

Homemakers

IT-214 Project

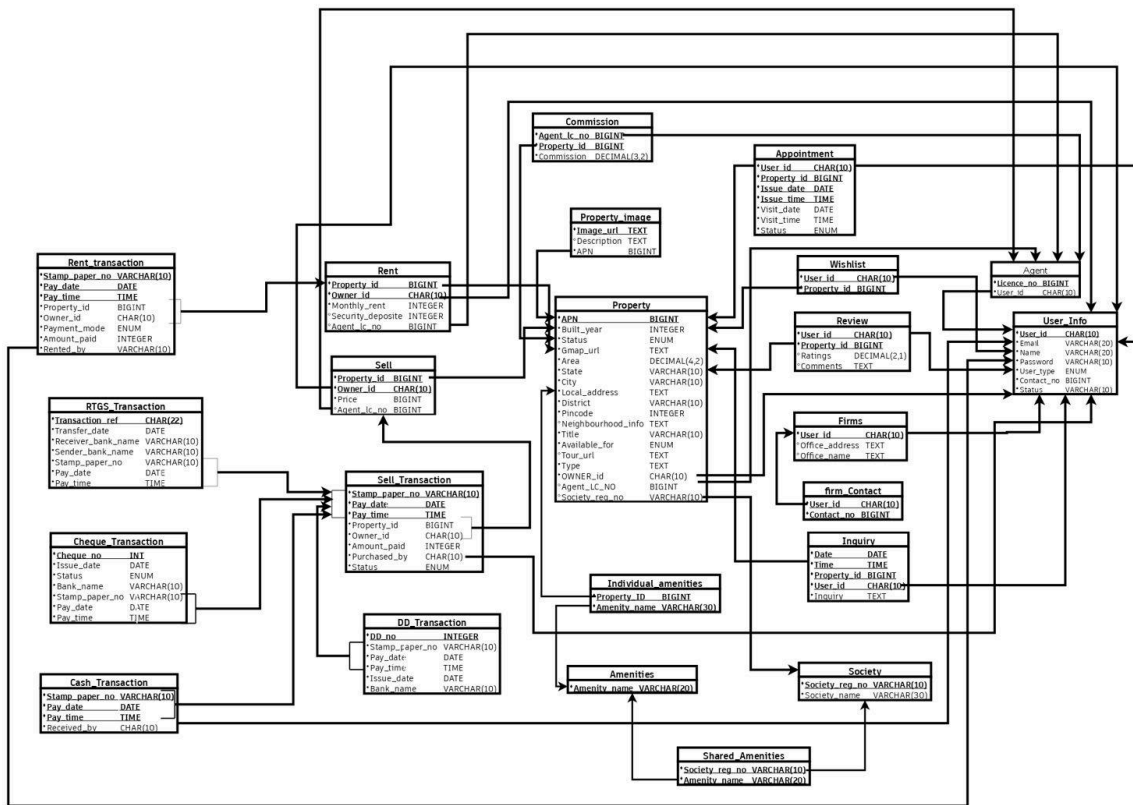
Group_no: G3_14

Group Members:

<u>NAME</u>	<u>STUDENT ID</u>
Brinda Sorathiya(GR)	202301182
Nisarg Bhatia	202301187
Prexa Patel	202301181
Kashish Kanjariya	202301135

Group-Leader Contact No. :8200721981

Relational Schema:



1) Users (User_id, Name, Password, User_type, Email, Contact_no, Status)

a) **FD Set:**

- i) $User_id \rightarrow \{Name, Password, User_type, Email, Contact_no, Status\}$
- ii) $Email \rightarrow \{Name, Contact\ no, password, User_type, User_id, Status\}$

b) **Minimal FD set:**

- i) $User_id \rightarrow Email$
- ii) $Email \rightarrow \{User_id, Name, Contact\ no, password, User_type, Status\}$

c) **Key :**

- i) $User_id$
- ii) $Email$

d) **Normal Form:**

- i) **BCNF:** Yes (Because determinant of all FDs in minimum FD set is the key)
-

2) Property (APN, Built_year, Status, Area, State, city, Local_address, District, Pincode, Neighborhood_info, Title, Available_for, Tour_url, Type, Owner_id, Agent_lc_no, Society_reg_no, Gmap_url)

a) **FD Set (Minimal):**

- i) $APN \rightarrow \{Built_year, Status, Gmap_url, Area, State, City, Local_address, District, Pincode, Neighbourhood_info, Title, Amenities, Available_for, Tour_url, Type, Owner_id, Agent_lc_no, Society_reg_no\}$
- ii) $\{State, City, Local_address, District, Pincode, Society_reg_no\} \rightarrow APN$

b) **Key :**

- i) APN
- ii) $\{State, City, Local_address, District, Pincode, Society_reg_no\}$

c) **Normal Form:**

- i) **BCNF:** Yes (because the determinants of all FDs in the Minimal FD set are keys)
-

3) Property_Image(Image_url, Description, APN)

