

Osano: API Integration Exercise

Your Mission

- From the program requirements below, we want to see how you create an integration of systems! Osano currently integrates with a lot of website services, and the main responsibility of this role is to increase the number of systems we integrate with. We'd like to see how you:
 - Identify & plan the scope of work.
 - Develop the integration with a quick, easy, and simple solution.
- Our current integrations use [Kotlin](#), but we understand if you haven't used this technology yet.
 - If you'd prefer to use [Java](#) or any other JVM-based language, that is totally fine!
 - If you haven't worked with a JVM-based solution and you would like to take this time to try Kotlin, that's great too. However...
- Don't spend more than [2-3 hours](#) on this exercise.
 - Getting the integration to work is the important part.
 - If you feel like you need more time or you encounter any roadblocks, please don't hesitate to reach out to Kelsey at kp@osano.com.
 - We'll try our very best to answer your question(s) as soon as possible.
- A few other things:
 - Please include a [README.md](#) file with instructions on how to build and run the program.
 - We'd like you to use either [Gradle](#) or [Maven](#) as a build tool (we use these to manage our libraries and compiling, packaging, and running tests).
 - If you haven't used either of these tools and prefer to use a different one, that's fine too.
 - You can use any open source libraries you'd like!

Functional Requirements

Please develop a program that does the following:

- Allows the user to input an ISO-4217 currency code, i.e. USD, EUR, etc. The value may be inputted in any manner you prefer.
- From there, it needs to query the Coinbase public API using that currency code. For example: <https://api.coinbase.com/v2/exchange-rates?currency=USD>. This gives us the exchange rates for that currency against several conventional currencies and cryptocurrencies.
- Filter out any of the return values that are not cryptocurrencies. A list of ISO-4217 currencies can be downloaded from <https://developers.google.com/adsense/management/appendix/currencies>. Anything not in that list can be assumed to be a cryptocurrency.

- Now, take the list of cryptocurrencies and use the Binance 24 hour ticker here: <https://api.binance.us/api/v3/ticker/24hr> to compare how much each has gained/lost in the last 24 hours against Bitcoin/BTC. The output from that API call gives an object like: {"symbol": "BNBBTC", "priceChangePercent": "-95.960", ...}. This is what percent BNB has increased or decreased against Bitcoin in the last 24 hours. The output will include some trading pairs which don't include Bitcoin/BTC which can be ignored.
- Finally, output a list (any format of your choosing) with:
 - The cryptocurrency code, i.e., ETH, ADA, SOL.
 - The current value in the chosen currency.
 - What percent it has gained/lost against Bitcoin in the last 24 hours.
 - How much money you would have right now if you had converted one Bitcoin 24 hours ago to that currency (optional).

Submission of Work

Once completed, please submit the work to Kelsey at kp@osano.com. It can be:

- A link to a saved [GitHub repository](#) accessible to our team, or
- Exported as a [zip file](#).

Commented [DS1]: [@Kelsey Peterson](#) Do you want to be the point of contact for questions and submissions of these exercises or should I have them sent elsewhere?

Commented [KP2R1]: I'm happy to be the point person!

When we get to this stage, I can add this doc (PDF form) to the email template. Additionally, I can mention to send me the completed version in the email body, too. Does that work?