Developing Simple Project Management Tool for Managing Software Projects

Project management tools are aids to assist an individual or team to effectively organize work and manage projects and tasks. The term usually refers to project management software you can purchase online or even use for free. There are many softwares for project management hosted online or even you can download, host and use these locally. Find some tools here: https://financesonline.com/top-5-trello-alternatives/. At Nerd Castle Limited, we are using trello.com for managing our software and find it very useful for us.

In this assignment, you are asked to make a simple project management tool for managing software projects. Several user stories are described below. We know that given user stories are not enough for a complete project management software. We keep it simple so that you can complete it on time.

By using your solution, suppose, a company will manage their software projects, save the user stories of each project and assign project manager, team leader, developers and QA engineer to any of their projects.

P.S. If you find any gap area, you can share with us. (See the deliverables list below)

What will you submit and how:

You will reply (reply all) the email (sent from tiemoon@gmail.com) sent to you and share your Github link with in email body. No submission will be accepted if you don't share the deliverables using GitHub.

You are requested to keep following things in your GitHub:

- **Source code**
- **Database script with seed data (if you use code first, you can skip it)**
- **Database schema (in PNG file format)**
- **Gap area (if you find any) in doc format**

Deadline:

Share your GitHub link before 11:00 PM of Thu, 28th Jan, 2018.

System Description:

Employees related to any software projects are the users of this system. And each user may have one on more roles in this system. Find the users and their roles as follows.

Role	User Type/Designation
Add/Edit/View User	IT Admin
Add Project/Edit	Project Manager
Assign User	Project Manager
Add Task	Project Manager, Team Lead, Developer, QA Engineer, UX Engineer
View Projects	Project Manager, Team Lead, Developer, QA Engineer, UX Engineer
View Projects Detail	Project Manager, Team Lead, Developer, QA Engineer, UX Engineer
Add Comment	Project Manager, Team Lead, Developer, QA Engineer, UX Engineer
View Comment	Project Manager, Team Lead, Developer, QA Engineer, UX Engineer

Note that any person who has been assigned to a project will be treated as **team member of that project**. So, Project Manager, Team Lead, Developer, QA Engineer, UX Engineer will be a team member when (s)he has been assigned to any projects.
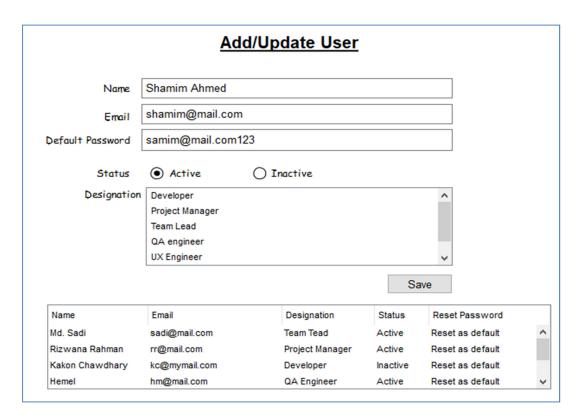
Main UI flow:

When a user wants to enter into the system, Login UI will be appeared sign in (no need for signing up feature). When user logs into the system successfully, as his designation following home page will be appeared:

There must have at least one IT Admin into the system (as seed data). Any user with IT Admin role will get only Add/Edit/View Role and (s)he can't be assigned to any projects as resource person.

User Stories:

1. **Add, Update & View Users:**
   Using this Page, user information can be added and updated. Any user with IT Admin Role can Add, Edit and View User information. Note that email address will be unique and default password will be *<given email address>* + "123". This UI will show all user information also. If you want, you can introduce separate UIs for Add, Update and View purpose.

Add/Update User

Name	Shamim Ahmed
Email	shamim@mail.com
Default Password	samim@mail.com123

Status ● Active   ○ Inactive

Designation:
- Developer
- Project Manager
- Team Lead
- QA engineer
- UX Engineer

[Save]

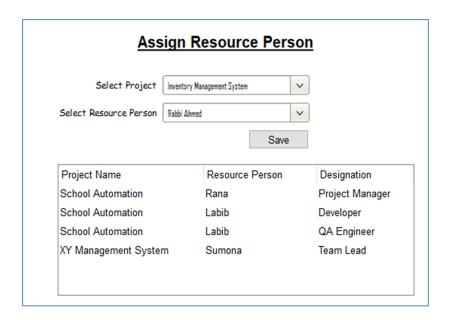| Name	Email	Designation	Status	Reset Password
Md. Sadi	sadi@mail.com	Team Tead	Active	Reset as default
Rizwana Rahman	rr@mail.com	Project Manager	Active	Reset as default
Kakon Chawdhary	kc@mymail.com	Developer	Inactive	Reset as default
Hemel	hm@mail.com	QA Engineer	Active	Reset as default

2. **Add Project:**

    Any user with Project Manager Role will create project and update project information. Duration
    field will be a calculated figure (user will not enter it).

    Note: You can keep uploaded files in database directly or you can keep these in a folder. If you
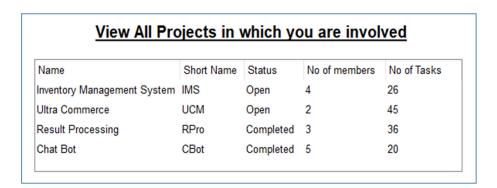   want, you can introduce separate UIs for Add and Edit purpose.

