

Normalisation

Monash Dental Daily Provider Running Sheet

UNF:

PROVIDER (prov_code, prov_name, prov_reg_no, prov_first_reg_date, prov_reg_status, prov_month_charge, prov_year_charge, (appt_datetime, patient_no, patient_name))

1NF:

PROVIDER(prov_code, prov_name, prov_reg_no, prov_first_reg_date, prov_reg_status, prov_month_charge, prov_year_charge)

APPOINTMENT(prov_code, appt_datetime, patient_no, patient_name)

Partial dependencies:

None

2NF:

PROVIDER (prov_code, prov_name, prov_reg_no, prov_first_reg_date, prov_reg_status, prov_month_charge, prov_year_charge)

APPOINTMENT(prov_code, appt_datetime, patient_no, patient_name)

Transitive dependencies:

Patient_no → patient_name

3NF:

PROVIDER (prov_code, prov_name, prov_reg_no, prov_first_reg_date, prov_reg_status, prov_month_charge, prov_year_charge)

APPOINTMENT(prov_code, appt_datetime, patient_no)

PATIENT(patient_no, patient_name)

Full dependencies:

prov_code → prov_name, prov_reg_no, prov_first_reg_date, prov_reg_status, prov_month_charge, prov_year_cha

prov_code, appt_datetime → patient_no

Prov_code → prov_name, prov_reg_no, prov_first_reg_date, prov_reg_status, prov_month_charge, prov_year_charge

Patient_no → patient_name

Monash Dental Appointment Completion Report

UNF:

APPOINTMENT(patient_no, patient_name, appt_date, appt_time, prov_code, prov_name, appt_room, appt_type, (service_code, service_desc, service_stnd_fee, service_fee_charged), (pay_no, pay_from, pay_amount))

1NF:

APPOINTMENT(patient_no, patient_name, appt_date, appt_time, prov_code, prov_name, appt_room, appt_type)

APPOINTMENT_SERVICE(appt_date, appt_time, prov_code, service_code, service_desc, service_stnd_fee, service_fee_charged)

PAYMENT(appt_date, appt_time, prov_code, pay_no, pay_from, pay_amount)

Partial dependencies:

Prov_code → prov_name

Patient_no → patient_name (appt_date, appt_time and patient_no was another candidate key)

Service_code → service_desc, service_stnd_fee

2NF:

APPOINTMENT(patient_no, appt_date, appt_time, prov_code, appt_room, appt_type)

PATIENT(patient_no, patient_name)

PROVIDER(prov_code, prov_name)

APPOINTMENT_SERVICE(appt_date, appt_time, prov_code, service_code, service_fee_charged)

SERVICE(service_code, service_desc, service_stnd_fee)

PAYMENT(appt_date, appt_time, prov_code, pay_no, pay_from, pay_amount)

Transitive dependencies:

None

3NF:

APPOINTMENT(patient_no, appt_date, appt_time, prov_code, appt_room, appt_type)

PROVIDER(prov_code, prov_name)

APPOINTMENT_SERVICE(appt_date, appt_time, prov_code, service_code, service_fee_charged)

SERVICE(service_code, service_desc, service_std_fee)

PAYMENT(pay_no, pay_from, pay_amount)

PAYMENT(appt_date, appt_time, prov_code, pay_no, pay_from, pay_amount)

Full dependencies:

appt_date, appt_time, prov_code → patient_no, appt_room, appt_type

prov_code → prov_name

appt_date, appt_time, prov_code, service_code → service_fee_charged

service_code → service_desc, service_std_fee

pay_no → pay_from, pay_amount

patient_no, patient_name

All 3NF relations:

1. PROVIDER (prov_code, prov_name, prov_reg_no, prov_first_reg_date, prov_reg_status, prov_month_charge, prov_year_charge)
2. APPOINTMENT(prov_code, appt_datetime, patient_no)
3. PATIENT(patient_no, patient_name)
4. APPOINTMENT(patient_no, appt_date, appt_time, prov_code, appt_room, appt_type)
5. PROVIDER(prov_code, prov_name)
6. APPOINTMENT_SERVICE(appt_date, appt_time, prov_code, service_code, service_fee_charged)
7. SERVICE(service_code, service_desc, service_std_fee)
8. PAYMENT(appt_date, appt_time, prov_code, pay_no, pay_from, pay_amount)
9. PATIENT(patient_no, patient_name)

Attribute synthesis

3 and 9 are combined.

1 and 5 are combined.

2 and 4 are combined. Relation 4 APPOINTMENT has date and time separately but it will be assumed that they can be combined together.

Final relations:

1. (&5) PROVIDER (prov_code, prov_name, prov_reg_no, prov_first_reg_date, prov_reg_status, prov_month_charge, prov_year_charge)
2. (& 4) APPOINTMENT(prov_code, appt_datetime, patient_no, appt_room, appt_type)
3. (& 9) PATIENT(patient_no, patient_name)
4. APPOINTMENT_SERVICE(appt_date, appt_time, prov_code, service_code, service_fee_charged)
5. SERVICE(service_code, service_desc, service_std_fee)
6. PAYMENT(appt_date, appt_time, prov_code, pay_no, pay_from, pay_amount)