I own a Multi-Specialty Hospital chain with locations all across the world. My hospital is famous for Vaccination. Patients who come to my hospital (across the globe) will be given a User Card with which they can access any of my hospital in the world.

Current Status:

We maintain all customers in one database. There are heaps of customers with user cards to my hospital. So, I decided to split up the customers based on the country and load them into corresponding country tables.

To pull the customers as per Country, my developers should know what are all the places the Customer Data is available. So, the data extracting will be done by our Source System. They will pull the all the relevant customer data and will give us a Data file.

In design documents, you will have:

○ File Name Specification – Name String, Extension of the files

○ Date and Time format of the File – YYYYMMDD, HHMMSSTT or any other format

○ Header Records Layout –
|H|Customer_Name|Customer_Id|Open_Date|Last_Consulted_Date|Vaccination_Id|Dr_Name|State|Country|DOB|Is_Active

○ Details Record Layout – |D|John|123456|20101012|20121013|MVD|Paul|NSW|AU|06031987|A

Detail Records will tell you what data you are getting from source, what data type, is it mandatory or not and the length of the column.

File Position	Column_Name	Filed Length	Data Type	Mandatory	Key Column
1	Customer Name	255	VARCHAR	Y	Y
2	Customer ID	18	VARCHAR	Y	N
3	Customer Open Date	8	DATE	Y	N
4	Last Consulted Date	8	DATE	N	N
5	Vaccination Type	5	CHAR	N	N
6	Doctor Consulted	255	CHAR	N	N
7	State	5	CHAR	N	N
8	Country	5	CHAR	N	N
9	Post Code	5	INT	N	N
10	Date of Birth	8	DATE	N	N
11	Active Customer	1	CHAR	N	N

The sample file format will be:

|H|Customer_Name|Customer_Id|Open_Date|Last_Consulted_Date|Vaccination_Id|Dr_Name|State|Country|DOB|Is_Active

|D|Alex|123457|20101012|20121013|MVD|Paul|SA|USA|06031987|A

|D|John|123458|20101012|20121013|MVD|Paul|TN|IND|06031987|A

|D|Mathew|123459|20101012|20121013|MVD|Paul|WAS|PHIL|06031987|A

|D|Matt|12345|20101012|20121013|MVD|Paul|BOS|NYC|06031987|A

|D|Jacob|1256|20101012|20121013|MVD|Paul|VIC|AU|06031987|A

Now using the ETL process now we loaded the data into Staging Tables. Intermediate tables will look like below:

Name	Cust_I	Open_Dt	Consul_Dt	VAC_ID	DR_Name	State	County	DOB	FLAG
Alex	123457	20101012	20121013	MVD	Paul	SA	USA	6031987	A
John	123458	20101012	20121013	MVD		TN	IND	6031987	A
Mathew	123459	20101012	20121013	MVD		WAS	PHIL	6031987	A
Matt	12345	20101012	20121013	MVD		BOS	NYC	6031987	A
Jacob	1256	20101012	20121013	MVD		VIC	AU	6031987	A

- All customers related to India will go to Table_India and so on.
- If the customer is shifted to another country and visits from that country then consider the record with the latest consultant date.
- Create the process considering we are getting billions of data every day

Technical Assessment: Deliverables

1. Create table queries

2. Create the above tables with additional derived columns: age and days since last consulted >30

3. Create necessary validations.

4. If we move forward with an interview we would like to see the demonstration