** | **a1** |
| **Nurse name** | **g1** |
| **Contract-no** | **g2** |
| **experience** | **g3** |
| **Analytical\_data(h0** | **Research data id** | **b3** |
| **senior doctor id** | **a1** |
| **Junior doctor id** | **a1** |
| **Meds in demand** | **f3** |

| **a1** | **a2,a3,a4,a5,b1,b2,b3** |
| --- | --- |
| **a1,d1** | **d2,d3** |
| **a1,e1** | **e2,e3** |
| **a1,f1** | **f2,f3** |
| **a1,g1** | **g2,g3** |

**1NF:**

**R1=**

| **a1** | **d1** | **e1** | **f1** | **g1** | **a2** | **a3** | **a4** | **a5** | **b1** | **b2** | **b3** | **d2** | **d3** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **e2** | **e3** | **f2** | **f3** | **g2** | **g3** |  |  |  |  |  |  |  |  |

**2NF: Here, all non-key attributes are dependent on the primary key.**

**R10:**

| **a1** | **a2** | **a3** | **a4** | **a5** | **b1** | **b2** | **b3** |
| --- | --- | --- | --- | --- | --- | --- | --- |

**R11:**

| **a1** | **d1** | **d2** | **d2** |
| --- | --- | --- | --- |

**R12 :**

| **a1** | **e1** | **e2** | **e3** |
| --- | --- | --- | --- |

**R13:**

| **a1** | **f1** | **f2** | **f3** |
| --- | --- | --- | --- |

**R14:**

| **a1** | **g1** | **g2** | **g3** |
| --- | --- | --- | --- |

**3NF:**

**R10,R11,R12,R13 and R14 already in 3nf**

**BCNF:**

**All relations already in BCNF**