UNF

**ADMISSION**: (patient\_id, date of adimission, time\_of\_adimission, patient\_name , sup\_doctor\_id, sup\_doctor\_name, (procedure\_code, procedure\_name, Req\_id, req\_name, carri\_id, carri\_name, carri\_date, carri\_time, procedure\_charge, (item\_code, item\_descri, item\_quan, total\_item\_charge), extra\_charge))

1NF

**ADMISSION**: (patient\_id, date\_of\_admission, time\_of\_adimission, patient\_name, sup\_doctor\_id, sup\_doctor\_name)

**PROCEDURE**: (patient\_id, carri\_date, carri\_time, procedure\_code, procedure\_name, req\_id, req\_name, carri\_id, carri\_name, procedure\_charge, extra\_charge)

**ADDITIONAL ITEM**: (procedure\_code, item\_code, item\_quan, item\_descri, total\_item\_charge)

Dependency diagram:

patient\_id 🡪 patient\_name (PRATIAL)

item\_code 🡪 item\_descri (PARTIAL)

patient\_id, date\_of\_admission, time\_of\_adimission 🡪 patient\_name, sup\_doctor\_id, sup\_doctor\_name (FULL)

carri\_date, carri\_time, patient\_id 🡪 procedure\_code, procedure\_name, req\_id, req\_name, carri\_id, carri\_name, procedure\_charge, extra\_charge (FULL)

item\_quan, procedure\_code, item\_code 🡪 item\_descri, total\_item\_charge (FULL)

sup\_doctor\_id 🡪 sup\_doctor\_name (TRANSITIVE)

req\_id 🡪 req\_name (TRANSITIVE)

carri\_id 🡪 carri\_name (TRANSITIVE)

procedure\_code 🡪 procedure\_name (TRANSITIVE)

2NF:

**ADMISSION**: (patient\_id, date\_of\_admission, time\_of\_adimission, sup\_doctor\_id, sup\_docotor\_name)

**PROCEDURE**: (carri\_date, carri\_time, patient\_id, procedure\_code, req\_id, req\_name, carri\_id, carri\_name, procedure\_charge, extra\_charge)

**ADDITIONAL ITEM**: (item\_quan, procedure\_code, item\_code, total\_item\_charge)

**PATIENT**: (patient\_id, patient\_name)

**ITEM DERAILS**: (item\_code, item\_descri)

3NF:

**ADMISSION**: (patient\_id, date\_of\_admission, time\_of\_adimission, sup\_doctor\_id)

**PROCEDURE**: (patient\_id, carri\_date, carri\_time, procedure\_code, req\_id, carri\_id, carri\_date, carri\_time, procedure\_charge, extra\_charge)

**ADDITIONAL ITEM**: (item\_quan, procedure\_code, item\_code, total\_item\_charge)

**PATIENT**: (patient\_id, patient\_name)

**ITEM DERAILS**: (item\_code, item\_descri)

**SUPERVISING DOCTOR**: (sup\_doctor\_id, sup\_doctor\_name)

**REQUESTED DOCTOR**: (req\_id, req\_name)

**CARRIED OUT DOCTOR**: (carri\_id, carri\_name)

**PROCEDURE DETAILS**: (procedure\_code, procedure\_name)

UNF

**NURSE** (nurse\_id, first\_name, last\_name, contact\_phone, certified,(ward\_code, ward\_name, data\_assigned, data\_completed))

1NF

**NERSE**: (nurse\_id, first\_name, last\_name, contact\_phone, certified)

**WARD\_ASSIGN**: (nurse\_id, ward\_code, date\_assigned, ward\_name, date\_completed)

Dependency diagram:

nerse\_id 🡪 first\_name, last\_name, contact\_phone, certified (FULL)

nerse\_id, ward\_code, date\_assigned 🡪 ward\_name, date\_completed (FULL)

ward\_code 🡪 ward\_name (PRATIAL)

2NF

**NERSE**: (nurse\_id, first\_name, last\_name, contact\_phone, certified)

**WARD\_ASSIGN**: (nurse\_id, ward\_code, date\_assigned, date\_completed)

**WARD**: (ward\_code, ward\_name)

3NF

**NERSE**: (nurse\_id, first\_name, last\_name, contact\_phone, certified)

**WARD\_ASSIGN**: (nurse\_id, ward\_code, date\_assigned, date\_completed)

**WARD**: (ward\_code, ward\_name)

Because the requirement doctor, carried out doctor and supervising doctor are same with doctor id. I write them in the same entity(doctor).

Because patient name and doctor name can be divided as patient\_lastname, patient\_fistname, doctor\_lastname and doctor\_firstname.

FINAL 3NF

**NERSE**: (nurse\_id, first\_name, last\_name, contact\_phone, certified)

**WARD\_ASSIGN**: (nurse\_id, ward\_code, date\_assigned, date\_completed)

**WARD**: (ward\_code, ward\_name)

**ADMISSION**: (patient\_id, date\_of\_admission, time\_of\_adimission, sup\_doctor\_id)

**PROCEDURE**: (patient\_id, carri\_date, carri\_time, procedure\_code, req\_id, carri\_id, carri\_date, carri\_time, procedure\_charge, extra\_charge)

**ADDITIONAL ITEM**: (item\_quan, procedure\_code, item\_code, total\_item\_charge)

**PATIENT**: (patient\_id, patient\_name)

**ITEM DERAILS**: (item\_code, item\_descri)

**DOCTOR (**doctor\_id, doctor\_lastname, doctor\_firstname**)**

**PROCEDURE DETAILS**: (procedure\_code, procedure\_name)