TeamFlowy

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Contents

Abstract

This report looks into the application features of a *Project Manage-ment System*. It describes the possible features that an employee might find useful from various perspectives. The web app will try to address most of the concerns we usually face while working in a huge team. The web app will shape up as a result of our experience using the existing webapps and will try to fill in various cavaets in the existing webapps!

1 Domain of the Project

Companies and organisation who host big projects with many team members, heavily subdivided work and lots of subdivisions, can utilize this webapp to manage work effectively and efficiently.

2 Models

The web app models a single organization. Each organization consists of multiple projects. The system will model:

- Projects

- Tasks

- Employees

- Sub Tasks

- Issues

- Skills of Employees

- Notifications

- Blogposts

- Employee-Issue Follow (This models employees capability to watch/follow certain issues)

- Storing Documents

The webapp will *not* model:

- Salaries of employees

- Recruitment details of employees (eg: When was the employee hired, for how many years etc)

- Exact time spent on a particular task/subtask.

- Our model assumes that if a group of people are working on a task, their task manager will divide the task into sub tasks which are to be performed by a single person. Thus, we cannot model tasks with multiple employees which cannot be broken into subtasks.

3 Application Features

This is the list of features we plan to support as a part of the project:

- Institutions, who own projects, need to allocate various tasks pertaining to a project to various groups. Tasks may be further divided into subtasks. Each task and subtask would have deadlines, issues that are being tracked and certain skillset requirement.

- Each project will have:

    - Team (People working on the project)
    - Project Managers
    - Task-Managers
    - Tasks and Sub-Tasks

- Different levels of access are granted depending upon a users role in a team.

- Many tasks will be assigned to Task Managers (by Project Managers) who will be responsible for its execution, managing issues, tackling deadline.

- Task will be subdivided into many sub-tasks which would be assigned to employees under the project by the Task Manager. The employees will be chosen according to different skillsets demanded by the task.

- Employees will report any issues and updates to their corresponding superiors, for example an employee working on a sub-task will report to Task Manager, and Task-Manager will have choice to report to the Project Manager, if he finds the issue important and requires attention.

- Each employee will have a personal calendar on which various deadlines will be reflected.

- There will be blog for projects where the team members can make announcements, file progress reports or participate in discussions and provide solutions.

- There will be options to show analytics(Gantt Charts, task filter reports , histograms etc.) relating to projects, groups and topics. For instance, the contributions by specific person over a period of time , the number of tasks assigned to a group , the number of contributions made by a group, top contributors and so on.

- After completion of tasks and subtasks, the task manager will rate the performance of the employee. This rating will be added to the employee's credentails for the corresponding skill sets which the task demanded. These ratings will be used later while suggesting employees for further tasks.

- Users can upload various documents pertaining to a project. The documents will be visible to only the employees working on that particular project.

Hierarchy within a Project

4 Role of Each Team Member

- Nilesh Kulkarni: Database Analysis/Design, Testing and UI (25%)

- Ashish Sonone: Database Analysis/Design, Testing and UI (25%)

- Vipul Harsh: Database Implementation and UI(25%)

- Sushant Hiray: Database Implementation and UI(25%)

This is a rough distribution of work and might change, will be more precise as we move deeper into the project.

5 Value Added Features

- We could use the employee ratings in giving them bonus

- We can use a combined model of rating, reliability and specialization to suggest good team formation for future projects.

- Adding comments on issues.

- Adding personalized details to calender.

6   ER Model

An ER Model is inserted below. For a better resolution image, check the submission folder for "er-model.png"

7   User Test Cases

The user test cases are attached alongside as a spreadsheet. Please refer to the doc named "testcases.xlsx" for the test cases.
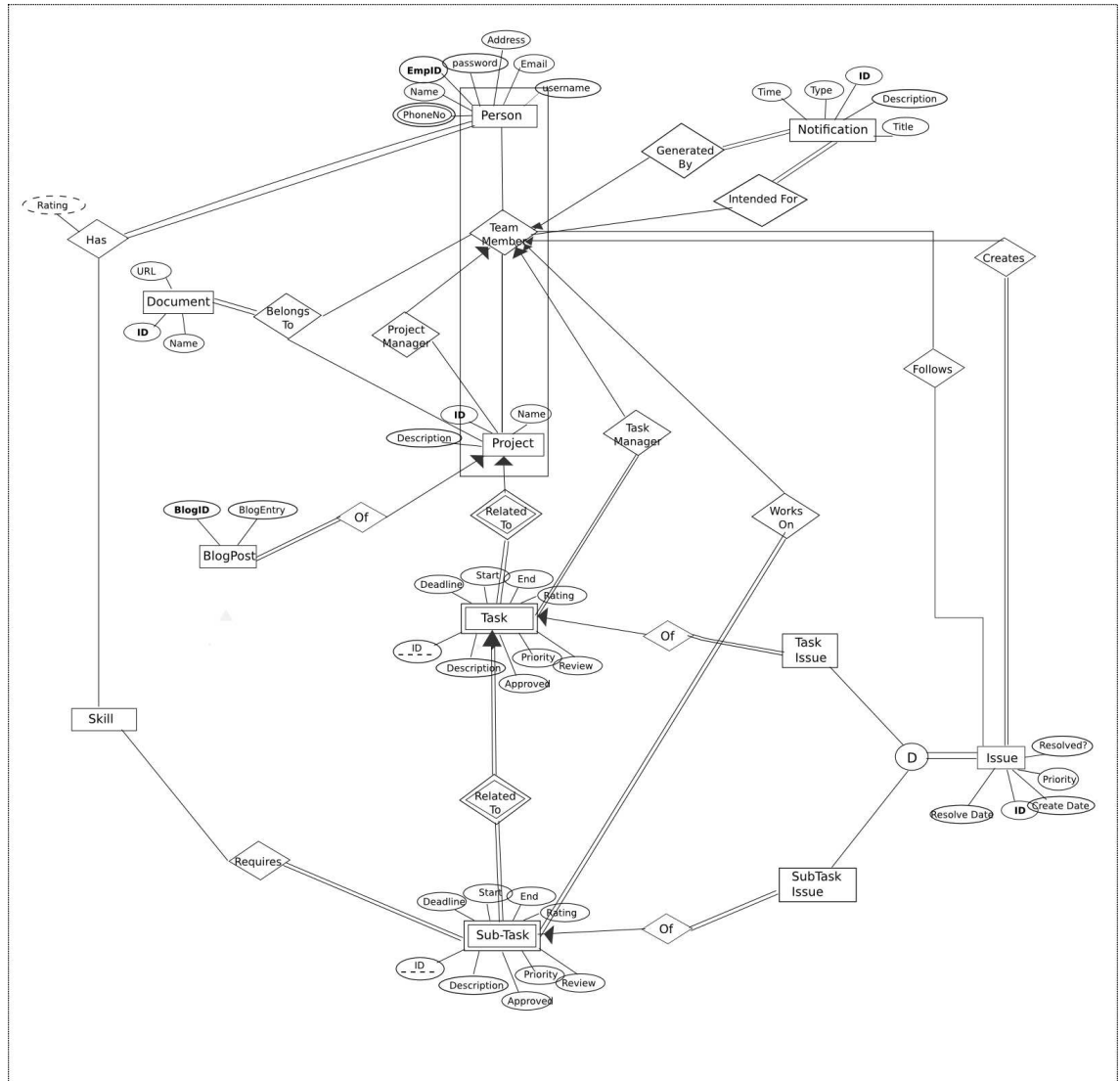
Figure 1: ER Model

