Lab Assignment-II

Objective: The objective of this lab assignment is to explore the applicability of blockchain architectures from a functional viewpoint and its impact on the development and deployment views.

Tasks:

Choose a software system: Select a software system that partly or completely matches the criteria for which a blockchain-based solution is apt. This could be a web or mobile app, or any other software system you are familiar with as long it is *not* the one you adopt as your main group assignment.

Identify functionalities that can benefit from a blockchain architecture: Select at least a module which you would realize through a blockchain architecture, and at least one module those that do not need it.

Document the decision process: Motivate the choice of at least one module to implement via blockchain technologies, and one module for which you would discard such a solution.

Select a blockchain category: Considering the four classes of blockchain platform available (either public or private and either permissionless or permissioned), indicate the one you would use for the identified module, explaining the rationale behind it.

Design smart contracts and tokens: Take the module you would realise via blockchain technologies and identify the information attributes and operations you would delegate to a smart contract, explaining why. Describe whether one or more tokens should be involved. For every token, indicate what its type shuld be (fungible? Non fungible? Semi-fungible?), specify what data it should bear (if any) and outline its lifecycle.

Write a report: Write a short document (up to 1200 words and up to 4 figures/tables) reporting on your analysis.