

Case Study: Financial Website

Introduction

Our core business is to create financial websites for some of the top-tier financial institutions in the world. Those pages display information about financial products or so-called "certificates". We ask you to build a simple webpage which can display the characteristics of the certificates.

Your code should be written in PHP5 and be fully object-orientated. Using Zend Framework is not required, but would be a real plus.

Tasks

1. The certificates are the most important element in your small application. A certificate has the following properties:

- ISIN
- Trading Market (e.g. Frankfurt, London)
- Currency
- Issuer
- Issuing Price
- Current Price

Please create a class "Certificate" with the above properties, which should also be changeable on demand. You can design the class in the way you prefer and also add other classes when it's necessary.

2. Each certificate has a history of prices which update every few seconds. Additionally, each product can have documents assigned to it. The documents may have varying types, e.g. a "Term Sheet" as a PDF document.

Please model those associations into your code.

3. Create two functions "displayAsHtml()" and "displayAsXml()", which render a certificate accordingly. This should happen as a HTML page and a XML file.

4. In addition to the standard certificates, there are special types of certificates. Those feature additional properties:

- Bonus-Certificates have a barrier level and you need to know if this barrier was hit or not.
- Guarantee-Certificates have a participation rate.

5. Please create a class "BonusCertificate" and "GuaranteeCertificate" and ensure that those special properties are also used in the display-Functions of Number 3.

Additionally, please take care that Guarantee-Certificates mustn't be exported as XML. In such a case, please fire a meaningful exception.

6. Please send us your code including all used frameworks and libraries in a single .zip-File. If you want to get some extra points, we would love if you could send a simple class diagram with it. If you have any experience with Unit Tests in PHP, we would be also very keen to see it in this example; otherwise we'll show you how to do when you join us!

Good luck!