Interface	Remarks	User Action	Output
Register new user		Leaves some field blank	Submit error, fields required
Register new user		All fields correct	New user created. Redirects to login page.
Login(landing page)		Correct credentials	Redirects to correct index page according to user's role
Login(landing page)		Incorrect credentials	Show login errror
Logout		User clicks logout button	Logged out from the webapp, redirected to login
Accessing internal link without logging in		User tries to access any link without logging in	Redirected to login page.
Add new project(must enter name, description,deadline)	Only visible to project manager	User gives a name that already exists	Since project names have to be unique,prompt user to give different name
Add new project(must enter name, description,deadline)	Only visible to project manager	Leaves any field blank	Submit error, fields required
Add new project(must enter name, description,deadline)	Only visible to project manager	All fields correct	Create the project and shows it on his index page
Create new task	Only visible to project manager	Leaves any field blank	Submit error, fields required
Create new task	Only visible to project manager	Task Deadline set beyond project deadline	Show an error
Create new task	Only visible to project manager	All fields correct	Newly created task shown under the project
Assign Task Manager	Only visible to project manager	Select from a dropdown list of possible candidate having required skills	Assigns the task to the person(visible on his index page) and informs him through a notification
Rating a task	Available to project manager only when task is complete	Rate task manager on scale from 1-10(choose from drop-down list) and write review	Notify task manager and updates his profile(skill rating)
Create a new sub-task	Only visible to task manager	Leaves any field blank	Submit error, fields required
Create a new sub-task	Only visible to task manager	Sub-task Deadline set beyond task deadline	Show an error
Create a new sub-task	Only visible to task manager	All fields correct	Newly created subtask shown under the corresponding task
Assign subtask to an employee	Only visible to task manager	Select from a dropdown list of possible candidate having required skills	Assigns the subtask to the person(visible on his index page) and informs him through a notification
Complete subtask		Employee marks a task as complete	Sends a notification to task manager for approval.
Complete subtask		Task Manager marks a task as complete and is redirected to interface to give rating.	Sub task is archived
Rating a subtask	Available to task manager only when subtask is complete	Rate corresponding employee on scale from 1-10(choose from drop-down list) and write review	Notify the employee and updates his profile(skill rating)

Create an issue		Select issue type, corresponding task/subtask from dropdown(which he is part of), enter issue details	Creates the issue under corr task/subtask and notify relevant supervisor.
Follow issue		Click on follow button alongside issue to get updates regarding the issue(resolved,etc)	Will receive notifcations whenever status of issue changes (eg to resolved/closed)
Forward an issue	Visible to task manager in notifications concerning subtask issue.	Choose to forward to project manager.	Create a notification for the project manager.
Forward an issue	Visible to task manager in notifications concerning subtask issue.	Choose not to forward to project manager.	Do nothing. Mark notification as read
Close an issue		Close an existing issue.	It sends a notification to task manager and archives the issue.
Profile update(Add skill)		Add skill description	Updates his profile accordingly
Analytics(employee statistics)		Search for the user profile(by employee name or id).Input is correct	Shows user statistics such as projects involved, current timeline, skill set with ratings, %task completed on time
Analytics(employee statistics)		Search for the user profile(by employee name or id). Incorrect input	Display no results
Analytics(project statistics)		Search for a project(look ahead). correct project name.	Shows project statistics such as pending tasks, task filters(priority based, backlog, date, completed,assignee), gantt charts for all the tasks of the project.
Analytics(project statistics)		Search for a project(look ahead). Incorrect project name.	Display no results
Analytics(task statistics)	Accessible only from project statistics.	Click on a task from shown list.	Show subtask gantt chart, subtask list with assignee and status.All filters similar to project statistics will be implemented.
Create a blog post		Enter project name(dropdown), blog title and description.	Creates the post and notifies everyone who is part of the project.
Create a new document	Accessible from project interface	Enter file name,and browse for the file to upload.	Uploads the file and shows it under the documents for that project
View a project document	Accessible from project interface	Select file name from list	Download the file to local machine (or preview
Replace existing document	Accessible only from document creator.	click on replace button alongside document name. open file browser to select new file.	Replaces the file.

Screen Design

Landing Page

If you are not logged in, you are directed to login page.

A Web Page

http://teeamflowy.com/login

Home | Register | About | Contact

Login

Username

Password

Sign In

If the user is not registered, he can switch over to the register tab from the menu, else he will be redirected to the index page after successfully logging in using the correct credentials.

A Web Page

http://teeamflowy.com/register

Home | Register | About | Contact

Register
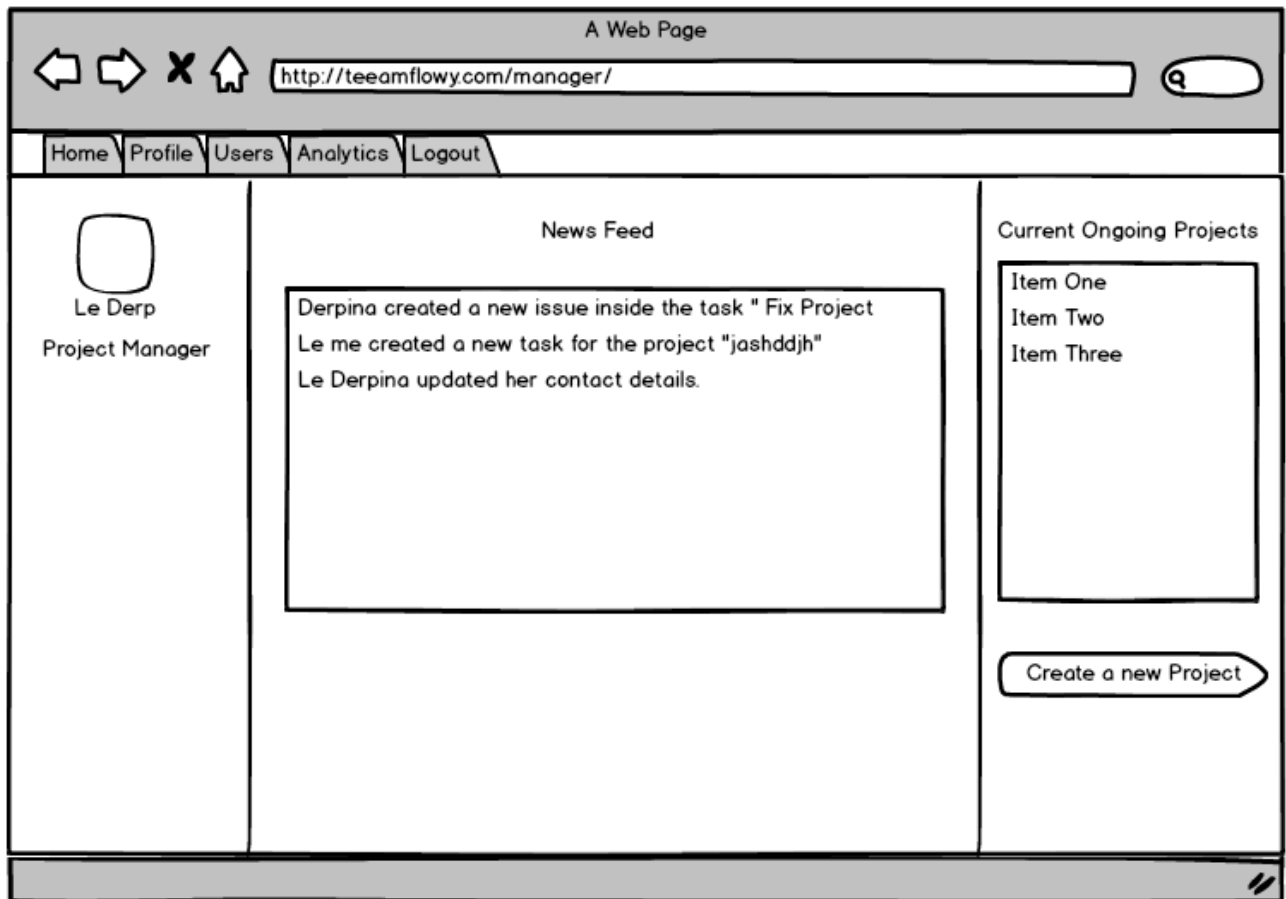
Name

Email Id

Username

Password

Address

○ Manager
○ Employee

Register

Post registering, the user has to login again, to access the internal links.
Depending on the access level of the user, I.e whether he is a normal
employee or the entire manager, the pages shown are different.
We will first look into the pages for a manager. The pages for a normal
employee will start post the manager pages.

Manager Pages:

Index Page

A Web Page

http://teeamflowy.com/manager/

Home | Profile | Users | Analytics | Logout

Le Derp

Project Manager

News Feed

Derpina created a new issue inside the task " Fix Project

Le me created a new task for the project "jashddjh"

Le Derpina updated her contact details.

Current Ongoing Projects

Item One
Item Two
Item Three

Create a new Project

The entire page is divided into 3 vertical divisions. The left division just gives the basic information for the manager (namely his name and optionally an image or identicon). There is a menubar at the top. The middle portion is the newsfeed region for the manager. The right sidebar enlists links to current created projects. He has an option to create a new project with the button.

Create Project

http://teamflowy.com/users/?project=create

Home | Profile | Analytics | Blog | Logout

Le Derpina

Notifications (10)

lederp@derp.in

Mumbai

Project Name:

Project Description:

Deadline   / /

Skills Required

Assign Manager: Derp ▼   Q search via skill

Create Project

Current Projects

I
II
III
IV
V

All the pages from now onwards will be divided into 3 zones, as explained in the earlier page. Here the middle zone comprises of a form to create a project. The right side enlists existing projects.
On creating the project, it will be enlisted as a project in the current projects and appropriate notifications will be generated. The manager will be redirected to the index page.
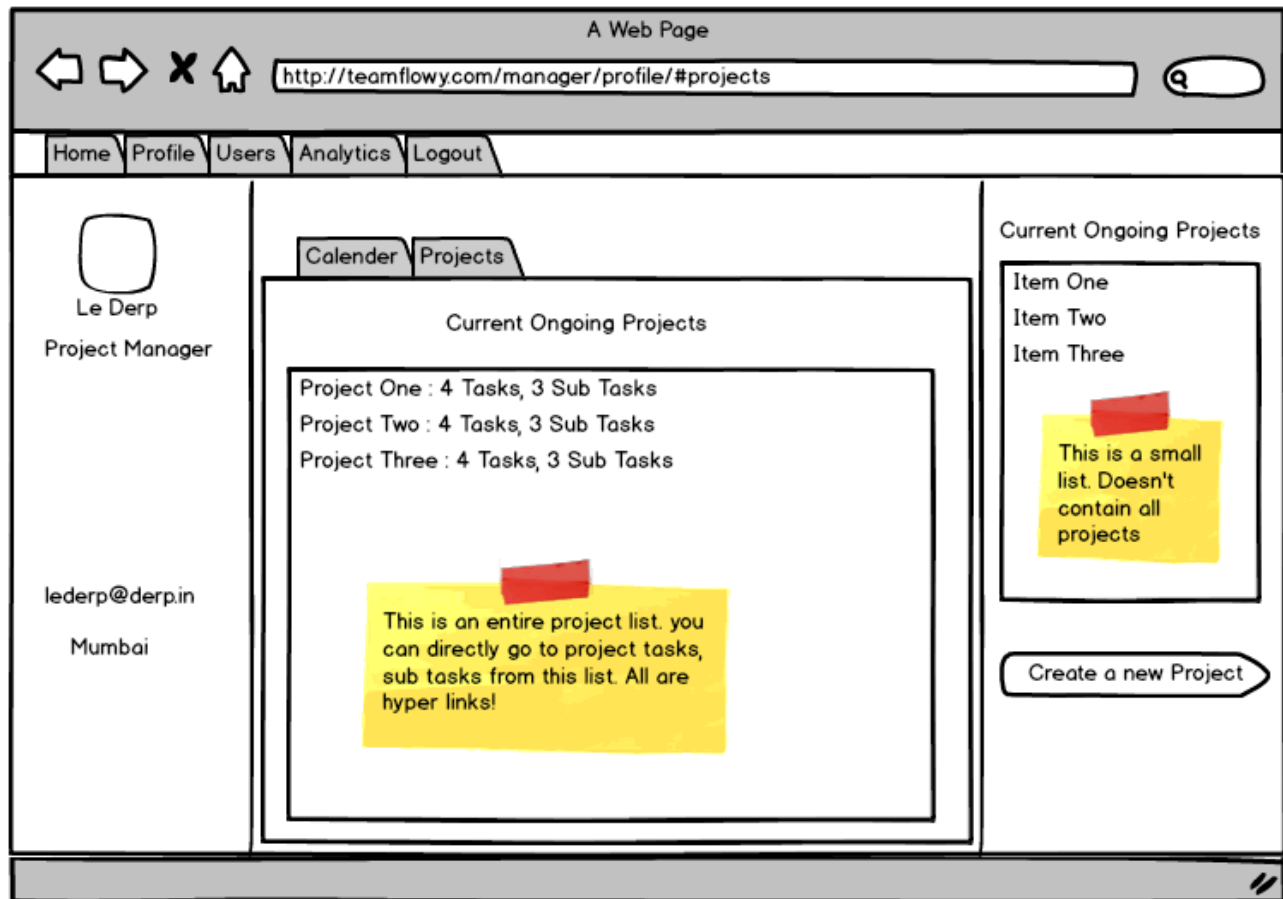
From there he can look into profile.

