SSIS Project - ETL - Telecom

See the steps to design a project using SSIS

A telecommunications company has contacted you as an ETL Developer/Consultant to perform the data storage process as follows:

1. The company has a system that saves a CSV file periodically, every 5 minutes. This file includes basic data for the various movements made by customers during a specific period of time.
2. The company has provided you with the following table, which shows the data stored in the .csv file.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Column  Name | Data  Type | Length | Is  Nullable | Sample |
| ID | Int |  | False | 156 |
| IMSI | String | 9 | False | 310120265 |
| IMEI | String | 14 | True | 490154203237518 |
| CELL | Int |  | False | 123 |
| LAC | Int |  | False | 12 |
| EVENT\_TYPE | String | 1 | True | 1 |
| EVENT\_TS | Timestamp |  | False | 16/1/2020 7:45:43 |

1. This data must be processed before being stored in the database as follows:

|  |  |  |
| --- | --- | --- |
| Column  Name | Mapping Rules | Target  Model |
| ID | As-is | Transaction\_id |
| IMSI | As-is, **reject the record if null** | IMSI |
| IMSI | Join with **IMSI reference** and get subscriber id, **add -99999 if null** | subscriber\_id |
| IMEI | Substring first 8 chars, **if null or size is less than 15 add -99999** | TAC |
| IMEI | Substring last 6 chars, **if null or size is less than 15 add -99999** | SNR |
| IMEI | As-is | IMEI |
| CELL | As-is, **reject the record if null** | CELL |
| LAC | As-is, **reject the record if null** | LAC |
| EVENT\_TYPE | As-is | EVENT\_TYPE |
| EVENT\_TS | Validate the timestamp format to be YYYY-MM-DD HH:MM:SS, **reject the record if null** | EVENT\_TS |

1. Rejected records will be stored in a separate table, with the original CSV file name recorded.
2. During the process of recording data in the database, some additional data is required to be recorded to ensure the quality of the data storage process:
   1. The number of records in the CSV file.
   2. The number of records stored in the database
   3. The number of records rejected when the required conditions were not met.
   4. Link the data stored in the database with the original CSV file.
3. After completing the process of storing data in the database according to the previous conditions, move the CSV file to another folder.