Assignment-1 Normalization

AirTnT: Activity Sheet

UNF

 CUSTOMER (Customer_id, Customer_fname, Customer_lname, Check_in_date, Check_in_time, Main_tour_guide_id, Main_tour_guide_fname, Main_tour_guide_lname (Activity_code, Activity_name, Activity_performed_date, Activity_performed_time, Requesting_act_tour_guide_id, Requesting_act_tour_guide_fname, Requesting_act_tour_guide_lname, Completing_act_tour_guide_id, Completing_act_tour_guide_fname, Completing_act_tour_guide_lname, Activity_current_standard_cost (Item_code, Item_description, Item_price, Item_used_quantity)))

-By solving the nested brackets:

1NF:

CUSTOMER (Customer_id, Customer_fname, Customer_lname)

CUSTOMER_check_in (Customer_id, Check_in_date, Check_in_time, Main_tour_guide_id, Main_tour_guide_fname, Main_tour_guide_lname)

Activity (Customer_id, Check_in_date, Check_in_time, Activity_code, Activity_performed_date, Activity_performed_time, Activity_name, Requesting_act_tour_guide_id, Requesting_act_tour_guide_fname, Requesting_act_tour_guide_lname, Completing_act_tour_guide_id, Completing_act_tour_guide_fname, Completing_act_tour_guide_lname, Activity_current_standard_cost)

Item (Customer_id, Check_in_date, Check_in_time, Activity_code, Activity_performed_date, Activity_performed_time, Item_code, Item_description, Item_price, Item_used_quantity)

Dependency diagram:

Customer_id -> Customer_fname, Customer_lname FULL

Customer_id, Check_in_date, Check_in_time -> Main_tour_guide_id FULL

Customer_id, Check_in_date, Check_in_time, Activity_performed_date, Activity_performed_time
Activity_code -> Activity_current_standard_cost, Requesting_act_tour_guide_id, Completing_act_tour_guide_id FULL

Customer_id, Check_in_date, Check_in_time, Activity_code, Activity_performed_date, Activity_performed_time, Item_code -> Item_description, Item_price, Item_used_quantity FULL

Activity_code -> Activity_name Partial

Main_tour_guide_id -> Main_tour_guide_fname, Main_tour_guide_lname Transitive

Requesting_act_tour_guide_id -> Requesting_act_tour_guide_fname, Requesting_act_tour_guide_lname Transitive

Completing_act_tour_guide_id -> Completing_act_tour_guide_fname, Completing_act_tour_guide_lname Transitive

2NF

CUSTOMER (Customer_id, Customer_fname, Customer_lname)

CUSTOMER_check_in (Customer_id, Check_in_date, Check_in_time, Main_tour_guide_id, Main_tour_guide_fname, Main_tour_guide_lname)

Activity_details (Customer_id, Check_in_date, Check_in_time, Activity_code, Activity_performed_date, Activity_performed_time, Activity_name, Requesting_act_tour_guide_id, Requesting_act_tour_guide_fname, Requesting_act_tour_guide_lname, Completing_act_tour_guide_id, Completing_act_tour_guide_fname, Completing_act_tour_guide_lname, Activity_current_standard_cost)

Activity_Identifying (Activity_code, Activity_name)

Item (Customer_id, Check_in_date, Check_in_time, Activity_code, Activity_performed_date, Activity_performed_time, Item_code, Item_description, Item_price, Item_used_quantity)

3Nf

CUSTOMER (<u>Customer_id</u>, Customer_fname, Customer_lname)

CUSTOMER_check_in (<u>Customer_id</u>, <u>Check_in_date</u>, <u>Check_in_time</u>, Main_tour_guide_id)

Activity_details (<u>Customer_id</u>, <u>Check_in_date</u>, <u>Check_in_time</u>, <u>Activity_code</u>, <u>Activity_performed_date</u>, <u>Activity_performed_time</u>, Requesting_act_tour_guide_id, Completing_act_tour_guide_id, Activity_current_standard_cost)

Item (<u>Customer_id, Check_in_date</u>, <u>Check_in_time</u>, <u>Activity_code</u>, <u>Activity_performed_date</u>, <u>Activity_performed_time</u>, <u>Item_code</u>, Item_description, Item_price, Item_used_quantity)