Profile Page
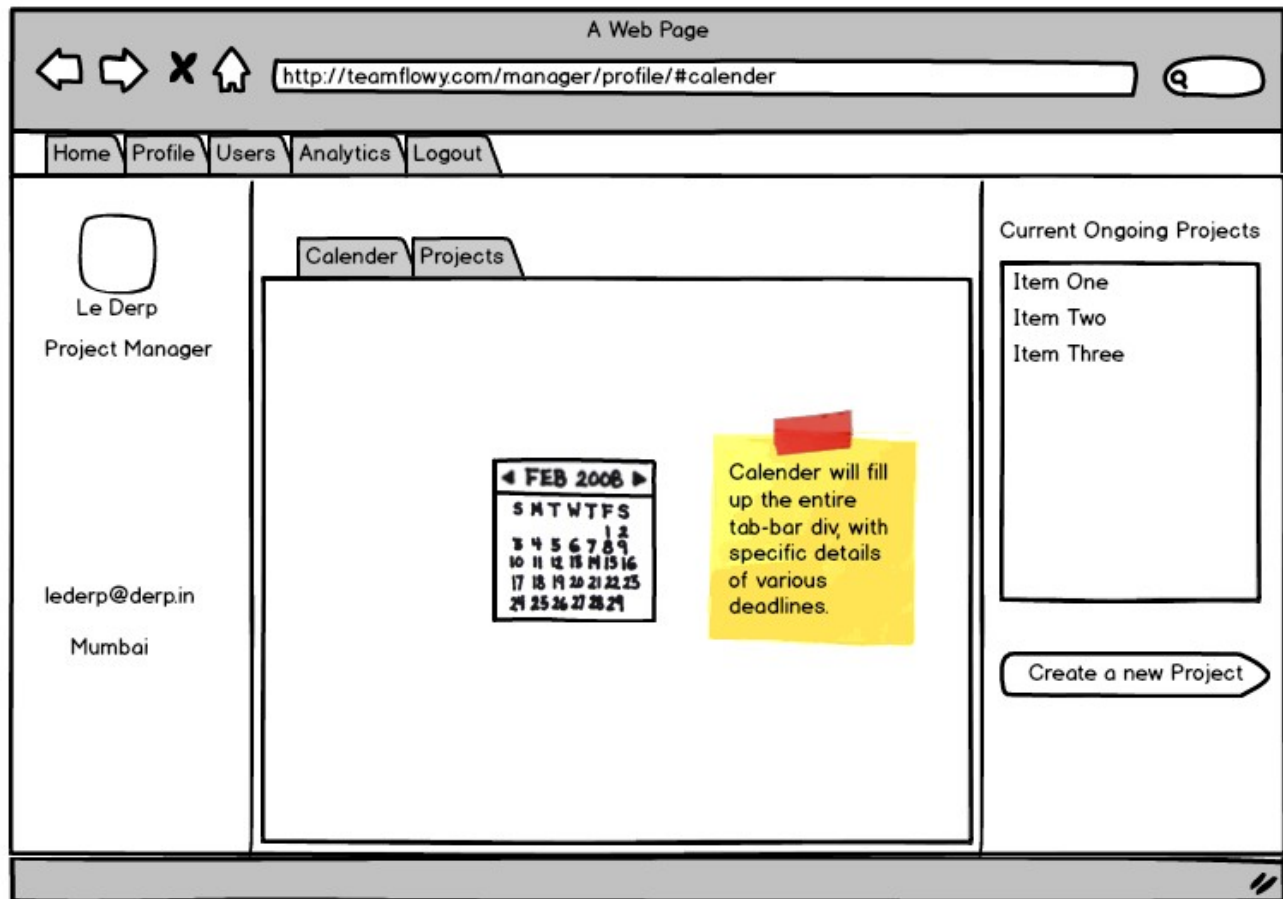
The profile page has 2 tab options, calender and projects. The calender view as explained in the comment will encompass the entire div and various deadlines will be marked down.
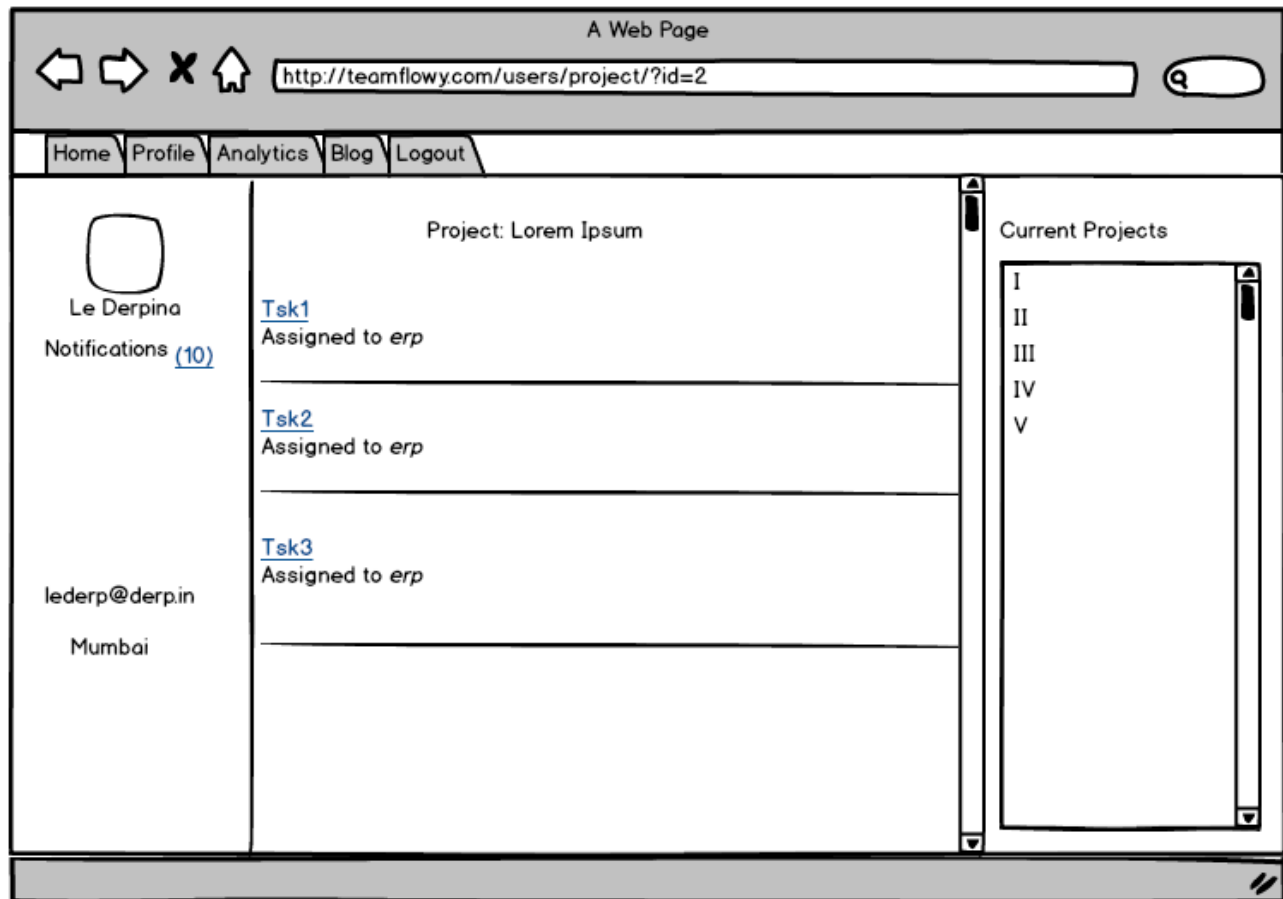The projects tab will be as follows:

Project-Enlist Pages

As mentioned in the comments, the project list in the middle zone is a very detailed description and consists of all the ongoing projects and their respective managers.

