|  |  |
| --- | --- |
| **Channel** |  |
| channelid | channelname |
| 10 | google |
| 11 | yahoo |
| 12 | yelp |
| 13 | reviews.com |

|  |  |  |
| --- | --- | --- |
| **business** |  |  |
| busid | busname | contactid |
| 20 | pizza hut | 70 |
| 21 | Mercedes | 71 |
| 22 | Dominos | 72 |
| 23 | Honda | 73 |

|  |  |  |
| --- | --- | --- |
| **businesslocation** |  |  |
| buslocid | locid | busid |
| 40 | 60 | 20 |
| 41 | 61 | 21 |
| 42 | 62 | 22 |
| 43 | 63 | 23 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **location** |  |  |  |  |
| locid | locaddress | locaname | website | phone |
| 60 | parsippany, NJ, USA | pizzahut parsippany | pizzahutparsippany.com | 973-973-9731 |
| 61 | Ventura, CA, USA | merecedes of Ventura | venturabenz.com | 123-456-7890 |
| 62 | Frisco TX | dominos of alpharetta | dominosalph.com | 974-897-7282 |
| 63 | Prosper, TX | honda of prosper | prosperhonda.com | 893-444-2234z |

|  |  |
| --- | --- |
| **contact** |  |
| contactid | contactname |
| 70 | Praveen |
| 71 | Tom |
| 72 | Sammy |
| 73 | John |
|  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **listing** |  |  |  |
| listingid | channelid | businesslocationid | ListingURL |
| 50 | 10 | 40 | google.com/parsippanypizzahut |
| 51 | 11 | 41 | yahoo.com/mercedesofventura |
| 52 | 12 | 42 | yelp.com/dominosoffrisco |
| 53 | 13 | 43 | reviews.com/prosperhonda |

|  |  |  |
| --- | --- | --- |
| **BusinessContact** |  |  |
| BusinessContactID | BusinessID | ContactID |
| 101 | 4 | 5 |
| 102 | 15 | 6 |
| 103 | 16 | 7 |
| 104 | 17 | 16 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Review** |  |  |  |  |  |  |
| ReviewID | ReviewTitle | ReviewText | ReviewRating | ReviewDate | ReviewerName | ListingID |
| 81 | awesome pizza | blah | "10/10" | 9/30/2021 |  | 50 |
| 82 |  | blah | "4/5" | 9/13/2021 | peter | 51 |
| 83 | quick delivery | blah | "8/10" | 8/30/2021 |  | 52 |
| 84 |  | blah | "5/5" | 7/30/2021 | maggy | 53 |

Notes:

There are several ways to implement the schema design. This is just a rough approach and a ‘draft at best’ and needs to be refined several times over.

1) The auto generated id (first column in most cases) will be the primary key

2) Those columns that are optional like reviewer name, i will mark as 'Allow NULL' in table

3) In contact table none of columns can be null

4) Channel table is standalone table

5) Location table is independent

6) Contact table is standalone

7) Business table has a foreign key relationship with contact table (contactid)

8) BusinessLocation is a mapping table (bridge table) which maps the business and the locations. It has foreign keys to location and business tables

Location(location id), business(busid)

9) Listing table connects the channel & location

foreign key to channel & businesslocation tables

10) Businesscontact is a bridge table (mapping table) that bridges businesses and the contacts

11) Review table contains the reviews for a listing that is a unique combination of a channel & a business location as characterized by listing table

12) There are many relationships in this ER Diagram.

for example,

13) business to contact is one to one

14) business to location is one to many

15) a business location can be in many channels

16) a channel can only contain one entry for a business location (not reviews)

17) listing to review is one to many

18) reviewer title and name are 'allow null' columns

19) channel table - primary key on id is sufficient

20) any column that will be searched a lot should have a non-clustered index

21) Index tuning wizard should be used to setup initial index

22) use SQL Server execution plans for analyzing performance of a long running SQL query

23) do not go overboard of indexes since index that work well for selects might be causing issues for inserts/updates

24) you can use check clause/constraints to ensure certain conditions are met for certain columns