Context: A Spring Boot microservice for budgeting and payment that should be responsible for:
● Generating and sending budgets for approval;
● Registering and verifying payments;
● Updating the work order status after payment;

To generate and send budgets, the service should retrieve work orders from an AWS queue (sqs) and, based on the items, send an email to the client to approve the budget. The object awaits the generation and sending of the quote according to the model below:


```
{
"workOrderId: "70e6215d-b5c6-4896-987c-144a6333a2b3",
"customer": {
"Id": "70e6215d-b5c6-4896-987c-144a6312a2b3",
"name": "John Doe",
"email": "john.doe@example.com"

},
"vehicle": {
"Id": "80e6215d-b5c6-4896-987c-144a6312a2b4",
"make": "Toyota",
"model": "Camry",

"year": 2020

},

"parts": [
{
"part" : "Oil Filter",
"quantity": 2,

"amount": 15.00

}
],
"services": [

{
"service" : "Oil Change",
"quantity": 1,

"amount": 50.00
}

]
}
```


For registration and payment verification, the system must retrieve data from a queue indicating whether the customer will authorize the service order or not. If authorized, the system must

communicate with the Mercado Pago Payment API. The response should be persisted in the database, and then a message sent to a queue that will record the payment response.

The message object to be received must contain the customer's data such as name, CPF or CNPJ, email, and credit card details for payment. Note: Two paths could be followed here: 1. Create an automation flow with N8N to receive the message, send payment to Mercado Pago, and save the Mercado Pago response in another queue. The queue can be used as a system consumption, or the system can make a call to the payment API within the system itself and persist the data based on the response.

For updating the order status after payment, if registration and validation are done within the system itself, the payment response data should follow a flow of sending it to the status update queue, which will be consumed by another microservice. If the implementation uses an automated N8N flow, it will be similar.