- a) **FD Set (Minimal):**
 - i) $\text{Image_url} \rightarrow \{\text{Description}, \text{APN}\}$
 - b) **Key :**
 - i) Image_url
 - c) **Normal Form:**
 - i) **BCNF:** Yes (because the determinant of the FD in the Minimal FD set is the Key)
-

4) Wishlist(User_id, Property_id)

- a) **FD Set (Minimal):**
 - No Non-Trivial FDs
 - b) **Key :**
 - i) $\{\text{User_id}, \text{Property_id}\}$
 - c) **Normal Form:**
 - i) **BCNF:** Yes (Because this is an all attribute key relation)
-

5) Review(User_id, Property_id, Ratings, Comments)

- a) **FD Set (Minimal):**
 - i) $\{\text{User_id}, \text{Property_id}\} \rightarrow \{\text{Ratings}, \text{Comments}\}$
 - b) **Key :**
 - i) User_id, Property_id
 - c) **Normal Form:**
 - i) **BCNF:** Yes (because the determinant of the FD in the Minimal FD set is the Key)
-

6) Rent (property_id, Owner_id, Monthly_rent, Security_deposit, Agent_lc_no)

a) **FD Set (Minimal):**

i) $\{\text{Property_id}, \text{Owner_id}\} \rightarrow \{\text{Monthly_rent}, \text{Security_deposit}, \text{Agent_lc_no}\}$

b) **Key :**

i) $\{\text{Property_id}, \text{Owner_id}\}$

c) **Normal Form:**

i) **BCNF:** Yes (because the determinant of the FD in the Minimal FD set is the Key)

7) Sell (property_id, Owner_id, Price, Agent_lc_no)

a) **FD Set (Minimal):**

i) $\{\text{Property_id}, \text{Owner_id}\} \rightarrow \{\text{Agent_lc_no}, \text{Price}\}$

b) **Key :**

i) $\{\text{Property_id}, \text{Owner_id}\}$

c) **Normal Form:**

i) **BCNF:** Yes (because the determinant of the FD in the Minimal FD set is the Key)

8) Sell_Transaction (stamp_paper_no, Pay_date, Pay_time, Property_id, Amount_paid, Purchased_by, Owner_id, Status)

a) **FD Set (Minimal):**

i) $\{\text{Stamp_paper_no}, \text{Pay_date}, \text{Pay_time}\} \rightarrow \{\text{Property_id}, \text{Amount_paid}, \text{Purchased_by}, \text{Owner_id}, \text{Status}\}$

b) **Key :**

i) $\{\text{Stamp_paper_no}, \text{Pay_date}, \text{Pay_time}\}$

c) **Normal Form:**

i) **BCNF:** Yes (because the determinant of the FD in the Minimal FD set is the Key)

**9) Rent _Transaction (stamp_paper_no, pay_date, Pay_time,
Property_id, Amount_paid, rented_by, payment_mode, Owner_id)**

a) **FD Set (Minimal):**

- i) {Stamp_paper_no, Pay_date, Pay_time} → {Property_id, Amount_paid, Rented_by, Payment_mode, Owner_id}

b) **Key :**

- i) {Stamp_paper_no, Pay_date, Pay_time}

c) **Normal Form:**

- i) **BCNF:** Yes (because the determinant of each FD in the Minimal FD set is the Key)
-

**10) RTGS _Transaction (Transaction_ref, Transfer_date,
Receiver_bank_name, Sender_bank_name, Stamp_paper_no,
Pay_date, Pay_time)**

a) **FD Set (Minimal):**

- i) {Transaction_ref} → {Transfer_date, Receiver_bank_name, Sender_bank_name, Stamp_paper_no, Pay_date, Pay_time}
- ii) {Stamp_paper_no, Pay_date, Pay_time} → {Transaction_ref}

b) **Key :**

- i) {Transaction_ref}
- ii) {Stamp_paper_no, Pay_date, Pay_time}

c) **Normal Form:**

- i) **BCNF:** Yes (because the determinant of each FD in the Minimal FD set is the Key)
-

11) Cheque_Transaction(Cheque_no, Issue_date, Status, Bank_name, Stamp_paper_no, Pay_date, Pay_time)

a) **FD Set (Minimal):**

- i) $\{\text{Cheque_no}\} \rightarrow \{\text{Stamp_paper_no}, \text{Pay_date}, \text{Pay_time}\}$
- ii) $\{\text{Stamp_paper_no}, \text{Pay_date}, \text{Pay_time}\} \rightarrow \{\text{Cheque_no}, \text{Issue_date}, \text{Status}, \text{Bank_name}\}$

b) **Key** :

- i) $\{\text{Cheque_no}\}$
- ii) $\{\text{Stamp_paper_no}, \text{Pay_date}, \text{Pay_time}\}$

c) **Normal Form:**

- i) **BCNF:** Yes (because the determinant of the FD in the Minimal FD set is the Key)
-