On clicking a particular project, the view will be as follows:

Specific Project Page:

A Web Page

http://teamflowy.com/users/project/?id=2

Home | Profile | Analytics | Blog | Logout

Le Derpina

Notifications (10)

lederp@derp.in

Mumbai

Project: Lorem Ipsum

Tsk1
Assigned to *erp*

Tsk2
Assigned to *erp*

Tsk3
Assigned to *erp*

Current Projects

I
II
III
IV
V

Various tasks are enlisted. The manager can edit any of the contents, like the project name, description etc, the same project view if seen by a normal user will look similar without the rights to edit. So it will appear as plain text to a normal user and a text field for manager.

The further task view and other views will be explained later after explaining some user views.

The manager can search for specific users by clicking users tab from menu option.

User Search

A Web Page

http://teamflowy.com/manager/users/

Home | Profile | Users | Analytics | Logout

Le Derp
Project Manager

lederp@derp.in

Mumbai

Search for users

Find Team Members of a project

Project Name ▼

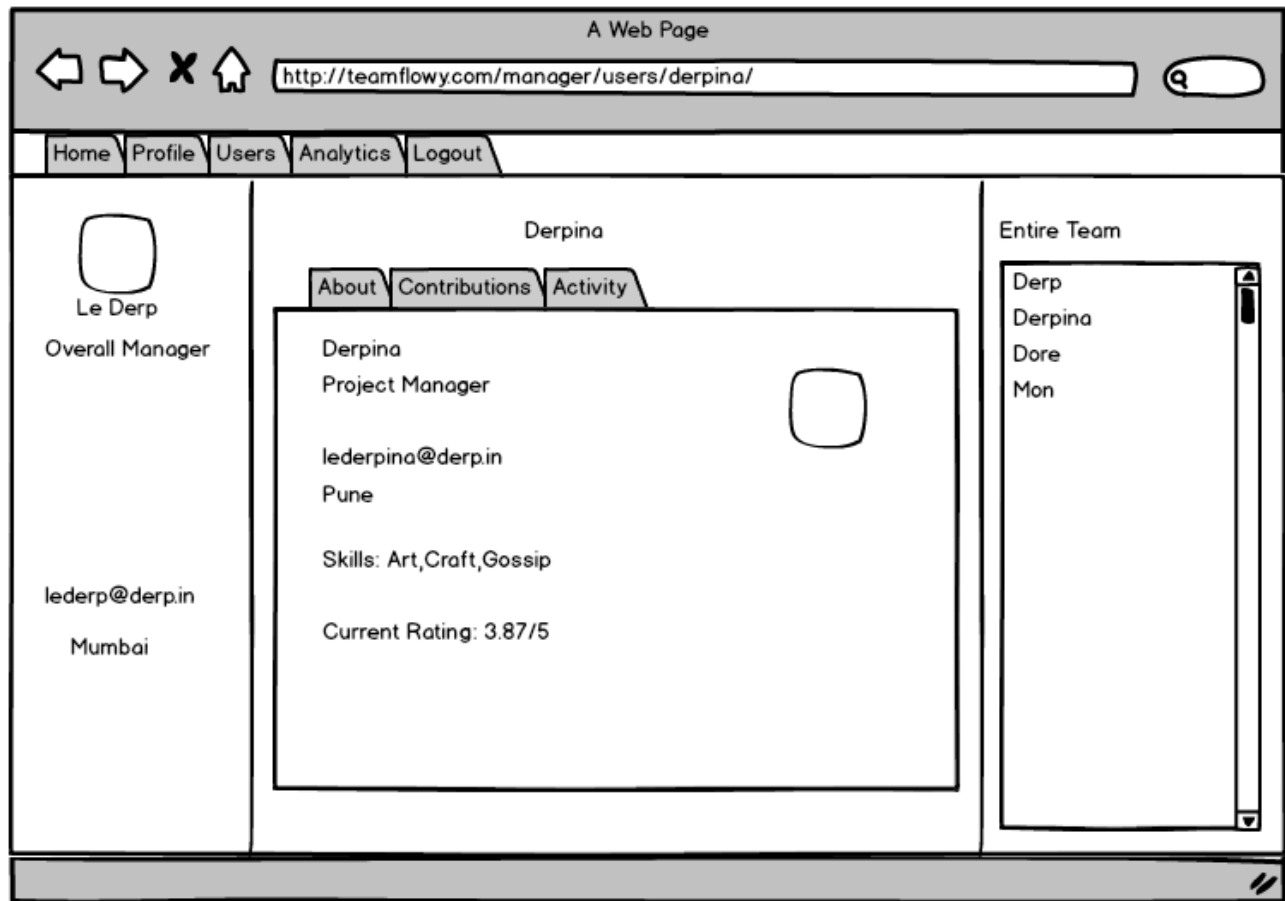Search via Task/Sub Task

Task/Sub Task ▼

Search via Name

🔍 search via name

Entire Team

Derp
Derpina
Dore
Mon

On the right the manager can view all the users in the current team. Also he can search according to various options provided. On searching for the user, the result page is shown in the following way.

User Result View

A Web Page

http://teamflowy.com/manager/users/derpina/

Home | Profile | Users | Analytics | Logout

Le Derp
Overall Manager

lederp@derp.in

Mumbai

Derpina

About | Contributions | Activity

Derpina
Project Manager

lederpina@derp.in
Pune

Skills: Art,Craft,Gossip

Current Rating: 3.87/5

Entire Team

Derp
Derpina
Dore
Mon

The default tab open is about tab for the particular user, say Derpina. The various details for Derpina are enlisted.
The Contributions tab looks as follows:

User-Contributions

http://teamflowy.com/manager/users/derpina/#contribution

| Home | Profile | Users | Analytics | Logout |

Le Derp
Overall Manager

lederp@derp.in

Mumbai

Derpina

| About | Contributions | Activity |

Derpina's Contributions

Project ▲	Identity (Task/SubTask)	Status	Review ⇕
Giacomo Guilizzoni	Drem T	Ongoing	-
Giacomo Guilizzoni	Drem ST	Completed	8/10
Giacomo Guilizzoni	Drem ST	Ongoing	-
Giacomo Guilizzoni	Drem T	Ongoing	-
Giacomo Guilizzoni	Drem T	Ongoing	-

Entire Team

- Derp
- Derpina
- Dore
- Mon

All the contributions sorted via projects and tasks are shown. The ratings are displayed in case the task/subtask is completed. The status is shifted accordingly.

