**1NF (First Normal Form) Rules**

* Each table cell should contain a single value.
* Each record needs to be unique. (each row needs to be unique)

Table

Description automatically generated

* FULL NAMES & PHYSICAL ADDRESS is one composite key
  + Check 1st normal form:
    - all rows should be unique
    - each cell should only have one single value

duplicate primary keys, duplicate rows, atomic values. Also validate primary keys

As for errors, we need to make sure that there are values for PK and column names; the table exists in the database; column names exist in the table. If any of these are true, we stop the program and throw an error?

i include the primary keys when i go over the leftover rows

[8:58 PM]

first i check if the primary keys are valid. then reguardless of the result i check if there are any duplicate rows, using every column provided in the input when i check

[8:58 PM]

primary keys, non-key columns

**2NF (Second Normal Form) Rules**

* Rule 1- Be in 1NF
* Rule 2- Single Column Primary Key that does not functionally dependant on any subset of candidate key relation

Table

Description automatically generated

* Membership ID is the primary key for table 2 and is the foreign key for table 1
  + Check 2nd normal form:
    - Pre-requisite: 1NF Yes
    - No composite keys

**3NF (Third Normal Form) Rules**

* Rule 1- Be in 2NF
* Rule 2- Has no transitive functional dependencies
* What is transitive functional dependencies: Table

  Description automatically generated
* Table

  Description automatically generated

**Working on hw**

* How param work [0,0 = table 0,1 = (table name)

1,0 = pk 1,1 = (pk values)

2,0 = columns 2,1 = (columns values)]

All error check needed:

* Artificial keys column and how to handled them
* No PK or nonkey column = halt and display “invalid input” (V)
* Generate SQL script file for all the queries and write to text file nf.sql (V)
* If connect to DBMS fail, display error message (V)
* If connect to DBMS is successful, show “success” (V)
* Check for existent tables and invalid column names (V)