

CITIZEN

<u>Citizen ID</u>	Aadhar No	Name	DOB	Age	Gender	Nationality	Annual Income	Educational background	State	City	PinCode	Contact Number	Email Address	Street Address
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VOTER

Aadhar No	<u>Voter ID</u>	DOB	Age	Gender	Nationality	Annual Income	Educational background	State	City	PinCode	Name	Voting Constituency	Street Address
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Political Party

<u>Party ID</u>	Party Name	Party President	Party Headquarters	Symbol	Total Members	Number of seats contested
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Member of Parliament

Cnd_ID	<u>CT_ID</u>	<u>PP_id</u>
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Manifesto

<u>Party ID</u>	Party Name	Publication Date	Title	Content	Face of Election	Tagline
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Tenure

<u>Candidate ID</u>	Term Start Date	Term End Date
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Candidate

<u>Candidate ID</u>	Name	Aadhar No	Source of Funding	Total Donations	Total Funding Received	Total Expenditure on Political Promotion	Party ID	Constituency ID
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Employee (Of Election Commission)

<u>ID</u>	Name	Position	DOB	Age	Residence	Email	Contact Number	Photo	Working Department	Super ID	Street Address	City	State	PinCode
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Criminal Records

<u>FIR Number</u>	Nature of Offense	Jurisdiction
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Educational Qualification

<u>C_ID</u>	<u>Educational Qualifications</u>
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<u>Candidate ID</u>	<u>FIR Number</u>
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FIRs filed against a candidate

Constituency

<u>C_ID</u>	C_Name	Number of Residing Citizens	Number of Polling Booths	State Name	Total Number of EVM Machines
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Department (Of Election Commission)

<u>ID</u>	Name	Number of Employees
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Responsibilities

<u>D_ID</u>	<u>Responsibility</u>
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Works For

<u>C_id</u>	<u>D_id</u>	<u>E_id</u>
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EVM Machine

<u>Machine ID</u>	No of Votes Registered	Vote Count Per Party	Const ID
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State

<u>Name</u>	Number of Residing Citizens	Number of constituencies	Number of Regional Parties
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Votes Count for Machine

<u>Party ID</u>	<u>Machine ID</u>	Vote Count
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Converting to 2CNF model :

- To convert a 1CNF model to 2CNF we have to remove partial dependencies from the model.
- We remove Aadhar No as a primary key from Citizens , Voters and Candidates and make it a candidate key. This resolves the partial dependencies in the respective tables since the 2 attributes in the primary key (the id of the table and aadhar) are individually unique to all non prime attributes.
- In the table Member of Parliaments , we remove the MP_id attribute since a partial dependency (MP_id , Candidate Id-> Term Start Date , Term End Date) and (Candidate_id -> Mp_id)exists in the table.Also attribute Candidate ID can identify term start date and term end date , hence we decompose the relation into Member of Parliament and a new relation Tenure with Candidate ID as PK and Term start date , Term end date.
- In criminal records of a candidate , we have a partial dependency Candidate ID , FIR Number with a partial dependency FIR Number -> Nature of offense , Jurisdiction hence we decompose into two relations one being criminal records and a new relation FIRS filed against a candidate with Candidate ID , FIR Number