The activity tab is as follows:

User-Activity

A Web Page

http://teamflowy.com/manager/users/derpina/#activity

Home | Profile | Users | Analytics | Logout

Le Derp
Overall Manager

lederp@derp.in

Mumbai

Derpina

About | Contributions | Activity

Derpina's Activities

Derpina joined Project four

Derpina completed Task IV under Project One

Derpina started Task IV under Project One

Entire Team

Derp
Derpina
Dore
Mon
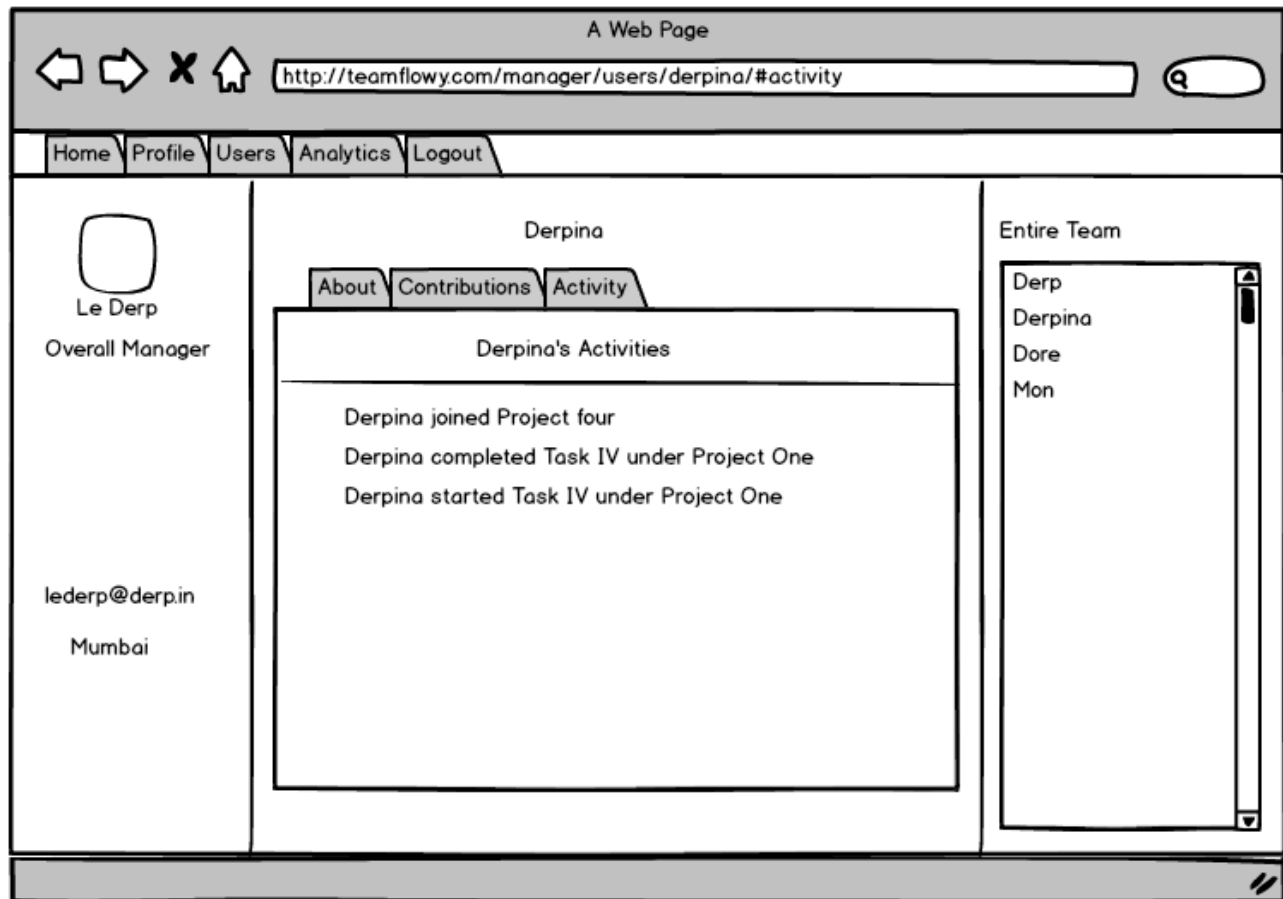
The user's entire activity log is listed, sorted via decreasing order of time.

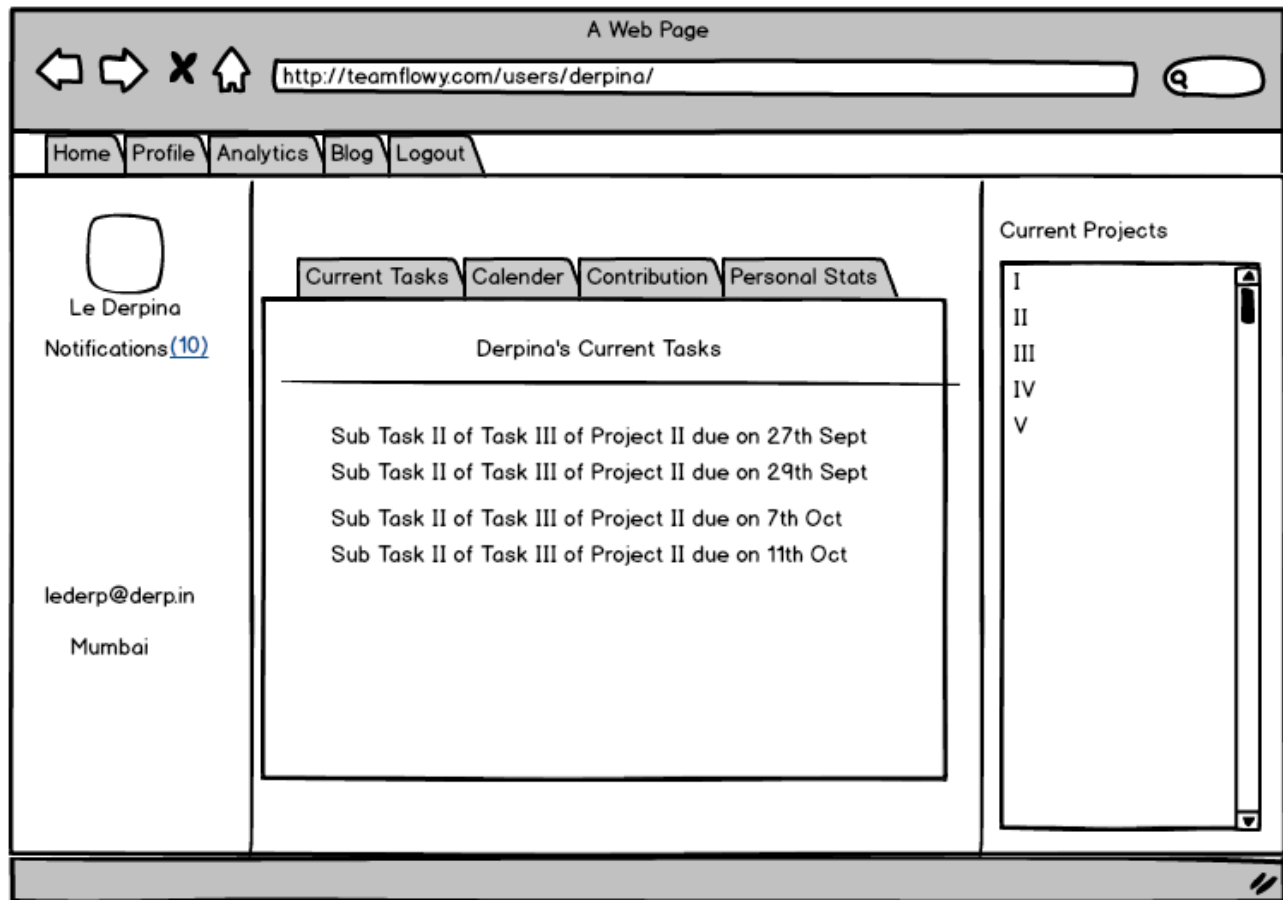The manager can further switch into analytics option.

