GROUP MEMBERS:

202101145 - Dhruv Parekh (Representative)
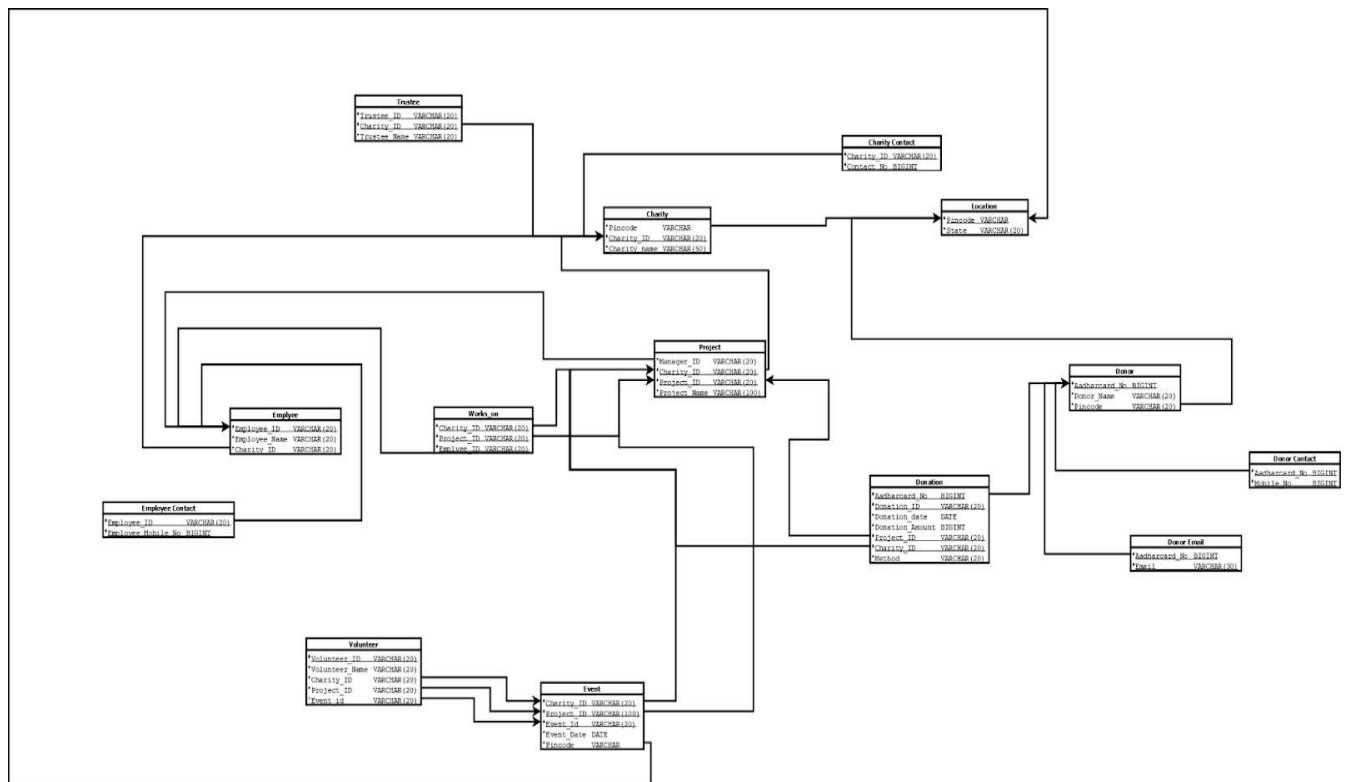202101153 - Smit Patel
202101098 - Rohan Rathol
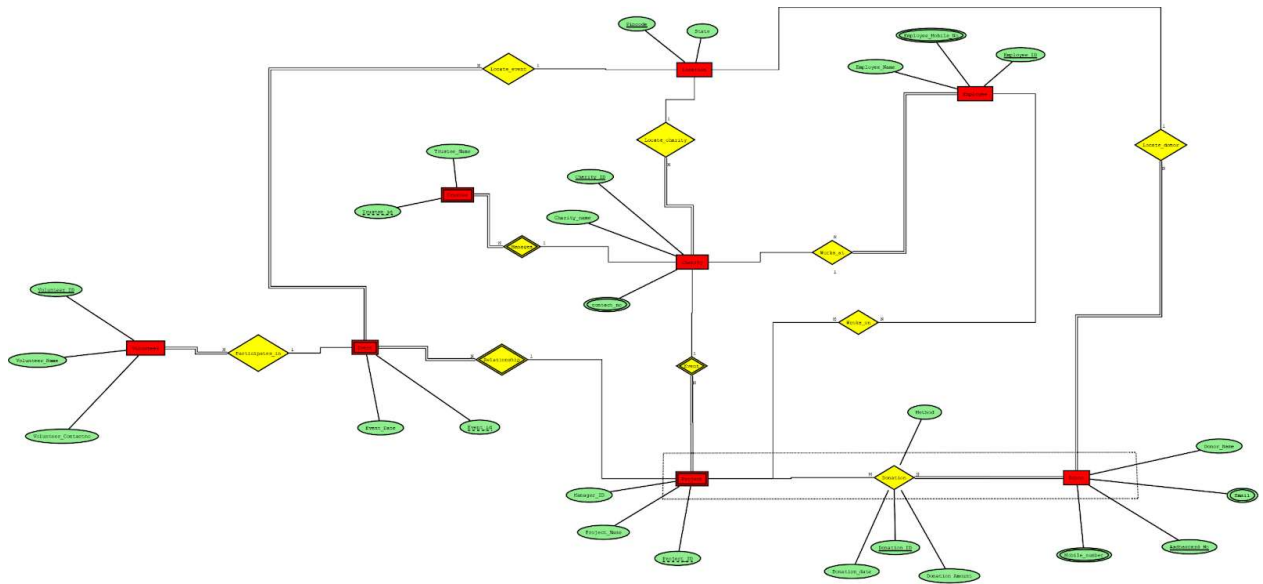
Group_No : 2

