STOREFRONT

Entities of StoreFront

1)Admin
2)Shoppers
3)Categories
4)Products
5)Stock
6)Orders

Relations of StoreFront

1)Admin (AID,Name,Contact No,Email-id)
2)Shoppers (SID,Name,Contact No,Email-id)
3)ShoppersAddress (SID,Address)
4)Categories (CID,Title,ParentCategory,Description)
5)Products (PID,Name,Price,Status)
6)ProductImages (PID , Images)
7)ProductCategory (PID , CID)
8)Stock (ItemCode,Name,Quantity)
9)Orders (OID, Date , SID,OrderTotal,Status)
10)ShoppersOrder (OID,PID)

Key Attributes of StoreFront

1)Admin (AID)
2)Shoppers (SID)
3)ShoppersAddress (SID+Address)
4)Categories (CID)
5)Products (PID)
6)ProductImages (PID+Images)
7)ProductCategory (PID+CID)
8)Stock (ItemCode)
9)Orders (OID)
10)ShoppersOrder (OID+SID)

Normalization

Normalization is the process of organizing data in a database. This includes creating tables and establishing relationships between those tables according to rules designed both to protect the data and to make the database more flexible by eliminating redundancy and inconsistent dependency.
Normalization is used for mainly two purpose:
-Eliminating redundant data.

-Ensuring data dependencies make sense i.e data is logically stored.

Types of Normalization

1)First Normal Form

-Eliminate repeating groups in individual tables.
-Create a separate table for each set of related data.
-Identify each set of related data with a primary key.

STUD_NO	STUD_NAME	STUD_PHONE	STUD_STATE	STUD_COUNTRY
1	RAM	9716271721, 9871717178	HARYANA	INDIA
2	RAM	9898297281	PUNJAB	INDIA
3	SURESH		PUNJAB	INDIA

Table 1

Conversion to first normal form

STUD_NO	STUD_NAME	STUD_PHONE	STUD_STATE	STUD_COUNTRY
1	RAM	9716271721	HARYANA	INDIA
1	RAM	9871717178	HARYANA	INDIA
2	RAM	9898297281	PUNJAB	INDIA
3	SURESH		PUNJAB	INDIA

Table 2

2)Second Normal Form

-Create separate tables for sets of values that apply to multiple records.
-Relate these tables with a foreign key.

Records should not depend on anything other than a table's primary key.

STUD_NO	COURSE_NO	COURSE_FEE
1	C1	1000
2	C2	1500
1	C4	2000
4	C3	1000
4	C1	1000
2	C5	2000

After normalization

Table 1

STUD_NO	COURSE_NO
1	C1
2	C2
1	C4
4	C3
4	C1

Table 2

COURSE_NO	COURSE_FEE
C1	1000
C2	1500
C3	1000
C4	2000
C5	2000

3)Third Normal Form

-Eliminate fields that do not depend on the key.

Values in a record that are not part of that record's key do not belong in the table. In general, anytime the contents of a group of fields may apply to more than a single record in the table,
consider placing those fields in a separate table.

4)Boyce Codd Normal Form

It is the highest form of normalization.Any relation is in BCNF if and only if every determinant is a candidate key.