Analytics:
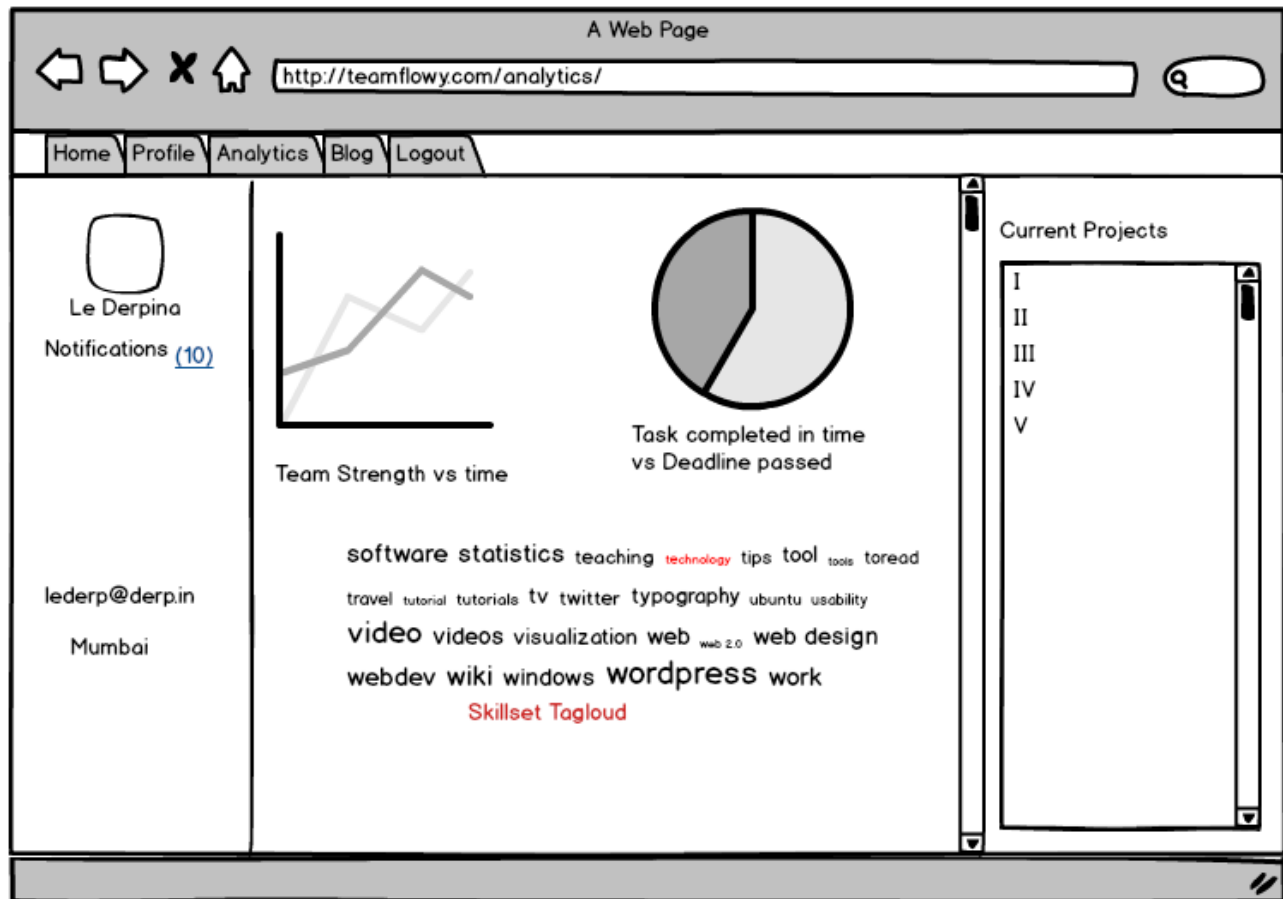
These are some sample analytics, namely team strength vs time, total task completed in time vs completed after deadline passed. Also the skillset tagcloud. Apart from these all other analytics will be shown beneath these which are specified in the specifications doc.
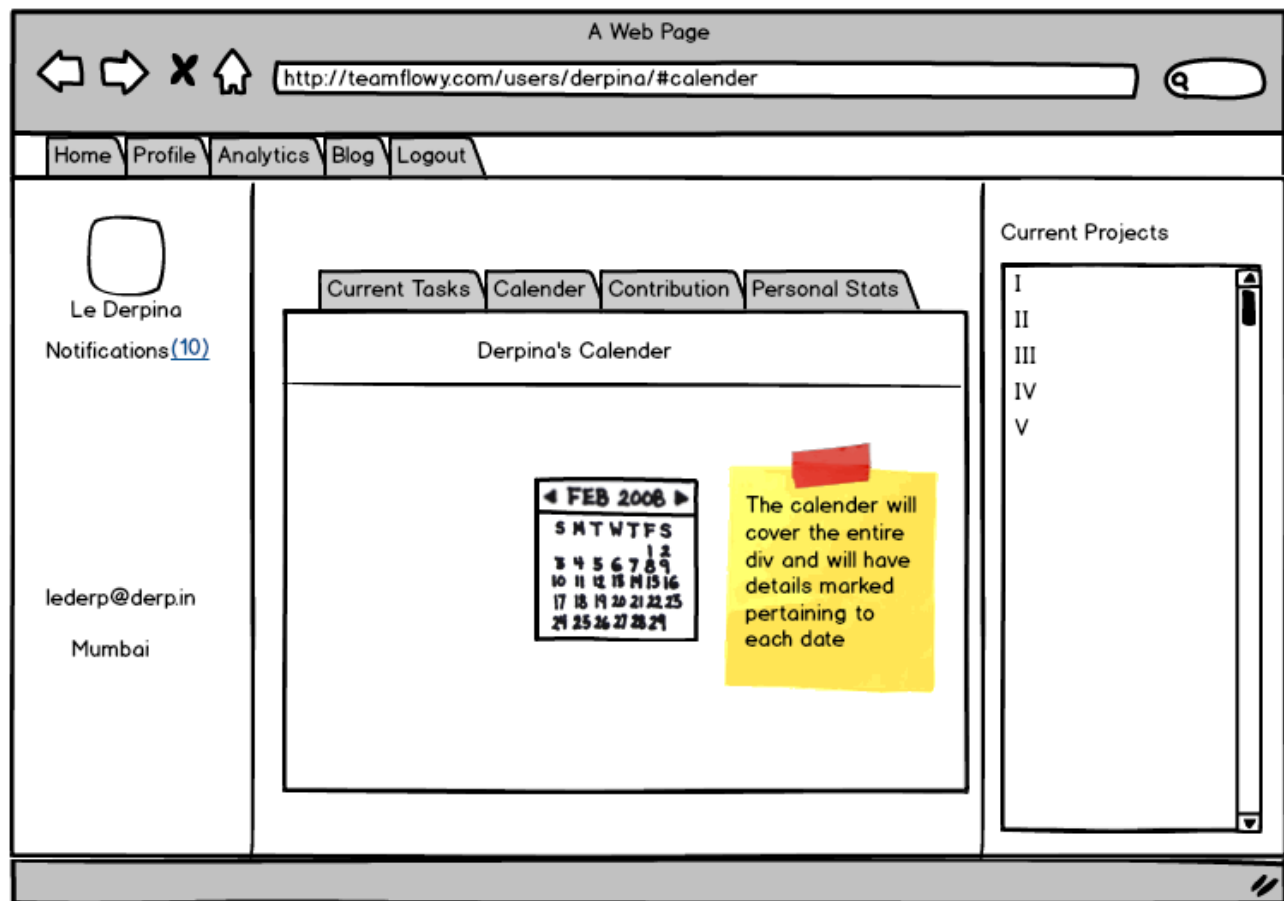
With these we have completed the various Manager pages. The rest pages will cover various functionality corresponding to a normal employee.

