| **High-Level Requirements** | Last Updated:  February 7, 2022 |
| --- | --- |
| *Project - Ensemble; Team - G6 Devs; Advisors - Dr. Chang, Dr. Khezrimotlagh* |
| *Members - Kody Backenstoes, Sabriya Fathima, Josip Kapular, Christopher Roberts, Ryan Ward* | |

Description: The following document contains the high-level requirements which specify the functionalities of the Ensemble software. These requirements are to be further elaborated in their respective Use Cases and diagrams.

Content:

| Definitions   * Benchmark Timeline - A timeline containing a series of dated milestones/benchmarks for a Project. * Company Timeline - A Gantt chart timeline containing the Project Timeline for all Projects in the system. * Component - A piece that holds topic-specific information regarding a specific Project. * Custom Component - A Component whose template is created and defined by the Project Manager. * Default Component - A Component whose template has been predefined by the development team (G6 Devs). * Issue Score - A score given to a Project that uses the quantity and Severity Rating of all unmarked Posts. This score is also increased when Investment Cost > Budget and Date > Project Timeline. * Post - A message from a Project Member that involves a Project’s timeline or budget. A Post is also provided as a notification to a Project Manager upon logging in. A Post can be marked as seen and/or done by the Project Manager who created the Project. * Project - A collection of Components that is uniquely defined by its Key Attributes. * Project Manager - A user that can access, modify, and delete Projects. * Project Member - A user who is assigned as part of one or more Projects. * Return on Investment - The predicted or known Return Profit of a Project ratioed with its Budget. Predicted ROI uses averages of known Return on Investments from existing Projects with similar Tags.   Requirements   1. The Project Manager must be able to create, modify, delete, and close a Project. 2. The Project Manager must be able to create, modify, and delete a Component. 3. The Project Manager must be able to search Projects by title, tags, and Project Manager. They must also be able to filter Projects by Project status, issue score, Project Manager, and Project Timeline. They must also be able to sort Projects by title, Project Manager, return on investment, budget, and Project Timeline. 4. Upon creation, manipulation, or deletion of a Project, the system must update the Company Timeline holding all archived Projects. This updated Company Timeline must then be displayed on the Project Manager’s dashboard. 5. Upon Project creation and manipulation, the system must use past Projects which match the new Project’s tags and predict & display the Project’s return on investment to the Project Manager. 6. The Project Manager must be able to create, modify, and delete a Files Default Component for a Project. 7. The Project Manager must be able to create, modify, and delete a Benchmark Timeline Default Component for a Project. 8. The Project Manager must be able to add, modify, and remove Project Members to/of/from a Project Team. The Project Manager must also be able to create new Project Member users. 9. A Project Member must be able to modify their member status. A Project Manager must be able to modify the member status of all Project Members within a Project Team. 10. A Project Member must be able to create Posts within a Project. Each Post must have a severity rating, description, and mark which aspect the Post affects. A Post can affect the budget and Project Timeline. 11. Upon logging in, a Project Manager must be notified of all Posts that are not marked as seen or done. 12. A user must login to the application upon startup. 13. Upon submission of a Post, a Project’s issue score must be updated and only change when the Post is marked as seen or done. If a Project becomes overdue or over budget, the issue score must be updated permanently. If a Project Member changes their member status, the issue score must be updated permanently. |
| --- |