**SSIS ASSIGNMENT**

**Instructions**

1. Supporting scripts have been provided wherever necessary.
2. All the levels should be attempted in given sequence only, i.e. Level 1 should be completed before moving on to Level 2.

**LEVEL-1**

Points Covered: Use of parameters, Data Flow task, File System Task

Task 1: Import data from .csv file to SQL table and archive that file to another location.

* Make use of parameters for – Input file path, SQL Server details, Archive file path, etc.

Task 2: Copy all the files from one directory to another, if file already exists then skip.

Task 3: Export the data from multiple SQL tables to .csv file.

**LEVEL-2**

Points Covered: Execute SQL Command, Look up, Derived Column, Multicast

Task 1 : Import data from .csv/.txt/excel/xml file to SQL table,

* Sync the data into the table.
  + If PRIMARY KEY already exists in the table then UPDATE the data in the table.
  + If new PRIMARY KEY is found in the file which does not exist in the table, INSERT the data into the table.
  + And if an PRIMARY KEY in Table does not exist in the file, DELETE the data from the table.
* Calculate Age based on DateOfBirth
* Address data should be imported in “Address” table.

**LEVEL-3**

Points Covered: XML Source, OLEDB Destination

Task 1 : Import data from XML file to SQL table.

* Create SQL table from XML file.
* Import data to SQL table

**LEVEL-4**

Points Covered: Execute SQL Task, Script task, Data Flow Task

Task 1: Create SQL table from excel file.

* First 4 rows having column name, data type & length.
* Then import data from excel. Data starts from Row No. 5

**LEVEL-5**

Points Covered: FTP Task, Send Email Task, Script Task

Task 1: FTP, File System & Email operations

* FTP - Download Files to a Folder. 2 files - One .txt & other .xlsx.
* The download folder should be at a shared location & not on the same local machine where the package is executing.
* Make changes to both of these files. Any kind of data change is fine.
* Send an email with 4 attachments. 2 original files + 2 modified files.
* Upload the modified files back to the same FTP location.
* Clean up all the 4 files from the downloaded location.

**LEVEL-6**

Points Covered: For each loop container, Script Task, Bulk Insert Task, Execute Process Task, File System Task

Task 1: Import data from multiple files

* Loop through all the .csv files in a folder and then load into the same SQL Server table using Bulk Insert Task
* Files are of same structure.
* “FileName” column should get added in each file before it’s processed and each row for this column should get filled with the file name, of the file being processed.
* Files should be processed from old to new, i.e. INSERT the data of the oldest file first.
* Zip and Archive the processed file.

**LEVEL-7**

Points Covered: Data Flow Task, OLEDB Destination, Excel Source, OLDEDB SQL Command, SSIS Logging Feature.

Task 1: Import data from .XLSX file and also implement the logging using SSIS logging feature.

* Sync the data into the table.
  + - If PRIMARY KEY already exists in the table then UPDATE the data in the table.
    - If new PRIMARY KEY is found in the file which does not exist in the table, INSERT the data into the table.
    - And if an PRIMARY KEY in Table does not exist in the file, DELETE the data from the table.
* Minimum logging requirements are –
  + - Count of Total records Processed,
    - Count of Total records inserted
    - Count of Total records updated
    - Count of Total records deleted
    - Count of Total records failed
* Export the logging details in an excel file.

**LEVEL-8**

Points Covered: Data Flow Task, Execute Package Task, Excel Destination

Task 1: Import data from .csv file using parallelism and also log the failed record(s) in a separate separate .txt/.csv/excel file.

* Import data from .csv/.txt/excel file to SQL table,
* Process multiple files in parallel(implement parallelism).
* Log the failed record(s) in a separate .txt/.csv/excel log file having exactly the same structure as the source file.