

Watermark-Test

A global publishing company that publishes books and journals wants to develop a service to watermark their documents. Book publications include topics in business, science and media. Journals don't include any specific topics. A document (books, journals) has a title, author and a watermark property. An empty watermark property indicates that the document has not been watermarked yet.

The watermark service has to be asynchronous. For a given content document the service should return a ticket, which can be used to poll the status of processing. If the watermarking is finished the document can be retrieved with the ticket. The watermark of a book or a journal is identified by setting the watermark property of the object. For a book the watermark includes the properties content, title, author and topic. The journal watermark includes the content, title and author.

Examples for watermarks:

```
{content:"book","title":"The Dark Code", author:"Bruce Wayne", topic:"Science"}
{content:"book","title":"How to make money", author:"Dr. Evil", topic:"Business"}
{content:"journal","title":"Journal of human flight routes", author:"Clark Kent"}
```

- a) Create an appropriate object-oriented model for the problem.
- b) Implement the Watermark-Service, meeting the above conditions.
- c) Provide Unit-Tests to ensure the functionality of the service.