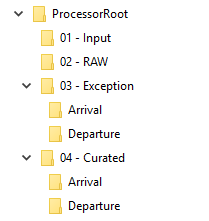
Developer - Programming Task

# Description

The programming task is about creating a small application which processes airline flight data. The application will watch a folder where new event data files will be placed by some other system (Out of scope for this task) and do validation before it will enter our Big Data platform.

The application will: (1) read the JSON in the event data file, (2) create a copy of the file in a different folder called “Raw” and (3) validate the content of the events and write individual events into a either “Exception” of “Curated” folder.

The resulting folder structure will look like this:



The out filename: {EVENTTYPE}-{TIMESTAMP}.json. Timestamp is the start processing DateTime in Ticks.

For this exercise the application supports two types of events (See below), but the entire system will support hundreds. Event Data Files can contain multiple event types within the same batch.

For each batch we are expecting logs to be created to provide support and overview information:

* **List of event types that were processed, incl Count of events per type**
* **Total duration for processing each batch**
* **Count of failed events**
* **List of the IDs of the failed events.**

# Important Notes:

* Use C# Dot Net Core application
* If validation rules change, they should be applied to all messages that contain that type of data
* Wherever possible, the code must be **unit tested**.
* App should be developed assuming it will have to scale to 10 batches per second.
* Consider this application as a sub system of an enterprise application. Design your solution structure as if you were to code the whole enterprise application.
* Please don’t host your result on GitHub

# Departure Event JSON:

[

{

"eventType": "Departure",

"timeStamp": "2017-10-11 12:53:22Z",

"flight": "NZ732",

"destination": "Auckland"

"passengers": "248"

},

{

"eventType": "Departure",

"timeStamp": "2017-11-27 09:43:56Z",

"flight" : "QA123",

"destination": "Brisbane"

"passengers" : "177"

}

]

# Arrival Event JSON:

[

{

"eventType": "Arrival",

"timeStamp": "2017-07-03 15:09:44Z",

"flight" : "AAV732",

"delayed" : "24:10",

"passengers" : "248"

},

{

"eventType": "Arrival",

"timeStamp": "2018-07-04 01:00:00Z",

"flight" : "AAV253",

"delayed" : "03:01",

"passengers" : "177"

}

]