**Detailed documentation -**

This project implements a **Project Management System** in Salesforce Objects, fields, page layout, Triggers, Apex classes, Lightning Web Components, flexi pages, custom tab and application. The system enables users to create and manage **Projects**, their **Milestones**, and **To-do Items**, with automatic progress tracking and status calculation.

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| --- | --- |
| **Objects** | **Description** |
| Project | Stores project information: Name, Owner, Status, % Complete |
| Milestone | Child of Project. Tracks project milestones: status, % complete, due date |
| To do Items | Child of Milestone. Contains individual to-do items with due date and status |

**Relationships:**

* Milestone\_\_c → Lookup to Project\_\_c
* ToDo\_\_c → Master-Detail to Milestone\_\_c

**Field Design**

|  |  |
| --- | --- |
| Project\_\_c | Name (Text), Owner (User), percentagecomplete\_\_c (Number), Status\_\_c (Formula) |
| Milestone\_\_c | Name, Due\_Date\_\_c (Date), percentagecomplete\_\_c (Number), Status\_\_c (Formula), Project\_\_c(Lookup), Total\_ToDos\_\_c(Rollup), Completed\_Todos\_\_c(Rollup) |
| To\_Do\_Items\_\_c | Name, Due\_Date\_\_c, Status\_\_c (Picklist: Not Started, In Progress, Completed) Milestone\_\_c(Master-Detail) |

**Backend Logic –**

* **User Restriction**: Users cannot manually edit the Status\_\_c fields on either Project or Milestone.
* When status on To do Items object record is updated, it will update the Rollup fields on Milestone and based on rollup fields update, % calculation field value on Milestone will be updated from trigger on Milestone.
* And based on % calculation on milestone, % calculation will be calculated for Project object and will be updated from after trigger.
* Based on % calculation on milestone and project, status field(formula) on both objects will be updated as per below logic –

“Not Started” when the % complete is 0%

"Complete" when the % complete is 100%

"In Progress" otherwise

**UI –**

1. Created 2 LWC component,
2. createproject

* Form input for Project, Milestones, and ToDos
* Dynamic addition/removal of milestones and to-dos
* Name field is required, throwing error if name is blank on any record
* Save all record with one button and reset button for resetting the component
* Apex class to save records

1. projoverview

* Displays summary of created records i.e. Project, Milestone and To do items

1. Created Application

* Created application as “Project Management” and showing all 3 objects tab.
* Embedded LWC on this custom Lightning App page or a record page via Lightning App Builder

**Using Application –**

1. Open App Launcher, search and open the Project Management app
2. Open Home Page of Application
3. Fill in the details in “Create New Project” component
4. Project Name
5. Add milestones with “Create Milestone” button
6. Add to do items with “Create To Do Items” and to do items
7. To save all records, click “Save Project”
8. View the Project Overview component below the create project component to view created records.
9. Open any object record by navigating to any object’s tab