# NORMALISATION

ADMISSION PROCCHARGE SHEET FORM

UNF:
ADMISSION_PROCEDURE_CHARGE_SHEET (pat_id, pat_name, admission_datetime, supervising_doc_id, supervising_doc_name,
(proc_code,proc_name, requested_by_id, requested_by_name, carried_out_by_id, carried_out_by_name, carried_out_on, proc_charge, total_extras_charge
(item_code, item_desc, qty, total_item_charge)))

Repeating groups:
(proc_code,proc_name, requested_by, carried_out_by, carried_out_on, proc_charge, total_extras_charge
(item_code, item_desc, qty, total_item_charge))


1NF:
ADMISSION (**pat_id**, **admission_datetime**, pat_name, supervising_doc_id, supervising_doc_name)
PROCDET (**pat_id**, **admission_datetime**, **carried_out_on**, proc_code, proc_name, requested_by_id, requested_by_name, carried_out_by_id, carried_out_by_name, proc_charge, total_extras_charge)
ITEMCHARGE (**pat_id**, **admission_datetime**, **carried_out_on**, **item_code**, item_desc, qty, total_item_charge)

DEPENDENCIES:

PARTIAL:
ADMISSION
pat_id -> pat_name
ITEMCHARGE
item_code -> item_desc

TRANSITIVE:
ADMISSION
supervising_doc_id -> supervising_doc_name
PROCDET
proc_code -> proc_name
requested_by_id -> requested_by_name
carried_out_by_id -> carried_out_by_name

FULL:
ADMISSION
pat_id, admission_datetime -> supervising_doc_id
PROCDET
pat_id, admission_datetime, carried_out_on -> proc_code, proc_charge, requested_by_id, carried_out_by_id, total_extras_charge
ITEMCHARGE
pat_id, admission_datetime, carried_out_on, item_code -> qty, total_item_charge

2NF:
ADMISSION (**pat_id**, **admission_datetime**, supervising_doc_id, supervising_doc_name)
PATIENT (**pat_id**, pat_name)
PROCDET (**pat_id**, **admission_datetime**, **carried_out_on**, proc_code, proc_name, proc_charge, requested_by_id, requested_by_name, carried_out_by_id, carried_out_by_name, total_extras_charge)
ITEMCHARGE (**pat_id**, **admission_datetime**, **carried_out_on**, **item_code**, qty, total_item_charge)
ITEM (**item_code**, item_desc)

3NF:
ADMISSION (**pat_id**, **admission_datetime,** supervising_doc_id)
SUPERVISING_DOCTOR (**supervising_doc_id**, supervising_doc_name)
PATIENT (**pat_id**, pat_name)
PROCDET (**pat_id**, **admission_datetime**, **carried_out_on**, proc_code, proc_charge, requested_by_id, carried_out_by_id, total_extras_charge)
REQUESTED_BY_DOCTOR (**requested_by_id**, requested_by_name)
CARRIED_OUT_BY_DOCTOR (**carried_out_by_id**, carried_out_by_name)
PROC (**proc_code**, proc_name)
ITEMCHARGE (**pat_id**, **admission_datetime**, **carried_out_on**, **item_code**, qty, total_item_charge)
ITEM (**item_code**, item_desc)

As supervising_doc_id/name, requested_by_id/name and carried_out_by_id/name are nothing but doctor id/name in various roles, they can be referred from a single entity DOCTOR.

Final 3NF:
ADMISSION (**pat_id**, **admission_datetime,** supervising_doc_id)
DOCTOR (**doc_id**, doc_name)
PATIENT (**pat_id**, pat_name)
PROCDET (**pat_id**, **admission_datetime**, **carried_out_on**, proc_code, proc_charge, requested_by_id, carried_out_by_id, total_extras_charge)
PROC (**proc_code**, proc_name)
ITEMCHARGE (**pat_id**, **admission_datetime**, **carried_out_on**, **item_code**, qty, total_item_charge)
ITEM (**item_code**, item_desc)

<u>NURSE WARD ASSIGNMENT FORM</u>

UNF:
NURSE_WARDASSIGN_FORM (nurse_id, nurse_fname, nurse_lname, nurse_phno, nurse_child_cert, (ward_code, ward_name, date_assigned, date_completed))

Repeating groups:
(ward_code, ward_name, date_assigned, date_completed)

1NF:
NURSE (**nurse_id**, nurse_fname, nurse_lname, nurse_phno, nurse_child_cert)
WARDASSIGN (**nurse_id**, **date_assigned**, ward_code, ward_name, date_completed)

DEPENDENCIES:

FULL:
NURSE
nurse_id -> nurse_fname, nurse_lname, nurse_phno, nurse_child_cert
WARDASSIGN
nurse_id, date assigned -> ward_code, date_completed

TRANSITIVE:
WARDASSIGN
ward_code -> ward_name

As there are no partial dependencies, 2NF is same as 1NF.

2NF:
NURSE (**nurse_id**, nurse_fname, nurse_lname, nurse_phno, nurse_child_cert)
WARDASSIGN (**nurse_id**, **date_assigned**, ward_code, ward_name, date_completed)

3NF:
NURSE (**nurse_id**, nurse_fname, nurse_lname, nurse_phno, nurse_child_cert)
WARDASSIGN (**nurse_id**, **date_assigned**, ward_code, date_completed)
WARD (**ward_code**, ward_name)

## COLLECTED 3NF RELATIONS

1. ADMISSION (**pat_id**, **admission_datetime,** supervising_doc_id)
2. DOCTOR (**doc_id**, doc_name)
3. PATIENT (**pat_id**, pat_name)
4. PROCDET (**pat_id**, **admission_datetime**, **carried_out_on**, proc_code, proc_charge, requested_by_id, carried_out_by_id, total_extras_charge)
5. PROC (**proc_code**, proc_name)
6. ITEMCHARGE (**pat_id**, **admission_datetime**, **carried_out_on**, **item_code**, qty, total_item_charge)
7. ITEM (**item_code**, item_desc)
8. NURSE (**nurse_id**, nurse_fname, nurse_lname, nurse_phno, nurse_child_cert)
9. WARDASSIGN (**nurse_id**, **date_assigned**, ward_code, date_completed)
10. WARD (**ward_code**, ward_name)