

*Research Study on Designing Software Architectures for Social Media***Design Tasks****Scenario Description**

You are the software architect of the emerging, novel online encyclopedia *WikiBritannica* that was launched a year ago. With a finer grained content curation process but maintaining the openness that any user can contribute, *WikiBritannica* managed to gain and expand ground in an area that was mainly occupied by other well known online encyclopedias.

As *WikiBritannica*'s software architect, your role is to guide the evolution of the platform and support the engineering team with strategic architectural decision making and planning.

For the described system scenario, an architecture description with multiple architecture views and related models has been created. One of these views focuses on *adaptation management* and its impact on the architecture of the system.

For each of the following design tasks you have a set of pre-defined architecture models related to this particular view that you have to extend or modify with regard to the tasks.

Task 1:

In a recent incident, a spam bot managed to create thousands of spam pages. As a result the security analyst recommended to switch from the existing CAPTCHA to CAPTCHApus, as well as to extend the monitoring mechanisms with an abnormal behavior page spam monitor mechanism. So far existing monitoring mechanisms only prevent the creation of spam accounts.

Your task is to extend the interaction rule adaptation element and the monitoring mechanism adaptation element.

Please write down here the motivation for your choices:

Task 2:

The administration of a country is currently plagued by new scandals every day, which also increased the edits of the involved pages in *WikiBritannica*. In addition to the usual updates, there is an increased report on incorrect contributions. This circumstance increases the workload of the available editors, because currently they temporarily need to turn on and off the page protection for the respective pages by hand. The management decided that under the current circumstances it is better to shift to an automated page protection that is done by the system itself instead of the operator.

Your task is to modify the existing page protection option to support automation during run time.

Please write down here the motivation for your choices:

Task 3:

In order to increase the degree of automation on the *WikiBritannica* platform the management and the operator decided that the platform should also be able to support bots in the future. A bot is an automated or semi-automated tool that carries out repetitive and mundane tasks to maintain the pages of the *WikiBritannica*. At the beginning there should be two options of bots:

1. Anti-vandalism bot which checks pages for unusual edits and marks them as important to be reviewed by users.
2. Spelling bot which checks the text of English pages and replaces US to British spelling.

Your task is to create a new adaptation element about bot mechanisms and create and assign the two bot mechanism options to it.

Please write down here the motivation for your choices: