**Go Team (Project Tracking System)**

**Narrative File**

**GitHub Page link:** [**https://github.com/TRISHA2424/Trishat2**](https://github.com/TRISHA2424/Trishat2)

As given in the proposal for the final project, I have developed a basic project tracking and monitoring program ‘Go Team’. I have created a program that prompts user to create three levels: 1) Project, 2) Project’s Phase and 3) Task list for each phase. For each level, there are below 3 related details could be entered through GUI:

1. **Project- Project ID, Project Name and Project Status.**
2. **Phase- Phase ID, Phase Name, Phase Status**
3. **Task- Task ID, Task Description, Task Status.**
4. **First to develop such GUI in python, I had to install ‘Tkinter’ GUI toolkit and related modules:**

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**I have also defined below global variables for the program:**

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**Project Level:**

1. **Then I created a window that prompts user to create a ‘New Project’ using a click button:**

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**Output GUI:**

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1. **On click of ‘New Project’ Button, program runs ‘GetInput2’ function that prompts user to enter Project ID, Project Name and Project Status for each new project.**

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**Output GUI:**

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1. **On click of ‘Submit’ button, program calls GetInput1 function where the user input using .get() function is stored in form dictionary ‘PRJ’.**

Variable ‘P’ has key: project id (x) and Values as Project name (y) and Project status (z) for each distinct project ID user saves. User may save multiple projects with different Project IDs. Each small dictionary of project is appended to PRJ as nested dictionary with each small dictionary list in PRJ.

Also, I have saved a list of all distinct project IDs in PID list.

Program shows a confirmation pop-up to the user on click of submit. On further click of ‘OK’ it prints the saved dictionary items in console.

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**Project creation is completed and saved now.**

**Phase Level**

1. **Similarly, I have created a new window for creating ‘New Phase’ for each of the above project. User can select the project from dropdown menu and enter Phase ID, Phase Name and Phase Status for that project like before.**

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1. **On click of ‘Submit’ button, program calls GetInput4 function where the user input using .get() function is stored in form dictionary ‘PHS’.**

I have retrieved the selected project from dropdown to ppid variable for tracker mapping of project id-phase id.

Variable ‘PH’ has key: phase id (x1) and Values as Phase name (y1) and Phase status (z1) for each distinct phase ID user saves for each project. Again, user may save multiple phases with different Phase IDs. Each small dictionary of phase is appended to PHS as nested dictionary with each small dictionary list in PHS.

Same as project level, I have saved a list of all distinct phase IDs in PHID list.

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**Task Level:**

1. **Similarly, I also created a new window for creating ‘New Task’ for each of the above phase. User can select the project and phase together from dropdown menu and enter Task ID, Task Description and Task Status for that project-phase.**

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**Output GUI:**

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1. **On click of ‘Submit’ button, program calls GetInput6 function where the user input using .get() function is stored in form dictionary ‘TSK’.**

I have retrieved the selected project from dropdown to ppid variable and selected phase in phid variable for tracker mapping of project id-phase id-task id.

Variable ‘TS’ has key: task id (x2) and Values as task name (y2) and task status (z2) for each distinct task ID user saves for each project-phase.

Again, user may save multiple tasks with different Phases. Each small dictionary of tasks is appended to TSK as nested dictionary with each small dictionary list in TSK.

Same as above two levels, I have saved a list of all distinct task IDs in TSID list.

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**Go Team Tracker GUI:**

1. **With above created three levels and retrieved user inputs, I have created below GUI in form of hierarchical table using Treeview Function.**

To create this table, I have created a new window with a click button ‘Show Tracker’ to prompt user to open tracker view.

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**Output:**

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1. **Post this, I have created 2 additional columns for ‘Name’ and ‘Status’ and labeled the default (first) column as ‘Project/Phase/Task ID’.**

To create multiple parent nodes for all projects, I ran for-loop with PID list (having list if all project IDs). – *This is Node-1 (Parent node*)

Then, I ran a nested for-loop for each phase under that project using PHID list (list of all phase IDs) to create nodes for all phases. – *This is Node-2 (child node*)

Similarly I ran another nested for-loop for each task under each project-phase using TSID (list if all task IDs) to create nodes for all created tasks for this phase. – *This is the end node of the hierarchy.*

I have populated IDs in first column, Name in second and Status in third column using **values= dictionary values for respective level.**

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**Output:**

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**The final output shows the expected basic hierarchy of Project-Phase-Task tracker as nodes in tree forms with Name and Status.**