Monolithic Service Problem

* [**Details**](https://cognizant.e-box.co.in/problem/show/9598#tab1)

Reference Code : FSE-MCR-002Complexity : Level1

**Monolithic Service**   
  
Let us take the frequently used operation in a Bank, get account balance of an account. We already understand that this operation can be initiated from various roles and using various devices. Few example scenarios where this service is used: 

* A customer viewing his account details in a mobile app
* A bank teller viewing account details of a customer
* A customer viewing account details over net banking application
* An IVR system reading out an account balance to a customer
* A customer service representative views the account details of a customer whom had called customer services
* A batch job that deducts EMI on your account should know the account balance before performing the transaction
* A customer viewing his account details in an ATM
* A SMS system that needs to send transaction details to customer's mobile should know the account balance, so that it can be included in the SMS text message.
* so on and so forth ......

Similar to the one above, various operations of a bank can get initiated from various devices, roles, internal systems, etc.  
  
A XYZ Software Services company develops an application for a Bank that implements all operations of the bank as RESTful Web Services. You name any service offered by the Bank, a service is available that can be consumed by the respective application. This project had been completed and had been recently launched live.  
  
After few days of launch, on one fine day at 4PM ...

* A loan agent was not able to submit a loan application, he might miss his monthly target
* An insurance agent was not able to process closure of an insurance and hand over the sum assured payment cheque. The customer is waiting for more than one hour to receive this cheque.
* A customer is waiting in customer service queue for the 25 minutes to report a stolen credit card

The primary reason for the above situation is that the RESTful Web Service application recently launched has become very slow in responding. Due to festival season shopping there were huge volume of transactions for getting account balance, since there was a memory leak in the code and there is not memory left, because of which new request coming to the server were either rejected or timed out.  
  
To overcome this situation the entire server had to be restarted. After restart, the situation becomes normal after 2 to 3 hours. The support team keeps their fingers crossed not sure when this issue crops us again.  
  
**Activity**  
SME to discuss with learners and come up with ideas to handle this situation 