**Solution of the Problem by Fotis Oikonomou**

At first I red carefully the description and I followed these steps in order to reach to the solution:

1. First I took a free key from Open Exchange Rates.
2. Secondly after reading the description I decided to divide the procedure in classes and I created a command folder as you can see in order to make tests via girt bash command and test the fetch etc.

So I could easily insert the fetch inside the currencyController.php file , but if in the future for an example, we had an application that was becoming larger, then if we were making custom fetches in different places/classes of the app that would be not a good practice.  
 So in order to organize it I made a simple interface called ExtractInterFace.php and an abstract class named ABstractExtractor. Then, I made in a new folder named implementations, (we can name it as we want), and a new class called CurrencyExtractor. Furthermore, whenever I want to use the fetch method I simply write: $extractor = new CurrencyExtractor($this->apiKey);  
 $data = $extractor->fetch($startDate, $endDate);   
Also, if in the future we want to change for an example the base url we will change it in only one spot inside the app and not everywhere in many components!!  
I simple used OOP Principles in order the code to be reusable and in case a new developer was joining the team, make it easier for him to follow up with the rest of the team.

1. As matters, the materialized database view, because I implement the solution with Yii2 and Mysql I have a problem because MySql does not support materialized views. In order to make something similar, I created a database procedure called monthly\_summary and we can execute with cronjob like this:  
   0 0 1 \* \* /usr/bin/mysql -u user -p pass db\_name -e "CALL MonthlySummary()"

Installation Notes.

1. First Install XAMPP in your computer
2. Install composer (<https://getcomposer.org/download/>)
3. Go to the folder of htdocs and run this command

composer create-project --prefer-dist yiisoft/yii2-app-basic name\_of\_the\_project

1. Access Yii2 project http://localhost/ name\_of\_the\_project /web/
2. In order to run the controller and fetch data from the API through the command use this command: php yii currency/import , or , php yii currency/import "2024-03-01" "2024-03-12".
3. For issue 12 as we discussed, I executed the script with windows task scheduler and it run smoothly. So because I don’t have a linux operation system I can’t run crontab and for that reason I simply writing down the command:  
    45 5 \* \* \* /usr/bin/php /… / yii currency/import  
   Besides that because I didn’t totally understood issue 11, I didn’t implement it.