
Rares-Sebastian Moldovan
30433

Students' Algorithm teaching tool
Use-Case Model

Version 1.0

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Revision History

Date	Version	Description	Author
19/03/2018	1.0	First version of the use case documentation	Rares-Sebastian Moldovan

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Use-Case Model

1. Use-Cases Identification

Use case: Registration

Level: summary level

Primary actor: Regular user

Main success scenario:

- The user successfully opens the application and accesses the registration page.
- The user inputs the necessary information: name, email and password.
- The system validates the uniqueness of the email input, the validity of the password and registers the user in the application database.

Extensions:

- If the user information does not respect the rules (unique email and correct-format password), the application displays an error message and allows the user to retry to register.

Use case: Log in

Level: summary level

Primary actor: Regular user

Main success scenario:

- The user successfully opens the application and accesses the log in page.
- The user inputs the necessary information: email and password.
- The system validates the correctness of the user input (checks for the email and password in the database to match the ones specified by the user) and opens up the main page of the application, together with some user-dedicated information (depending on the type of user).

Extensions:

- If the user information does not respect the rules (email not present in the database or password not matching the target user email), the application displays an error message and allows the user to retry to log in.

Use case: Log out

Level: summary level

Primary actor: Regular user

Main success scenario:

- The user is logged in.
- The user selects the log out option.

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- The system logs out the user and it expects from him to provide the credentials another time for the other operations to be available.

Use case: Create new algorithm page

Level: summary level

Primary actor: Administrator

Main success scenario:

- The user successfully opens the application and accesses the log in page.
- The user inputs the necessary information: email and password and the system validates the user as a system administrator.
- The administrator chooses the “Create new algorithm page” option and enters a name for the algorithm page.
- The system creates the new page and its corresponding fields with blank information. Additionally, he/she may or may not provide some input to the algorithm pages (such as provide the overview or any type of implementation).

Extensions:

- If the user information does not respect the rules (email not present in the database or password not matching the target user email), the application displays an error message and allows the user to retry to log in.
- If the user is not an administrator, he/she is not allowed access to this kind of action.

Use case: Assign the algorithm administrator

Level: summary level

Primary actor: Administrator

Main success scenario:

- The administrator is logged in.
- The administrator selects one of the users from the registered list and assigns it as an algorithm administrator.
- The system assigns this user the possibility to perform CRUD operations on the chosen algorithm page.

Extensions:

- This use case may appear as an initiative from the administrator or it may be a result of a user request.

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Use case: Request to add algorithm information

Level: user-goal level

Primary actor: Regular user

Main success scenario:

- The user is logged in.
- The user selects an algorithm page.
- The user chooses “add information” option and fills in the form with the necessary information (theoretical or implementation, technology etc.).
- The user hits the “Send request” button and a request is sent to the algorithm administrator that may or may not validate the user contribution.

Extensions:

- If the user does not fill all the information from the form, the system will not allow the request to be sent to the administrator.

Use case: Add new algorithm information

Level: user-goal level

Primary actor: Algorithm administrator

Main success scenario:

- The user is logged in.
- The user selects its algorithm page
- The user chooses “add information” option and fills in the form with the necessary information (theoretical or implementation, technology etc.).
- The user hits the “Confirm” button and the information is stored in the database, as well as displayed to all of the users.

Extensions:

- This step may appear as a result to a regular user requesting new information to be added or it can appear at the wish of the algorithm administrator to contribute with his/her own information.

Use case: Rate the information

Level: user-goal level

Primary actor: Regular user

Main success scenario:

- The user logs in and selects an algorithm page.
- The user selects one of the page content, such as the overview or an implementation.
- The user rates the information on a scale from 1 to 10.

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- The user hits the “Confirm” button and the information is stored in the database, and the average response is recomputed.

Extensions:

- If the user already rated the information, he/she is not able to rate a second time.

Use case: Generate user report

Level: user-goal level

Primary actor: Administrator

Main success scenario:

- The administrator hits “Compute user rankings” and the system performs a computation that yields as result the ordered list of users that contributed to the algorithm pages based on their ratings.
- The administrator chooses to publish the report.

Extensions:

- If the administrator doesn't want to publish the report, it does not have to necessarily display it (some problems may have arisen when computing the ordered list).

2. UML Use-Case Diagrams

