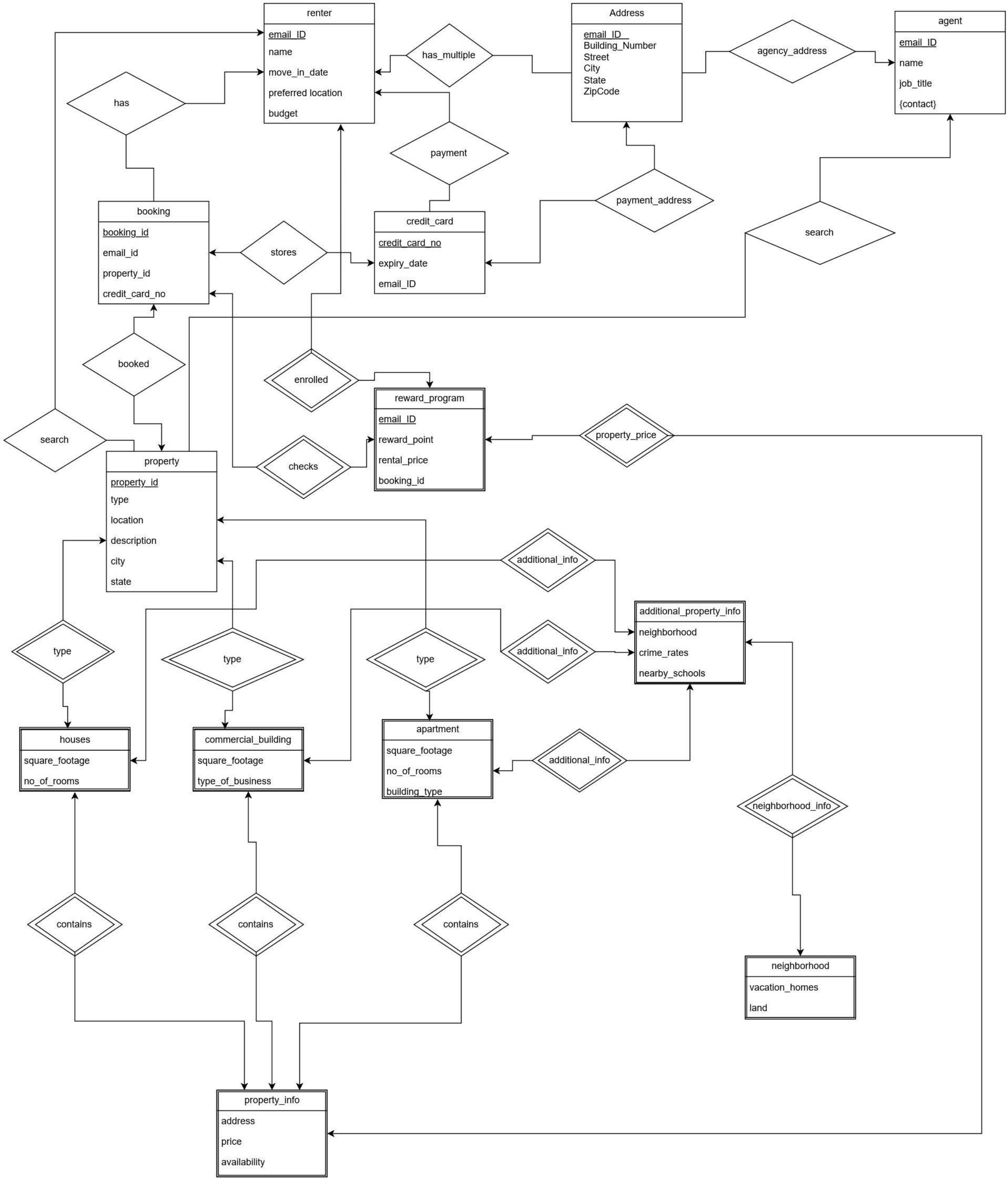
CS 425
Database Organization
Class Project – Phase -2

Sreeved Krishna P S
CWID: A20525827
skrishnaps@hawk.iit.edu

Sidra Sana Shareef
CWID: A20528408
s7@hawk.iit.edu

Katroju Priya Hamsa
CWID – A20527159
khamsa@hawk.iit.edu


renter
email_ID
name
move_in_date
preferred location
budget
has_multiple
Address
email_ID
Building_Number
Street
City
State
ZipCode
agency_address
agent
email_ID
name
job_title
{contact}
has
payment
booking
booking_id
email_id
property_id
credit_card_no
stores
credit_card
credit_card_no
expiry_date
email_ID
payment_address
search
booked
search
enrolled
reward_program
email_ID
reward_point
rental_price
booking_id
property_price
checks
property
property_id
type
location
description
city
state
additional_info
additional_property_info
neighborhood
crime_rates
nearby_schools
type
type
type
additional_info
houses
square_footage
no_of_rooms
commercial_building
square_footage
type_of_business
apartment
square_footage
no_of_rooms
building_type
additional_info
neighborhood_info
contains
contains
contains
neighborhood
vacation_homes
land
property_info
address
price
availability

