Online Questions Game - Think-a-bit

Requirements:
1. An online game with randomized questions
2. Sign in / Sign up
3. Difficulty setting
4. Each level / stage has 10 consecutive questions
5. After all the questions are answered correctly, the next stage unlocks
6. Question type:
    a. Closed with one correct answer
    b. Closed with more than one correct answer
    c. Open with a numerical answer
7. Each consecutive stage has increasing difficulty - less tries for answering the questions
8. User can replay a stage after a certain amount of time
9. Each stage has a certain amount of tries for answering the questions - the higher the difficulty, the less tries
10. If a user has run out of tries for a stage, he can "buy" more tries

High Level Design:
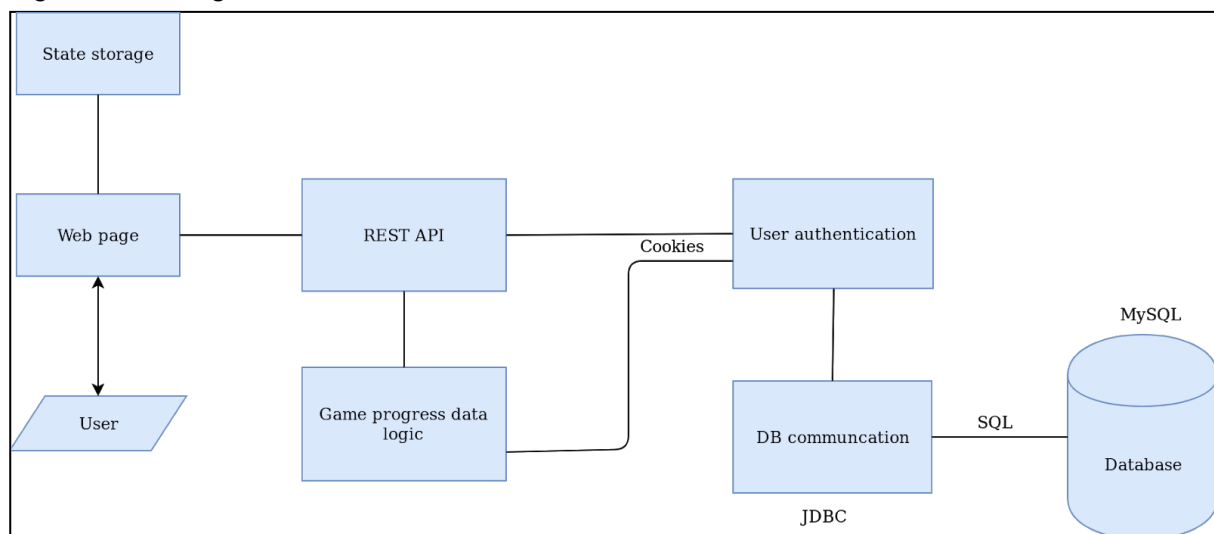
The system contains 3 components in a Java application communicating with the web browser via REST calls and with the database via JDBC driver. These components are:
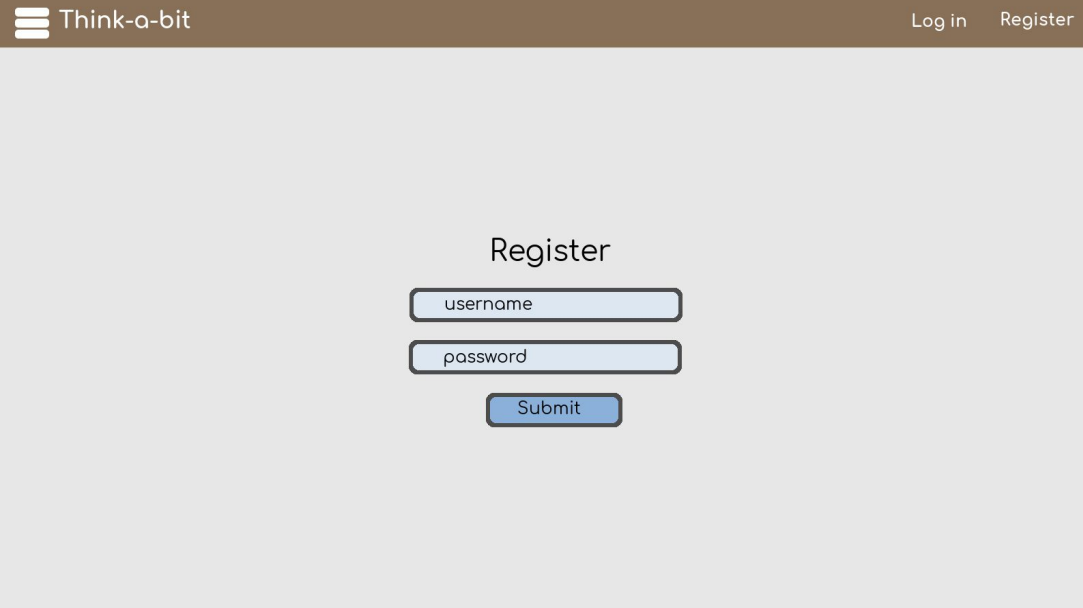
● User authentication - The logic that with register, log in and log out a user. Comunicates with the browser with Jersey REST Api. Has internal comunication with the DB Comunication Component for inserting and getting the user information.
● DB Comunication - The logic that makes the SQL queries and sends them to the MySQL DB. JDBC functionality here. Comunicates with the Database via SQL.