Charity Donation Management System

Relational Schema:

ER Diagram:

Minimal FD set Fmin:

- Charity_ID → {Charity_name,Pincode}

- Pincode → State

- {Trustee_ID,Charity_ID} → Trustee_Name

- Volunteer_ID → {Volunteer_Name,
  Vounteer_Contactno,Charity_ID,Project_Id}

- {Charity_ID,Project_ID,Event_ID} → {Pincode_Event,Event_Date}

- Aadharcard_No → {Donor_name,Pincode}

- {Charity_ID,Project_ID,Event_ID} → {Pincode_Event,Event_Date}

- {Employee_ID, Charity_ID} → {Employee_Name}

- {Charity_ID, Project_ID} → {Project_Name,Manager_ID}

- {Aadharcard_No,Donation_ID, Project_ID, Charity_ID} → {Donation_Date ,Donation_Amount,Method}

1. Charity Relation

- Charity_ID → Charity_name
- Charity_ID → Pincode

➢ Key: Charity_ID
➢ Type : BCNF

2. Location Relation

- Pincode → State

➢ Key : Pincode
➢ Type : BCNF

3. Volunteer Relation

- Volunteer_ID → Volunteer_Name
- Volunteer_ID →Vounteer_Contactno
- Volunteer_ID →Charity_ID
- Volunteer_ID →Project_Id

➢ Key : Volunteer_ID
➢ Type : BCNF

4. **Event Relation**

- {Charity_ID,Project_ID,Event_ID} → Pincode_Event
- {Charity_ID,Project_ID,Event_ID} → Event_Date

➢ Key : {Charity_ID,Project_ID,Event_ID}
➢ Type: BCNF

5. **Employee Relation**

- {Employee_ID, Charity_ID} -> Employee_Name
- {Employee_ID, Charity_ID} -> Employee_Mobile_No
- {Employee_ID, Charity_ID} -> Charity_ID

➢ Key :{ Employee_ID,Charity_ID}
➢ Type : BCNF

6. **Project Relation**

- {Charity_ID, Project_ID} -> Project_Name
- {Charity_ID, Project_ID} -> Manager_ID

➢ Key : {Charity_ID, Project_ID}
➢ Type : BCNF

7. **Works_On Relation**

- FD: NULL

➢ Key : {Project_ID, Charity_ID, Employee_ID}
➢ Type: BCNF

8. Donor Relation

- Aadharcard_No -> Donor_name
- Aadharcard_No -> Pincode

  ➢ Key: Aadharcard_No
  ➢ Type: BCNF

9. Donor Email Relation

- FD : NULL

  ➢ Key: {Aadharcard_No,Email}
  ➢ Type: Not BCNF Because of Multivalue attribute

10. Donation Relation

- {Aadharcard_No,Donation_ID, Project_ID, Charity_ID}-> Donation_Date
- {Aadharcard_No,Donation_ID, Project_ID, Charity_ID}-> Donation_Amount
- {Aadharcard_No,Donation_ID, Project_ID, Charity_ID} -> Method

  ➢ Key : {Aadharcard_No,Donation_ID, Project_ID, Charity_ID}
  ➢ Type : BCNF

11. Charity_Contact_No Relation

- FD : NULL
  ➢ Key : {Charity_ID, Charity_Contact_No}
  ➢ Type : Not BCNF Because of Multivalue attribute

12. Donor_Mobile_No Relation

- FD : NULL

  ➢ Key : {Aadharcard_No, Donor_Mobile_No}
  ➢ Type : Not BCNF Because of Multivalue attribute

13. Employee_contactno Relation

- FD : NULL
  ➢ Key : {Employee_ID,Charity_ID, Volunteer_contactno}
  ➢ Type : Not BCNF Because of Multivalue attribute

14. Trustee Relation

- FD: {Trustee_ID,Charity_ID} → Trustee_Name

  ➢ Key: {Trustee_ID,Charity_ID}
  ➢ Type : BCNF