Instructions:

Dear students,

We have published the second homework which is the following:

Review the DD available on Webeep, direct link:

https://webeep.polimi.it/pluginfile.php/1302807/mod\_folder/content/0/ProjectToBeReviewed/DD.pdf

It refers to the assignment described in this document:

https://webeep.polimi.it/pluginfile.php/1302807/mod\_folder/content/0/ProjectToBeReviewed/Assignment\_RDD\_2023-2024.pdf

Then answer to the questionnaire here (one submission per group):

https://forms.office.com/e/1U5NqdVNkR

Keep the same groups as for the first homework (if you did it).

We will assign up to 1 point to clear and convincing answers

Deadline: November 19th at 23.59 (Rome time)

Answers will be used as basis for discussion during the lab of November 20th (Prof. Camilli and Di Nitto) and of November 21st (Prof. Rossi)

Recommendations

· Focus more on content rather than structure;

· Pure AI-generated content will not be considered acceptable. Value your reasoning and expressive capabilities! You are the ones who will build machines, not vice versa!

Cheers

Matteo Camilli, Elisabetta Di Nitto, Matteo Rossi

**Questions:**

**11. Identify exactly three aspects in Sections 2.1, 2.2, and 2.3 that represent either strengths or weaknesses (e.g., 1 strength and 2 weaknesses, or 3 weakness, etc.). Support each identified aspect with proper arguments (one or two sentences) motivating your selection.**

**Weakness 1:** Overview not enough explained.

* It's well explained what the advantages of the three-tier architecture in general are, but we think it lacks with the arguments why this architecture is suitable for this project CKB. We believe there should be space for at least one sentence about that.

**Strength 2:** Component view is clearly presented.

* Every component well explained with each of them having clear responsibilities. There are no unclear or divided tasks for every component. Good architecture design with the ability to scale.

**Strength 3:** Security features in deployment design

* Good idea in the deployment design for using security measures in form of load balancer and firewall, ensuring protection against malicious attacks.

**12. Identify exactly three aspects in Sections 2.4, 2.5, 2.6 and 2.7 that represent either strengths or weaknesses (e.g. 1 strength and 2 weaknesses, or 3 weakness, etc.). Support each identified aspect with proper arguments (one or two sentences) motivating your selection.**

**Strength 1**: The runtime view diagrams are generally well thought out and presented. The same applies to Section 2.6, which thoroughly addresses component interfaces.

The runtime view diagrams effectively illustrate all possible use cases, presenting the information clearly. However, a few diagrams are missing alternative flows for errors or system failures (e.g., UC2 or UC9). Additionally, Section 2.6 while better presented in two columns rather than one, is still extremely thorough in its presentation.

**Strength 2**: The selected architectural styles and patterns are well-suited for this application, given its complexity and the number of actors involved.

The 3-tier architecture model, along with the MVC pattern and the facade pattern, are logical and appropriate choices that align with the application’s requirements and structure.

**Weakness 1**: Section 2.7 needs significant expansion and further specification, as it raises more questions than it answers.

It lacks clarity on how the application (or its hosting platform) will handle a sudden influx of users. For example, the mention of "load balancing" is vague and insufficiently detailed. Furthermore, there is no mention of the data storage solution to be used, nor any specifics on encryption for stored data. Finally, beyond a brief mention of a firewall, the section fails to address the cybersecurity measures necessary to ensure availability, stability, and data protection.

**13. Identify exactly three aspects in Sections 3,4 and 5 that represent either strengths or weaknesses (e.g. 1 strength and 2 weaknesses, or 3 weakness, etc.). Support each identified aspect with proper arguments (one or two sentences) motivating your selection.**

**Strength 1**: User Interface Design

In the User Interface Design section, the user login page, selection bar, and menu are displayed and designed to ensure that users can navigate the platform with ease. The user login page allows both types of users (students and teachers) to sign up and also enables new users to log in with a GitHub account.

**Weakness 1**: RequirementsTraceability

Although all the components necessary to satisfy the requirements stated in the RASD document are listed, it is not explicitly clarified which component is responsible for each part of the requirements. For example, does the AuthenticationManager handle only R2 (login), or does it also manage parts of R1? Similarly, does the Database store user credentials for both R1 and R2?

**Strength 2**: Implementation, Integration, and Test Plan

The section provides a clear and systematic approach to implementation, integration, and testing. The combination of bottom-up and thread strategies is well-justified, promoting parallel development and incremental validation. By prioritizing core features like authentication and team creation, the strategy ensures that foundational functionalities are robust before adding advanced capabilities.