

fda_normalisation

▼ Fire Event Report

▼ UNF

Fire_Event (fire_id, fire_name, fire_date_started, fire_lives_lost,
fire_damage (property_id, building_id, building_class, damage_cost,
total_destroy, insurance_coverage))

▼ 1NF

Fire_Event (fire_id, fire_name, fire_date_started, fire_lives_lost,
fire_damage)

damage_for_fireEvent (fire_id, property_id, building_id, building_class,
damage_cost, total_destroy, insurance_coverage)

▼ Candidate Keys :

- fire_id, Property_Id, Building_ID

▼ Partial dependency :

- property_id, building_id → building_class,
insurance_coverage

▼ 2NF

Fire_Event(fire_id, fire_name, fire_date_started, fire_lives_lost,
fire_damage)

Building_Damage(Property_Id, fire_id, Building_ID, Damage_Cost,
Totally_Destroyed)

Building_Info (Property_Id, Building_ID, Building_Class,
Insurance_coverage)

▼ Transitive dependency :

No transitive dependency is found

▼ 3NF

Fire_Event(fire_id, fire_name, fire_date_started, fire_lives_lost,
fire_damage)

Building_Damage(property_id, fire_id, building_id, damage_cost,
total_destroy)

Building_Info (property_id, building_id, building_class,
insurance_coverage)

▼ Full dependency :

- fire_id → fire_name, fire_date_started, fire_lives_lost,
fire_damage
- property_id, fire_id, building_id, → damage_cost,
total_destroy
- property_id, building_id, → building_class,
insurance_coverage

▼ Assessment Visit

▼ UNF

Assess_Damage(property_id, property_street, property_town,
property_postcode, lga_code, lga_name, building_id,

lga_building_value, building_class, fire_id, assessor_id, assessor_gname, assessor_fname, (arrival_date_and_time, departed_date_and_time))

▼ 1NF

Assess_Damage(property_id,building_id, fire_id, property_street, property_town, property_postcode, lga_code, lga_name, lga_building_value, building_class, assessor_id, assessor_gname, assessor_fname)

▼ Candidate Keys :

- property_id, building_id, fire_id (PK)

▼ Partial dependency :

- property_id → property_street, property_town, property_postcode
- property_id, building_id → building_class, lga_building_value

Visit_datetime (property_id,building_id, fire_id, arrival_date_and_time, departed_date_and_time)

▼ Candidate Keys :

- property_id,building_id, fire_id, date_and_time_arrived (PK)
- property_id,building_id, fire_id, date_and_time_departed

▼ Partial dependency :

- No partial dependency is found.

▼ 2NF

Assess_Damage(property_id,building_id, fire_id, lga_code, lga_name, assessor_id, assessor_gname, assessor_fname)

▼ Transitive dependency :

- lga_code → lga_name
- assessor_id → assessor_gname, assessor_fname

Visit_datetime (property_id,building_id, fire_id, arrival_date_and_time, departed_date_and_time)

▼ Transitive dependency :

- No transitive dependency is found.

Property (property_id, property_street, property_town, property_postcode)

▼ **Transitive dependency :**

- No transitive dependency is found.

Building (property_id, building_id, lga_building_value, building_class)

▼ **Transitive dependency :**

- No transitive dependency is found.

▼ **3NF**

Assess_Damage(property_id, building_id, fire_id, lga_code, assessor_id)

Visit_datetime (property_id, building_id, fire_id, arrival_date_and_time, departed_date_and_time)

Property (property_id, property_street, property_town, property_postcode)

Building (property_id, building_id, lga_building_value, building_class)

LGA (lga_code, lga_name)

Assessor(assessor_id, assessor_gname, assessor_fname)

▼ **Full dependency**

- property_id, building_id, fire_id → lga_code, assessor_id
- property_id, building_id, fire_id, arrival_date_and_time → departed_date_and_time
- property_id → property_street, property_town, property_postcode
- property_id, building_id, → lga_building_value, building_class
- lga_code → lga_name
- assessor_id → assessor_gname, assessor_fname

▼ **COLLECTED 3NF RELATIONS :**

For Fire Event Report :

1. **Fire_Event**(fire_id, fire_name, fire_date_started, fire_lives_lost, fire_damage)
2. **Building_Damage**(property_id, fire_id, building_id, damage_cost, total_destroy)
3. **Building_Info** (property_id, building_id, building_class, insurance_coverage)

For Assessment Visit :

4. **Assess_Damage**(property_id, building_id, fire_id, lga_code, assessor_id)
5. **Visit_datetime** (property_id, building_id, fire_id, arrival_date_and_time, departed_date_and_time)
6. **Property** (property_id, property_street, property_town, property_postcode)
7. **Building** (property_id, building_id, lga_building_value, building_class)
8. **LGA** (lga_code, lga_name)
9. **Assessor**(assessor_id, assessor_gname, assessor_fname)

▼ ATTRIBUTE SYNTHESIS:

1. **Fire_Event**(fire_id, fire_name, fire_date_started, fire_lives_lost, fire_damage)
- 2.&4. **Damage**(property_id, fire_id, building_id, damage_cost, total_destroy, lga_code, assessor_id)
- 3.& 7. **Building** (property_id, building_id, lga_building_value, building_class, insurance_coverage)
5. **Property** (property_id, property_street, property_town, property_postcode)
6. **Assessor**(assessor_id, assessor_gname, assessor_fname)
8. **LGA** (lga_code, lga_name)

9. **Visit_datetime** (property_id,building_id, fire_id, arrival_date_and_time,
departed_date_and_time)