12) Cash_Transaction(Stamp_paper_no, Pay_date, Pay_time, Received_by)

a) **FD Set (Minimal):**

- i) $\{\text{Stamp_paper_no}, \text{Pay_date}, \text{Pay_time}\} \rightarrow \{\text{Received_by}\}$

b) **Key** :

- i) $\{\text{Stamp_paper_no}, \text{Pay_date}, \text{Pay_time}\}$

c) **Normal Form:**

- i) **BCNF:** Yes (because the determinant of each FD in the Minimal FD set is the Key)
-

13) DD_Transaction(DD_no, Stamp_paper_no, Pay_date, Pay_time, Issue_date, Bank_name)

a) **FD Set (Minimal):**

- i) $\{DD_no\} \rightarrow \{Stamp_paper_no, Pay_date, Pay_time\}$
- ii) $\{Stamp_paper_no, Pay_date, Pay_time\} \rightarrow \{DD_no, Issue_date, Bank_name\}$

b) **Key :**

- i) DD_no
- ii) $\{Stamp_paper_no, Pay_date, Pay_time\}$

c) **Normal Form:**

- i) **BCNF:** Yes (because the determinant of each FD in the Minimal FD set is the Key)
-

14) Agent(License_no, User_id)

a) **FD Set (Minimal):**

- i) License_no \rightarrow User_id
- ii) User_id \rightarrow License no

b) **Key :**

- i) License_no
- ii) User_id

c) **Normal Form:**

- i) **BCNF:** Yes (because the determinant of each FD in the Minimal FD set is the Key)
-

15) Appointment (User_id, Property_id, issue_time, issue_date, visit_time, visit_date, status)

a) **FD Set (Minimal):**

- i) $\{User_id, Property_id, issue_time, issue_date\} \rightarrow \{visit_date, visit_time, status\}$

b) **Key :**

- i) $\{User_id, Property_id, issue_time, issue_date\}$

c) **Normal Form:**

- i) **BCNF:** Yes (because the determinant of each FD in the Minimal FD set is the Key)
-

16) Firms (User_id, Office_address, Office_name)

- a) **FD Set (Minimal):**
- i) $\text{User_id} \rightarrow \{\text{Office_address}, \text{Office_name}\}$
 - ii) $\{\text{Office_address}\} \rightarrow \text{User_id}$
- b) **Key :**
- i) User_id
 - ii) Office_address
- c) **Normal Form:**
- i) **BCNF:** Yes (because the determinant of each FD in the Minimal FD set is the Key)
-

17) Firms_contact (User_id, Contact_no)

- a) **FD Set (Minimal):**
- No Non-trivial dependencies
- b) **Key :**
- i) {User_id, Contact_No}
- c) **Normal Form:**
- i) **BCNF:** Yes (Because its an all attribute key relation)
-

18) Inquiry (Date, time, Proprty_id, User_id, Inquiry)

- a) **FD Set (Minimal):**
- i) $\{\text{Date}, \text{time}, \text{Proprty_id}, \text{User_id}\} \rightarrow \text{inquiry}$

- b) **Key** :
- i) {Date, time, Property_id, User_id}
- c) **Normal Form**:
- i) **BCNF**: Yes (because the determinant of each FD in the Minimal FD set is the Key)
-

19) Amenities (Amenity_name)

- a) **FD Set (Minimal)**:
- i) Here only one attribute is in the table so there are no any non-trivial functional dependencies.
- b) **Key** :
- i) {Amenity_name}
- c) **Normal Form**:
- i) **BCNF**: Yes (because the determinant of each FD in the Minimal FD set is the Key)
-

20) Society (Society_reg_no, Society_name)

- a) **FD Set (Minimal)**:
- i) Society_reg_no \rightarrow Society_name
 - ii) Society_name \rightarrow Society_reg_no
- b) **Key** :
- i) Society_reg_no
 - ii) Society_name
- c) **Normal Form**:
- i) **BCNF**: Yes (because the determinant of each FD in the Minimal FD set is the Key)
-

21) Individual_Amenities (Amenity_name, Proprty_id)

a) **FD Set (Minimal):**

- i) Here both attributes are composately making key so there is no any non-trivial FDs.

b) **Key :**

- i) {Amenity_name, Property_id}

c) **Normal Form:**

- i) **BCNF:** Yes (because the determinant of each FD in the Minimal FD set is the Key)
-

22) Shared_Amenities (Amenity_name, Society_reg_no)

a) **FD Set (Minimal):**

- i) Here both attributes are composately making key so there is no any non-trivial FDs.

b) **Key :**

- i) {Amenity_name, Society_reg_no}

c) **Normal Form:**

- i) **BCNF:** Yes (because the determinant of each FD in the Minimal FD set is the Key)
-

23) Commission (Agent_lc_no, Property_id, Commission)

a) **FD Set (Minimal):**

- i) {Agent_lc_no,Property_id} -> Commission

b) **Key :**

- i) {Agent_lc_no,Property_id}

c) **Normal Form:**

- i) **BCNF:** Yes (because the determinant of each FD in the Minimal FD set is the Key)