Activity_Identifying (<u>Activity_code</u>, Activity_name)

Main_tour_guide (<u>Main *tour_guide_id*</u>, Main_tour_guide_fname, Main_tour_guide_lname)

Requesting_tour_guide (<u>Requesting_act_tour_guide_id</u>, Requesting_act_tour_guide_fname, Requesting_act_tour_guide_lname)

Completing_tour_guide (<u>Completing_act_tour_guide_id</u>, Completing_act_tour_guide_fname, Completing_act_tour_guide_lname)

AirTnT: HouseKeeper Assignment Details

UNF

HOUSEKEEPER (HouseKeeper_id, HouseKeeper_fname, HouseKeeper_lname, HouseKeeper_contact_no, HouseKeeper_police_check_code, HouseKeeper_bankruptcy_check (HouseShare_code, HouseShare_name, HouseKeeper_assigned_date, HouseKeeper_completed_date))

1NF

HOUSEKEEPER (<u>HouseKeeper_id</u>, HouseKeeper_fname, HouseKeeper_lname, HouseKeeper_contact_no, HouseKeeper_police_check_code, HouseKeeper_bankruptcy_check)

HouseShare_assigned (<u>HouseKeeper_id</u>, <u>HouseShare_code</u>, <u>HouseKeeper_assigned_date</u>, HouseShare_name, HouseKeeper_completed_date)

Dependency diagram:

HouseKeeper_id -> HouseKeeper_fname, HouseKeeper_lname, HouseKeeper_contact_no, HouseKeeper_police_check_code, HouseKeeper_bankruptcy_check FULL

HouseShare_code -> HouseShare_name PARTIAL

HouseKeeper_id, HouseShare_code -> HouseKeeper_assigned_date, HouseKeeper_completed_date FULL

2NF

HOUSEKEEPER (HouseKeeper_id, HouseKeeper_fname, HouseKeeper_lname, HouseKeeper_contact_no, HouseKeeper_police_check_code, HouseKeeper_bankruptcy_check)

HouseShare_assigned (HouseKeeper_id, HouseShare_code, HouseKeeper_assigned_date, HouseKeeper_completed_date)

HouseShare (HouseShare_code, HouseShare_name)

3NF

HOUSEKEEPER (HouseKeeper_id, HouseKeeper_fname, HouseKeeper_lname, HouseKeeper_contact_no, HouseKeeper_police_check_code, HouseKeeper_bankruptcy_check)

HouseShare_assigned (HouseKeeper_id, HouseShare_code, HouseKeeper_assigned_date, HouseKeeper_completed_date)

HouseShare (HouseShare_code, HouseShare_name)

->Synthesis:

CUSTOMER (Customer_id, Customer_fname, Customer_lname)

CUSTOMER_check_in (Customer_id, Check_in_date, Check_in_time, Main_tour_guide_id)

Activity_detail (Customer_id, Check_in_date, Check_in_time, Activity_code, Activity_performed_date, Activity_performed_time, Requesting_act_tour_guide_id, Completing_act_tour_guide_id, Activity_current_standard_cost)

Item (Customer_id, Check_in_date, Check_in_time, Activity_code, Activity_performed_date, Activity_performed_time, Item_code, Item_description, Item_price, Item_used_quantity)

Activity_Identifying (Activity_code, Activity_name)

Main_tour_guide (Main_tour_guide_id, Main_tour_guide_fname, Main_tour_guide_lname)

Requesting_tour_guide (Requesting_act_tour_guide_id, Requesting_act_tour_guide_fname, Requesting_act_tour_guide_lname)

Completing_tour_guide (Completing_act_tour_guide_id, Completing_act_tour_guide_fname, Completing_act_tour_guide_lname)

HOUSEKEEPER (HouseKeeper_id, HouseKeeper_fname, HouseKeeper_lname, HouseKeeper_contact_no, HouseKeeper_police_check_code, HouseKeeper_bankruptcy_check)

HouseShare_assigned (HouseKeeper_id, HouseShare_code, HouseKeeper_assigned_date, HouseKeeper_completed_date)

HouseShare (HouseShare_code, HouseShare_name)