

## Document A

### STEP 1: NORMALISATION:

#### UNF:

**RESORT**(resort\_id,resort\_name,resort\_address,{cabin\_no,standard\_time,  
date\_cleaned,contractor\_no,first\_name,last\_name,contract\_rate,actual\_time,  
cleaning\_charge})

#### 1NF:

**RESORT** (resort\_id,res\_name,resort\_address)

**CABIN\_CLEANING** (resort\_id,cabin\_no,date\_cleaned,standard\_time,contractor\_no,  
first\_name,last\_name,contract\_rate,actual\_time,cleaning\_charge)

resort\_id -> res\_name, res\_address **FULL DEPENDENCY**

resort\_id, cabin\_no, date\_cleaned ->  
contractor\_no, actual\_time, contract\_rate, cleaning\_charge **FULL DEPENDENCY**

(resort\_id, cabin\_no) -> standard\_time. **PARTIAL DEPENDENCY**

contractor\_no -> first\_name, last\_name. **TRANSITIVE DEPENDENCY**

#### 2NF:

Resolving the Partial dependencies.

**RESORT**(resort\_id,res\_name,res\_address)

**CABIN\_CLEANING**(resort\_id,cabin\_no,date\_cleaned,contractor\_no,first\_name,last\_name,  
contract\_rate,actual\_time,cleaning\_charge)

**CABIN**(resort\_id,cabin\_no,standard\_time)

#### 3NF:

Resolving the Transitive dependencies.

**RESORT** (resort\_id,resort\_name,res\_address)

**CABIN\_CLEANING** (resort\_id,cabin\_no,date\_cleaned,contractor\_no,contract\_rate,actual\_time,cleaning\_charge)

**CABIN**(resort\_id,cabin\_no,standard\_time)

**CONTRACTOR\_DETAIL**(contractor\_no,first\_name,last\_name)

### **Document B&C.**

#### **STEP 1: NORMALISATION:**

##### **UNF:**

**CONTRACTOR\_DETAIL**(contractor\_no,first\_name,last\_name,postal\_address,phone,{start\_date,end\_date,contract\_hourly\_rate,contract\_type})

contractor\_no -> first\_name,last\_name,postal\_address,phone **FULL DEPENDENCY**

contractor\_no,start\_date -> end\_date, contract\_hourly\_rate, contract\_type **FULL DEPENDENCY**

##### **1NF:**

**CONTRACTOR\_DETAIL**(contractor\_no, first\_name,last\_name,postal\_address,phone)

**CONTRACTOR\_HISTORY**(contractor\_no,start\_date,end\_date,contract\_hourly\_rate,contract\_type)

##### **2NF:**

**No Partial Dependency.**

**CONTRACTOR\_DETAIL**(contractor\_no, first\_name,last\_name,postal\_address,phone)

**CONTRACTOR\_HISTORY**(contractor\_no,start\_date,end\_date,contract\_hourly\_rate,contract\_type)

**3NF:**

**No Transitive Dependency.**

**CONTRACTOR\_DETAIL**(contractor\_no, first\_name, last\_name, postal\_address, phone)

**CONTRACTOR\_HISTORY**(contractor\_no, start\_date, end\_date, contract\_hourly\_rate, contract\_type)

**COLLECTED 3NF Relations:**

1. **RESORT** (resort\_id, resort\_name, res\_address)
2. **CABIN\_CLEANING**(resort\_id, cabin\_no, date\_cleaned, contractor\_no, contract\_rate, actual\_time, cleaning\_charge)
3. **CONTRACTOR\_DETAIL**(contractor\_no, first\_name, last\_name)
4. **CABIN**(resort\_id, cabin\_no, standard\_time)
5. **CONTRACTOR\_DETAIL** (contractor\_no, first\_name, last\_name, postal\_address, phone)
6. **CONTRACTOR\_HISTORY** (contractor\_no, start\_date, end\_date, contract\_hourly\_rate, contract\_type)

**STEP 2: ATTRIBUTE SYNTHESIS**

Join together relations, which have an identical PK – ie. represent the same entity:

**1: 3 & 5.**

**CONTRACTOR\_DETAIL**(contractor\_no, first\_name, last\_name, postal\_address, phone)

**2:**

**RESORT**(resort\_id, resort\_name, res\_address)

**3:**

**CABIN**(resort\_id, Cabin\_no, standard\_time)

**4:**

**CONTRACTOR\_HISTORY** (contractor\_no, start\_date, end\_date, contract\_hourly\_rate, contract\_type)

**5:**

**CABIN\_CLEANING**(resort\_id, cabin\_no, date\_cleaned, contractor\_no, contract\_rate,

actual\_time,cleaning\_charge)

- From the Collected 3NF **RESORT**(resort\_id,resort\_name,resort\_address) and the **RESORT**(resort\_id,resort\_name,resort\_address,lat,long,Star\_rating,pets\_allowed,manager\_present,m\_id) of conceptual design have same primary key hence only entity is considered.
- For the collected 3NF **CABIN**(resort\_id,Cabin\_no,standard\_time) and the entity **CABIN**(resort\_id,Cabin\_no,no\_of\_bedrooms,sleeping\_capacity,description,standard\_time) of conceptual design have identical primary keys hence considered as one entity and the attribute standard\_time is added into the Cabin entity.