

CryptoPrice Design Document

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1 Introduction

CryptoPrice is a Bitcoin price ticker & converter app for Android and Universal Windows Platform. It allows you to view the real-time & historical Bitcoin to Euro exchange rate, as well as calculate the conversion price from Bitcoin to Euro and vice versa. It uses the BitcoinAverage.com JSON API in order to fetch real-time Bitcoin price data.

2 Features

- View real-time Bitcoin price from BitcoinAverage.com or other API.
- Convert Bitcoin to Euro and vice versa.
- View historical Bitcoin price information using suitable graphs & bar charts.

3 User Interface

CryptoPrice contains 3 main screens, a screen containing current realtime price information, a screen for converting a value from Bitcoin to Euro and vice versa, and a screen which displays historical price data.

The current screen can be changed using tabs.

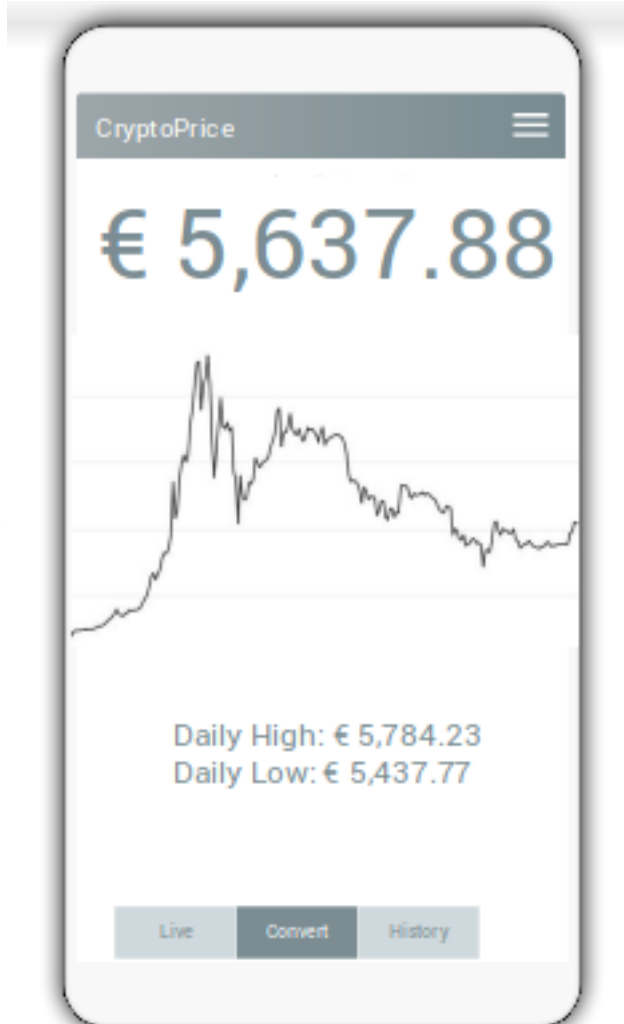
3.1 Real-time price screen

The live page displays real-time price information, such as the current Bitcoin price, daily high and daily low.



3.2 Historical price screen

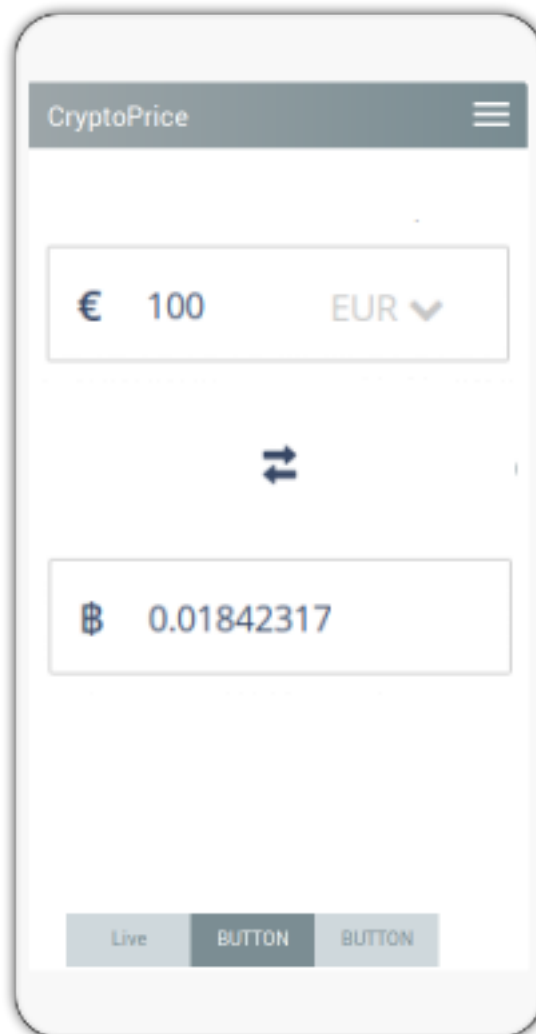
The history screen displays historical price data, using graphs, for a selectable period of time, such as the past 24 hours, past month or past year.



3.3 Currency converter screen

The currency converter screen allows the user to convert from Bitcoin to Euro using the current exchange rate.

The user can simply enter the value they wish to change and switch between converting from Bitcoin to Euro and Euro to Bitcoin by clicking on the arrow logo.



4 Architecture

- The app will be built using Xamarin for cross-platform support.
- Git will be used for source control.
- Microsoft unit test framework will be used for unit testing.
- A TabbedPage will be used for switching between screens.
- JsonConvert will be used to parse the data from the API.
- The Microcharts library will be used to display historical pricing data using suitable graphs & bar charts.
- BitcoinAverage.com or CoinDesk.com will be used as the API provider. Both provide a free API to access Bitcoin pricing data in JSON format.
- Pricing data may need to be stored locally on the device in order for the user to view historical price data while they are offline. The data may be stored on the device in a SQLite database, or perhaps simply saved as a JSON file verbatim from the last time the app queried the API.