

## UNF

**ADMISSION** (pat\_id, pat\_fname, pat\_lname, ad\_date/time, sp doc\_id, sp doc\_fname, sp doc\_lname (pro\_code, pro\_name, req doc\_id, req doc\_fname, req doc\_lname, car doc\_id, car doc\_fname, car doc\_lname, pro\_date/time, pro\_charge (item\_code, description, quantity, total item charge, total extras charges)))

## 1NF

**ADMISSION** (pat\_id, ad\_date/time, pat\_fname, pat\_lname, sp doc\_id, sp doc\_fname, sp doc\_lname)

pat\_id, date/time -> sp doc\_id FULL

pat\_id -> pat\_fname, pat\_lname PARTIAL

sp doc\_id -> sp doc\_fname, sp doc\_lname TRANSITIVE

**PROCEDURE DETAILS** (pat\_id, ad\_date/time, pro\_date/time, req doc\_id, pro\_code, car doc\_id, pro\_name, req doc\_fname, req doc\_lname, car doc\_fname, car doc\_lname, pro\_charge)

pat\_id, ad\_date/time, pro\_date/time, -> car doc\_id, req doc\_id, pro\_code FULL

car doc\_id -> car doc\_fname, car doc\_lname TRANSITIVE

req doc\_id -> req doc\_fname, req doc\_lname TRANSITIVE

pro\_code -> pro\_name, pro\_charge PARTIAL

**ADDITIONAL CHARGES** (item\_code, quantity, description, total item charge, total extras charges)

item\_code -> description PARTIAL

quantity, item\_code -> total item charge FULL

total item charge -> total extras charges TRANSITIVE

## 2NF

**ADMISSION** (pat\_id, date/time, sp doc\_id, sp doc\_fname, sp doc\_lname)

**PATIENT** (pat\_id, pat\_fname, pat\_lname)

**PROCEDURE DETAILS** (pat\_id, ad\_date/time, pro\_date/time, req doc\_id, pro\_code, car doc\_id, pro\_name, req doc\_fname, req doc\_lname, car doc\_fname, car doc\_lname)

**PROCEDURE** (pro\_code, pro\_name, pro\_charge)

**ADDITIONAL CHARGES** (quantity, item\_code, total item charge, total extras charges)

**ITEM** (item\_code, description)

## 3NF

**ADMISSION** (pat\_id, date/time, sp doc\_id)

**SUPERVISING DOCTOR** (sp doc\_id, sp doc\_fname, sp doc\_lname)

**PATIENT** (pat\_id, pat\_fname, pat\_lname)

**PROCEDURE DETAILS** (pat\_id, ad\_date/time, pro\_date/time, req doc\_id, pro\_code, car doc\_id)

**PROCEDURE** (pro\_code, pro\_name, pro\_charge)

**REQUESTED DOCTOR** (req doc\_id, req doc\_fname, req doc\_lname)

**CARRYOUT DOCTOR** (car doc\_id, car doc\_fname, car doc\_lname)

**ADDITIONAL CHARGES** (quantity, item\_code, total item charge)

**CHARGE** (total item charge, total extras charges)

**ITEM** (item\_code, description)

## UNF

**NURSE ASSIGNMENT** (nurse\_id, nurse\_fname, nurse\_lname, nurse\_phone, nurse\_certified  
(ward\_code, ward\_name, date\_assigned, date\_completed))

## 1NF

**NURSE** (nurse\_id, nurse\_fname, nurse\_lname, nurse\_phone, nurse\_certified)

nurse\_id -> nurse\_fname, nurse\_lname, nurse\_phone, nurse\_certified FULL

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

nurse\_id, date\_assigned -> ward\_name, date\_completed FULL

ward\_code -> ward\_name TRANSITIVE

## 2NF

**NURSE** (nurse\_id, nurse\_fname, nurse\_lname, nurse\_phone, nurse\_certified)

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

## 3NF

**NURSE** (nurse\_id, nurse\_fname, nurse\_lname, nurse\_phone, nurse\_certified)

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

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

## COLLECTION 3NF RELATIONS:

**ADMISSION** (pat\_id, date/time, sp doc\_id)

**SUPERVISING DOCTOR** (sp doc\_id, sp doc\_fname, sp doc\_lname)

**PATIENT** (pat\_id, pat\_fname, pat\_lname)

**PROCEDURE DETAILS** (pat\_id, ad date/time, pro date/time, req doc\_id, pro\_code, car doc\_id)

**PROCEDURE** (pro\_code, pro\_name, pro\_charge)

**REQUESTED DOCTOR** (req doc\_id, req doc\_fname, req doc\_lname)

**CARRYOUT DOCTOR** (car doc\_id, car doc\_fname, car doc\_lname)

**ADDITIONAL CHARGES** (quantity, item\_code, total item charge)

**CHARGE** (total item charge, total extras charges)

**ITEM** (item\_code, description)

**NURSE** (nurse\_id, nurse\_fname, nurse\_lname, nurse\_phone, nurse\_certified)

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

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