Add/Update Project

Name	
Code Name	
Description	
Possible Start Date	
Possible End Date	
Duration (in Days)	
Upload File	[Browse]
Status	⦿ Not Started
	◯ Started
	◯ Completed
	◯ Cancelled
	[Save]

3. **Assign Resource Person:** Any user with project manager role can assign someone (except IT
    Admin) to any project. Even a project manager will assign himself/herself to a project. Hence,
    project dropdown will contain all projects and View part of this UI will display all projects and all
    assignee list of projects. You don't need to keep any update feature here. Keep it simple.
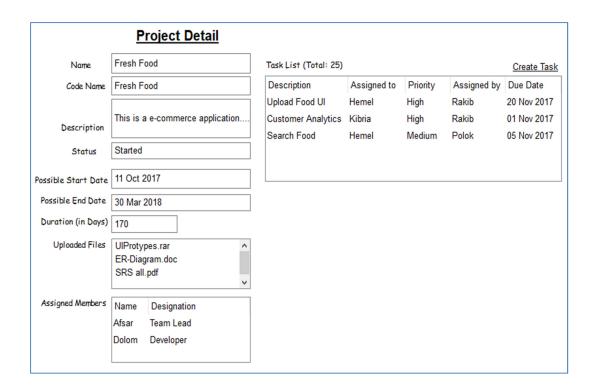
Assign Resource Person

Select Project `Inventory Management System` ▾

Select Resource Person `Rabbi Ahmed` ▾

[Save]

Project Name	Resource Person	Designation
School Automation	Rana	Project Manager
School Automation	Labib	Developer
School Automation	Labib	QA Engineer
XY Management System	Sumona	Team Lead

4. **View Projects:**

   Any logged in user (except IT Admin) can access project information. And logged in user will see only the projects information in which (s)he has been assigned to i.e. team member will see only their project information.
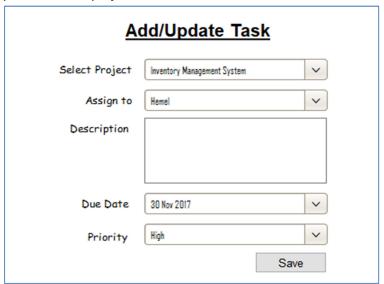
View All Projects in which you are involved

Name	Short Name	Status	No of members	No of Tasks
Inventory Management System	IMS	Open	4	26
Ultra Commerce	UCM	Open	2	45
Result Processing	RPro	Completed	3	36
Chat Bot	CBot	Completed	5	20

5. **Project's Detailed View:**

   By clicking on any project (of above user story), user will view project details as follows. User will create task of the selected project (See the Create Task in User Story Number: 6)
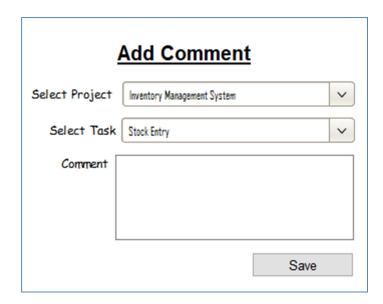
Project Detail

		Task List (Total: 25)				Create Task
Name	Fresh Food	**Description**	**Assigned to**	**Priority**	**Assigned by**	**Due Date**
Code Name	Fresh Food	Upload Food UI	Hemel	High	Rakib	20 Nov 2017
Description	This is a e-commerce application....	Customer Analytics	Kibria	High	Rakib	01 Nov 2017
		Search Food	Hemel	Medium	Polok	05 Nov 2017
Status	Started					
Possible Start Date	11 Oct 2017					
Possible End Date	30 Mar 2018					
Duration (in Days)	170					
Uploaded Files	UIProtypes.rar ER-Diagram.doc SRS all.pdf					

Assigned Members

Name	Designation
Afsar	Team Lead
Dolom	Developer

6. **Create/Add Task:**

   Any logged in user can create task and assign it to someone (someone who has been assigned in this project before). For creating Task of a project, Logged in user must be an assigned resource person of that project.
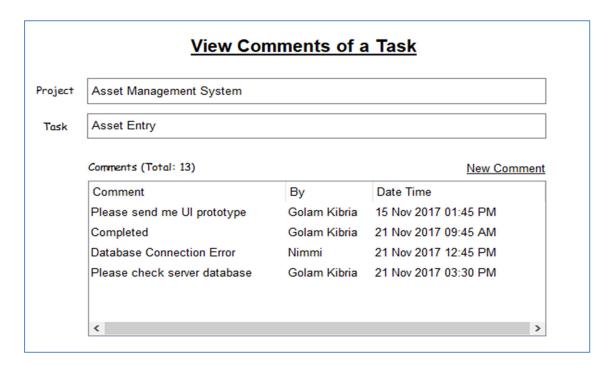
Add/Update Task

Select Project	Inventory Management System ▾
Assign to	Hemel ▾
Description	
Due Date	30 Nov 2017 ▾
Priority	High ▾
	Save

7. **Comment:**

   User can put a comment against a task of a project. Anyone, assigned to the selected project can comment in any tasks, no matter (s) he has been assigned to selected task or not. i.e. any team member can comment to any tasks.

8. View comments of a Task:

This page will be displayed when user will click on any task of user story number: 5 (see above). Any team member of a project can view the comments.

9. And more :

You can create a graphical (Chart, Bar diagram or whatever you want) report which you think can help management to understand something about all the projects. Note that this report will be accessible by IT Admin type users and also note that you can use any library you like, for creating this graphical report.

Last Note: Please don't hesitate to share your deliverables with us, even if you couldn't complete all user stories. We will appreciate your efforts.

☺ Thank you ☺