Dear Ibrahim,

Referring to the technical task you have sent to me. Please find the following.

**Git Repository:** <https://github.com/eslamabdelrazeq/ELM.Customers.TechnicalTask>

And please find my highlighted comments in **green**.

         Create an API to Add List of New customers in the database as a batch.

-          The request should be add in queue.

**Done, Bulk insert has been added to repository.**

         Create Customer Consumer

-          The queue consumer should add to database (call database one time)

-          notify another API called Notification API.

**Done**

**Note: That could have been implemented in a better approach using event-driven architecture. The request is made using HTTP request as per our last communication.**

         The second API (Notification API) should receive the request and do the following

-          Add the request to the queue.

**Done**

         Notification consumer:

-          The consumer should send email to the customer about the registration. **Done**

**Note: Both the customer and notifications consumers are POC’s only.**

The technologies and techniques you should use in this task:

         .NetCore

**Done**

         RabbitMq

**Done (My initial commits uses RabbitMq only and my latest commits use MassTransit as a data bus)**

         Logging in the file system

**Done, I have added Serilog to extend the dotnet core logger so that I have the ability to write the logs into captured by the middleware into file system.**

         Auditing ( for request and response for each API call in the file system as json)

**Done using dotnet core middleware in the customers API**

         N layer. **Done**

         Dependency Injection.**Done**

         In case of failure in the queue consumer do retry for configurable number of times.

**Done**

**Note : I have added dead-letter, dead-letter exchange, and queue beside configuring the retry count and retry failure.**

         Do not use any static string instead use configurable values.

**Done**

**Everything was added to appsettings.json**

         Use fluent validation to validate Create customer and notify customer.

**Done, Some business validations only**

         The request and the response structure should look like this:

-          Request Sample :

                        {

    "header": {

        "messageId": "123456",

        "timeStamp": "2019-05-05T16:50:36",

                                   },

    "body": {

      Your object

    }

}

-          Response Sample :

                          {

    "header": {

        "messageId": "123456",

        "timeStamp": "2019-05-05T16:50:36",

                                   },

    "body": {

        Data :   Your Response in case of succeed

        Errors:[ ]  in case of business error or fluent validation errors

    }

}

**Done**

**Known Issues:**

As I already informed you that I was on a very tight schedule I was not a little bit lucky to handle the following, Also no possibility for tomorrow as well :

1 – Only happy case scenario tested.

2 – The code is made for POC/Development/Testing and not ready for production.

3 – Better design using event driven architecture.

4 – Localizing messages and resources.

Thanks.

I will be waiting for your feedback.