Requirement Specification

Project name: Integration and visualisation.

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Purpose: Tie everything together into a single working software tool that takes a 3D model file along with any user input needed, and then produces the documents that can be sent for approval.

High-level overview of the system: Overview of the whole site and view of each roof face with solar panels.

Technology used: Python Programming language.

IDE: Visual Studio Code.

Functional Requirements:

1. Overview of the whole system(All roof faces on all buildings, All fire ventilation setbacks and pathways All solar panels)
2. Verify in which wind pressure zones the solar panels will be mounted
3. Display for each solar pannel:
    - Roof face, with edge type printed next to each edge
    - All solar panels on this roof face (so it would be visible which solar panels fall into which wind pressure zone)
    - Wind pressure zones
    - Calculation showing the wind zone width that was used
4. Create a 3D model of the system

Non-funcional Requirements:

- Usability: The functionality of the system will be user friendly, so that everything will be capable of being found on intuitive level, thus there will be added guidance tips
- Availability: The system will be available in one of the pages of desktop application dedicated specifically to visualisation of the whole project

- Security: The functionality will be :
  - The software must remain resilient in the face of attacks.
  - Preserve the access control and disclosure restrictions on information.
  - Choose their database partner carefully.
  - The system's back-end servers shall only be accessible to authenticated administrators.

- Reliability:The functionality ensures that the software tool, produced documents and visual representations will be working as intended and, if needed, prompt a warning in case an incorrect input was provided.

- Compatibility: The user interface for the software will be compatible with MS SQL by which users can access to the system.

Implementation plan:

1. Create a team and separate roles among each other, so everyone is responsible for a specific part of the project.
2. Create a chat on Discord to organise all the information and materials in the convenient way.
3. Create a Git Hub repository to work on different task and optimise the process.
4. Choose a technology that we are working with.
5. Create a workload for every week and keep track of the process.
6. Update the specification when there are going to be changes in the process.
7. Deliver the project to the customer for the feedback.
8. Apply changes based on customer‘s feedback.
9. Create a final version of the project.