- Game progress data - The logic that manages the arrangement of the questions, the question type, the locking and unlocking of the stages, the tries for each stage and the difficulty settings. Comunicates with the web browser with Jersey REST api and transfers information to the User module via Cookies.

The web page is built using React framework. In accordance with user actions, requests are being sent to server in order to get or update user's data. A state, needed for proper page rendering, is kept on the front end.
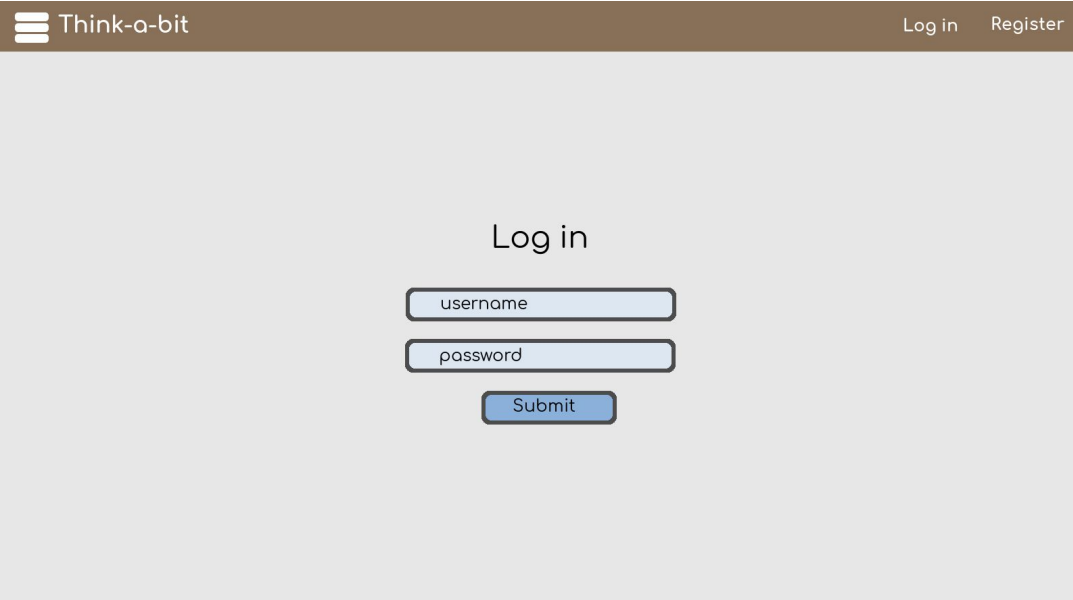
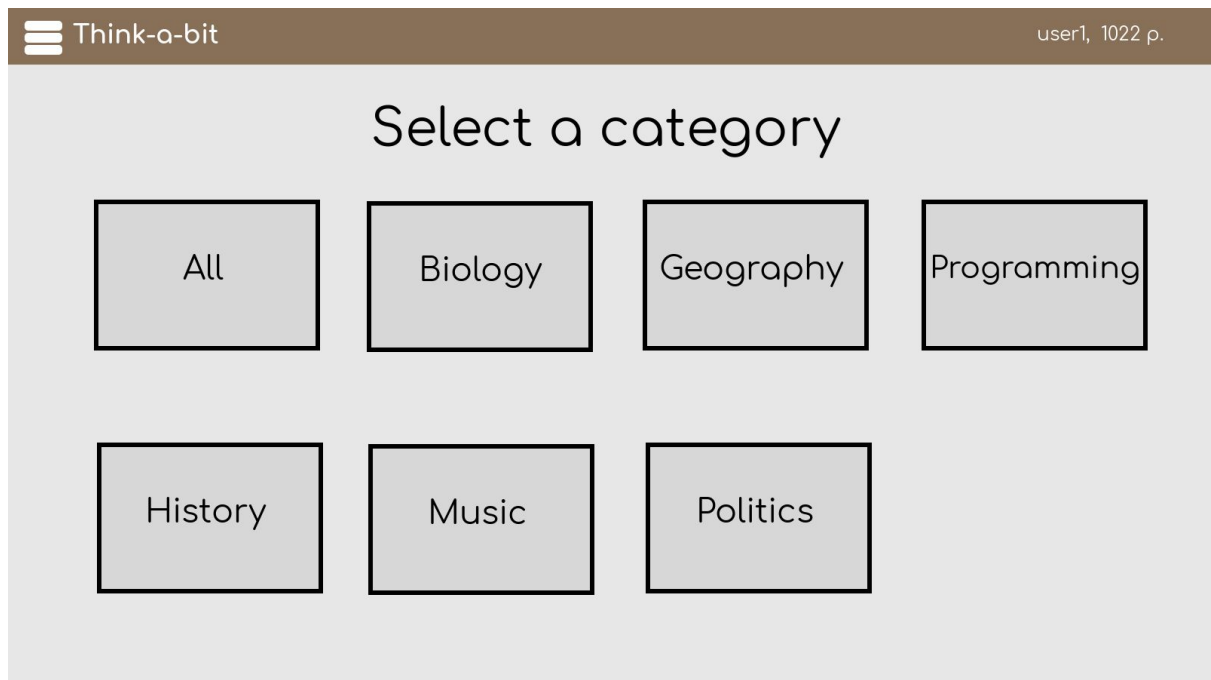The user will see a web based interface as follows:

1. Register

2. Log in

3. Select category

Think-a-bit

Select a category

All	Biology	Geography	Programming

History	Music	Politics

4. Category stages

Think-a-bit

user1
Account settings
Log out

Play a game
Politics
History
Geography
Music
Biology
Programming
All

Geography

Level 1	Level 2	Level 3
solved 4 times	solved 2 times	solved 0 times

5. Question

user1

Account settings

Log out

Play a game

Politics

History

Geography

Music

Biology

Programming

All

Geography

<- Previous   finish   Next ->

What is the length of the Equator?

Question 2/10

A) 40075 km	B) 20014 km
C) 10722 km	D) The Earth is flat

6. Stage result

user1

Account settings

Log out

Play a game

Politics

History

Geography

Music

Biology

Programming

All

Result: Failed

Questions you got wrong:

What is the length of the Equator?

What is the capital of Turkey?

4 attempts left