

Java project - Cryptocurrency quotes

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1. Purpose of the Project

Cryptocurrencies are one of the most popular means of investment among new investors. Cryptocurrencies are based on blockchain technology. The main topics or research areas that contain concepts related to cryptocurrencies are computer science and economics. Therefore, this topic is very interesting for us. We want to create an application that allows you to check the rates of various cryptocurrencies, in specific time intervals, in a specific currency.

2. Business logic

The application will fetch data using public API

CoinCap API 2.0 provided by the site [Coincap API 2.0](#). Then, after pre-processing the collected data, the application will analyze it to return to the user various types of charts and information on how the currency changed over the selected period of time. The data will be displayed in a user-friendly manner.

One of the main classes will be the Cryptocurrency class. Our application will create an object of this class for each selected cryptocurrency.

We will also create a class that communicates with the API. It will store information obtained using the CoinCap API and make access to it available to other application components using defined methods.

We will create a GUI class to support the user interface.

The entire project will be divided into two areas. One that will download data from the user and the other that will visualize the data and present the entire graphical interface.

3. Functional Requirements

Our application will meet the following functionalities:

- drawing linear graphs of the dependence of the price of a given cryptocurrency on time
- setting the time range for which the chart is to be drawn
- selection of the currency in which the value of a given cryptocurrency is to be presented
- selection of the cryptocurrency for which the chart is to be presented
- the ability to draw several curves on one graph, distinguished from each other by color

4. Non-Functional Requirements

- quick response from the server to a request for a given cryptocurrency
- clear data visualization
- simple and clear layout of the application
- responsive application window
- information for the user about loading data