| **Use Cases & Use Case Diagram** | Last Updated:  February 7, 2022 |
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Description: The following document contains the Use Cases and Use Case Diagram respective to the High-Level Requirements provided for the Ensemble software project.

Content:

| Uses Cases   1. The Project Manager must be able to create, modify, delete, and close a Project.    * Basic Course - In the Header of the Dashboard the Project Manager can click the “+” button and click “Project” in the drop-down menu. The Project Manager will choose between a Default or Custom Template, then fill out all details and submit the created Project.    * Alternate Courses      + The Project Manager attempts to submit the Project without a Title, the Project Manager will then receive an Error “Please create a Title.”      + The Project Manager chooses a Custom Template and adds no components to the Project. The titled Project will successfully submit, and components can be added in the future.      + The Project Manager can view the list of Projects in the dashboard and click on a Project. The Project information will be shown and the Project Manager can click the “Edit Details” Button and submit the modified information.      + The Project Manager can use the search bar in the Header of the Dashboard and search for a specific Project, then click the “Edit Details” Button and submit the modified information.      + The Project Manager modifies a closed Project, in which the Project Manager will go to “Archives”, select the closed Project, then click the “Edit Details” Button and submit the modified information.      + The Project Manager can view the list of Projects in the dashboard and select a Project. The Project information will be shown. The Project Manager can click the “Delete Project” Button, and will be asked to confirm selection and verify identity.      + The Project Manager clicks the “Delete Project” Button and does not verify identity, an Error message will be presented “Could not be completed.”      + The Project Manager deletes a closed Project, in which the Project Manager will go to “Archives”, select the closed Project, then click the “Delete” Button, and will be asked to confirm selection and verify identity.      + The Project Manager can view the list of Projects in the dashboard and select a Project. The Project information will be shown. The Project Manager can click the “Archive Project” Button and will be asked to confirm selection.      + The Project Manager can use the search bar in the Header of the Dashboard and search for a specific Project, then click the “Archive Project” Button and will be asked to confirm selection.      + The Project Manager clicks the “Archive Project” Button and does not confirm selection, an Error message will be presented “Could not be completed.” 2. The Project Manager must be able to create, modify, and delete a Component.    * Basic Course - The Project Manager can view the list of Projects in the dashboard and select a Project. The Project information will be shown. The Project Manager can click the “New Component” Button. A list of options and fillable data will appear for the Project Manager to fill. Upon filling and submission the Component will be added to the Project details.    * Alternate Courses      + The Project Manager can use the search bar in the Header of the Dashboard to search for a specific Project. They can then click on the Project to show the Project information. The Project Manager can click the “New Component” Button. A list of options and fillable data will appear for the Project Manager to fill. Upon filling and submission the Component will be added to the Project details.      + If the Project Manager does not confirm selection or cancels the addition of a new Component, an Error message will be presented “Could not be completed.”      + The Project Manager can view the list of Projects in the dashboard and select a Project. The Project information will be shown. The Project Manager can click the “Modify Component” Button. The Project Manager can select which Component they wish to modify. Upon selecting the component which they wish to modify, a list of fillable data will appear for the Project Manager to fill. Upon filling and submission, the Component will be edited and updated for display on the Project Details.      + The Project Manager can view the list of Projects in the dashboard and select a Project. The Project information will be shown. The Project Manager can click the “Modify Component” Button. The Project Manager can select which Component they wish to modify. If the Project Manager attempts to continue without selecting any Component, nothing will happen.      + The Project Manager can view the list of Projects in the dashboard and select a Project. The Project information will be shown. The Project Manager can click the “Modify Component” Button. The Project Manager can select which Component they wish to modify. Upon selecting the component which they wish to modify, a list of fillable data will appear for the Project Manager to fill. If the Project Manager attempts to submit the change without filling all fillable data, an error message will be displayed “Please Fill all Fillable Fields”.      + The Project manager can delete any Custom Component present within a project regardless of whether the Project has been completed or not.      + The Project Manager cannot delete any Default Component within the project. When attempting to delta Default Component an error message will be displayed “Default Component cannot be deleted”. 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.    * Basic Course - The Project Manager can filter projects by clicking the filter button on the Project page and then selecting any combination of Tags, Project Status’, and Project Managers from the dropdown. The Projects displayed will change depending on the currently selected filters.    * Alternate Courses      + Project Manager can remove filters on the Project page by clicking the remove button next to currently selected Tags within the filter menu. If no filters are selected all Projects are displayed.      + The Project Manager can use the search bar in the Header of the Dashboard to find projects by tag, title, and Project Manager. A list of all projects will be displayed that contains the entered terms in the search bar.      + An error message will be displayed within the search results “No projects found.”.      + The Project Manager sorts the list of Projects by title, Project Manager, return on investment, budget, issue score, and Project Timeline. The Projects displayed then change to match the selected sort. 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.    * Basic Course - The Project Manager creates a Project in the system. The system adds the Project record in the system database and updates the system’s Company Timeline. The new Company Timeline is then displayed on the Project Manager dashboard.    * Alternate Courses      + The Project Manager changes a Project’s Project Timeline. Upon submission, the system updates the Project record in the system database and updates the system’s Company Timeline. The new Company Timeline is then displayed on the Project Manager dashboard.      + The Project Manager deletes a Project. Upon confirmation, the system removes the Project record in the system database and updates the system’s Company Timeline. The new Company Timeline is then displayed on the Project Manager 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.    * Basic Course - The Project Manager creates a Project in the system. After submitting the Key Attributes of the Project, the ROI for the Project is calculated using past Projects containing one or more of the new Project’s Tags. The ROI is then displayed to the Project Manager user on the Project review screen.    * Alternate Courses      + If no archived Projects contain a Tag that equals those which classify the newly created Project, the system displays a warning message to the Project Manager user saying “Insufficient data to calculate Project ROI.” After clicking the OK button, the Project review screen is displayed.      + If the ROI for the newly created Project is negative, then a warning message is displayed to the Project Manager user saying “Project Investment Costs may outweigh Return Profit.” After clicking the OK button, the ROI is displayed to the Project Manager user on the Project review screen.      + If a Project’s Tags are changed, the ROI is recalculated and recorded. Afterward, the new ROI is displayed on the Project screen.      + Upon clicking the “Refresh ROI” button on the Project screen, the ROI is recalculated and recorded. Afterward, the new ROI is displayed on the Project screen. 6. The Project Manager must be able to create, modify, and delete a Files Default Component for a Project.    * Basic Course - The Project Manager can add the Files Default Component to the Project from the kebab menu during Project creation and selecting it from the resulting dropdown menu.    * Alternate Courses      + The Project Manager can upload any relevant Files to the Files Default Component after clicking on upload within the kebab menu.      + The Project Manager can delete any Files in the Files Default Component after clicking remove within the kebab menu and selecting the Files that should be deleted. The Project Manager must confirm the deletion through the popup confirmation. 7. The Project Manager must be able to create, modify, and delete a Benchmark Timeline Default Component for a Project.    * Basic Course - The Project Manager can view the list of Projects in the dashboard and select a Project. The Project information will be shown. The Project Manager can click the “Edit Timeline” Button. A form containing all current deadlines within the Benchmark Timeline will be displayed. The Project Manager can select and edit each of these deadlines individually. Upon completion the deadlines and Benchmark Timeline will be updated.    * Alternate Courses      + The Project Manager can view the list of Projects in the dashboard and select a Project. The Project information will be shown. The Project Manager can click the “Edit Timeline” Button. A form containing all current deadlines within the Benchmark Timeline will be displayed. The Project Manager can select and edit each of these deadlines individually. If the Project Manager attempts to submit a deadline from a date already passed, a warning will be displayed “This deadline has already passed. Updating will mark this as overdue. Continue?”. Upon confirming the deadlines and Benchmark Timeline will be updated.      + The Project Manager can view the list of Projects in the dashboard and select a Project. The Project information will be shown. The Project Manager can click the “Edit Timeline” Button. A form containing all current deadlines within the Benchmark Timeline will be displayed. The Project Manager can select and edit each of these deadlines individually. If the Project Manager attempts to submit a deadline from a date already passed, a warning will be displayed “This deadline has already passed. Updating will mark this as overdue. Continue?”. Upon canceling the previous form will be displayed once again for the Project Manager to edit. 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.    * Basic Course - The Project Manager can click the edit button in the Project details then add, modify, and remove, a Project Member in the member component.    * Alternate Courses      + If the Project Member does not exist, the Project Manager can click the “+” button and click “Project Member” in the drop-down menu. The Project Manager can fill out basic details of the Member and assign the Project Member to a Project.      + During the creation of a Project, the Project Manager can add Project Members. 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.    * Basic Course - The Project Member can change their Member Status by selecting their Profile, clicking on one of the predetermined Statuses and confirming their selection. Each Member's Status will have an issue score that will be totaled up into an overall Issue Score and displayed on the Project Manager’s Dashboard.    * Alternate Courses      + Project Member fails to select a predetermined Status when changing their Status and tries to confirm their selection. Error Message “Please select a Status” 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.     * Basic Course - The Project Member can create a post and input a Severity Rating, Description, mark which aspect of the project is going to be affected (Budget and/or Timeline) and submit the post to the system.     * Alternate Courses       + Project Member doesn’t fill in Severity Rating, Description and/or Affected Aspect, when trying to submit the post Project Member will receive an error message “All Fields must be filled in”. 11. Upon logging in, a Project Manager must be notified of all Posts that are not marked as seen or done.     * Basic Course - Upon the Project Manager clicking the login button, they will be brought to the Dashboard. Within the Dashboard, a section will show all unseen Posts to the Project Manager. The Project Manager may mark these Posts as seen by clicking the seen button next to each Post. After a Post has had its respective seen button clicked, it will be hidden from the unseen Posts section of the Dashboard.     * Alternate Courses       + The Project Manager can select a Project from the Dashboard. Upon selecting a Project, the Project Dashboard will be loaded showing all Components of the selected Project. Within these Components will be the Posts Default Component which contains all seen and unseen Posts with visual distinction between the two. Unseen Posts may be marked as seen via the seen button next to each one. Upon being marked as seen the Post will be displayed as the other seen posts. 12. A user must login to the application upon startup.     * Basic Course - The user enters valid login credentials on the login screen. After verification, the user is presented with the dashboard with all Projects that they are a part of or are managing.     * Alternate Courses       + The user provides invalid credentials. Upon verification, the system displays a popup saying “Invalid username or password.” After closing the popup, the password field is reset. 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.     * Basic Course - After a Post is submitted by a Project Member, the system calculates the score to add. The Project’s issue score is then updated. The new issue score is then displayed on the Project list screen and dashboard.     * Alternate Courses       + A Project’s set Project Timeline becomes overdue in the system at the scheduled refresh time (midnight). The issue score is then updated. A Post is then created (score = 0) by the system for the Project in question to notify the Project Manager of this issue. The new issue score is then displayed on the Project list screen and dashboard.       + A Project’s set budget is surpassed by its investment costs. The issue score is then updated. A Post is then created (score = 0) by the system for the Project in question to notify the Project Manager of this issue. The new issue score is then displayed on the Project list screen and dashboard.       + Upon marking a Post as seen or done, the issue score for the Project is decreased by the score allocated to the Post. The new issue score is then displayed on the Project list screen and dashboard.       + When a Project Member changes their member status, all Projects with the given member on its Project Team must have their issue score updated. A Post is then created (score = 0) by the system for every Project in question to notify the Project Managers of this issue. The new issue scores are then displayed on the Project list screen and dashboard.   Use Case Diagram |
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