Relation schema
Strong entities:

renter (email_id, name, move_in_date, preferred_location)

address (email_id, Building_Number,Street,City State, ZipCode)

agent (email_id, name, job_title)

booking (booking_id, email_id, property_id, credit_card_number)

credit_card (credit_card_no, expiry_date, email_id)

property (property_id, type, location, description, city, state)

Weak entities:

renter (email_id, name, move_in_date, preferred_location)

address (email_id, Building_Number,Street, City State, ZipCode)

agent (email_id, name, job_title)

booking (booking_id, email_id, property_id, credit_card_number)

credit_card (credit_card_no, expiry_date, email_id)

property (property_id, type, location, description, city, state)

reward_program (email_id, reward_point, rental_price, booking_id)

houses (property_id, square_footage, no_of_rooms)

commercial_building (property_id, square_footage, type_of_business)

apartment (property_id, square_footage, no_of_rooms, building_type)

additional_property_info(neighborhood, crime_rates, nearby_schools)

Multi Valued Attributes:

renter (email_id, name, move_in_date, preferred_location)

address (email_id, Building_Number, Street, City State, ZipCode)

agent (email_id, name, job_title, contact)

booking (booking_id, email_id, property_id, credit_card_number)

credit_card (credit_card_no, expiry_date, email_id)

property (property_id, type, location, description, city, state)

reward_program (email_id, reward_point, rental_price, booking_id)

houses (property_id, square_footage, no_of_rooms)

commercial_building (property_id, square_footage, type_of_business)

apartment (property_id, square_footage, no_of_rooms, building_type)

additional_property_info(neighborhood, crime_rates, nearby_schools)

Translating Relationships:

renter (email_id, name, move_in_date, preferred_location)

address (email_id, Building_Number, Street, City State, ZipCode)

agent (email_id, name, job_title)

booking (booking_id, email_id, property_id, credit_card_number)

credit_card (credit_card_no, expiry_date, email_id)

property (property_id, type, location, description, city, state)

reward_program (email_id, reward_point, rental_price, booking_id)

houses (property_id, square_footage, no_of_rooms)

commercial_building (property_id, square_footage, type_of_business)

apartment (property_id, square_footage, no_of_rooms, building_type)

additional_property_info(neighborhood, crime_rates, nearby_schools)

booked (booking_id, property_id)

has (renter_email_id, booking_id)

stores (booking_id, credit_card_id)

has_multiple (renter_email_id, Address_email_id)

payment (credit_card_no, reneter_email_id)

payment_address (Address_email_id, credit_card_no)

agency_address (Address_email_id, agent_email_id)

renter_search (renter_email_id, property_id)

agent_search (agent_email_id, property_id)

SQL script that generates a schema for PostgreSQL

```
create schema realestatebooking;
create table realestatebooking.accounts(
        id serial8 PRIMARY KEY,
        username varchar[],
        password varchar[],
        "user" varchar[]
        );
create table realestatebooking.renter(email_ID varchar[] PRIMARY KEY, name varchar[], move_in_date date,preferred_location varchar[], budget integer,contact varchar[] );
create table realestatebooking.Address(email_ID varchar[] PRIMARY KEY,Building_number varchar[], Street varchar[], City varchar[], State
varchar[], ZipCode varchar[]);
create table realestatebooking.agent(email_ID  varchar[] PRIMARY KEY, name varchar[], job_title varchar[], contact varchar[]);

create table realestatebooking.booking(booking_id varchar[] PRIMARY KEY, email_id varchar[],property_id varchar[], credit_card_no
integer); create table realestatebooking.credit_card(credit_card_no integer PRIMARY KEY, expiry_date varchar[],email_id varchar[]);
create table realestatebooking.property(property_id varchar[] PRIMARY KEY, type varchar[], location varchar[], description varchar[],
city varchar[], state varchar[]);
create table realestatebooking.reward_program(email_id varchar[] PRIMARY KEY, reward_point integer, rental_price numeric(10,2), booking_id varchar[]);
create table realestatebooking.additional_property_info(property_id varchar[] REFERENCES realestatebooking.property(property_id), neighborhood varchar[], crime_rates numeric(5,2), nearby_schools
varchar[]);

create table realestatebooking.houses(property_id varchar[] REFERENCES realestatebooking.property(property_id),square_footage numeric(10,2), no_of_rooms integer);
create table realestatebooking.commercial_building(property_id varchar[] REFERENCES realestatebooking.property(property_id), square_footage numeric(10,2), type_of_business varchar[]);
create table realestatebooking.apartment(property_id varchar[] REFERENCES realestatebooking.property(property_id), square_footage numeric(10,2), no_of_rooms integer, building_type
varchar[]);create table realestatebooking.neighborhood(property_id varchar[] REFERENCES realestatebooking.property(property_id), vacation_homes varchar[],land varchar[]);


create table realestatebooking.property_info(property_id varchar[] REFERENCES realestatebooking.property(property_id), address varchar[], price numeric(10,2),availability boolean);
```