Employee Pages:
Index Page

A Web Page

http://teamflowy.com/users/derpina/

Home | Profile | Analytics | Blog | Logout

Le Derpina

Notifications (10)

lederp@derp.in

Mumbai

Current Tasks | Calender | Contribution | Personal Stats

Derpina's Current Tasks

Sub Task II of Task III of Project II due on 27th Sept
Sub Task II of Task III of Project II due on 29th Sept

Sub Task II of Task III of Project II due on 7th Oct
Sub Task II of Task III of Project II due on 11th Oct

Current Projects

I
II
III
IV
V

The default open tab is the upcoming deadlines of various tasks. The right sidebar shows the projects in which the employee is involved.

Index-Calender:

A Web Page

http://teamflowy.com/users/derpina/#calender

Home | Profile | Analytics | Blog | Logout

Le Derpina

Notifications (10)

lederp@derp.in

Mumbai

Current Tasks | Calender | Contribution | Personal Stats

Derpina's Calender

◄ FEB 2008 ►

S M T W T F S

The calender will cover the entire div and will have details marked pertaining to each date

Current Projects

I
II
III
IV
V

This is the calender page for the employee. The calender will be similar to that of the manager but it will enlist only deadlines for this particular employee.
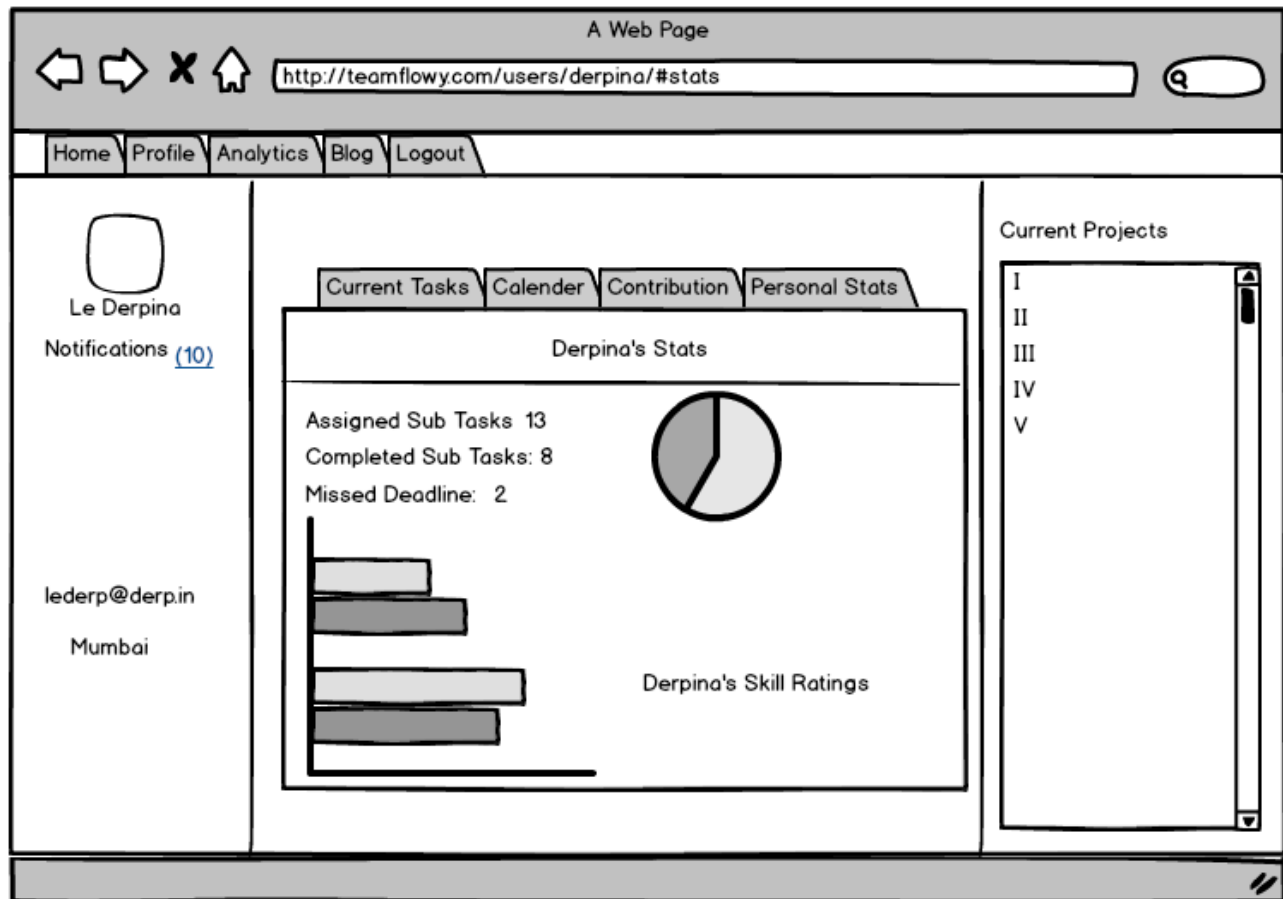
Index-Contributions:

http://teamflowy.com/users/derpina/#contribute

Home | Profile | Analytics | Blog | Logout

Le Derpina

Notifications (10)

lederp@derp.in

Mumbai

Current Tasks | Calender | Contribution | Personal Stats

You are working on the following tasks

Project ▲	Identity (Task/SubTask) ⬍	Status	Review ⬍
Giacomo	I (Task)	Ongoing	-
Bultpm	II (Sub Task)	Complete	8.7

You are Managing the following Tasks:

Projec ▲	Identity (Task/	Status	Revie ⬍	Manage
Giacomo	I (Task)	Ongoing	-	Add Sub
Itpm	II (Sub Task)	Complet	8.7	

Current Projects

I
II
III
IV
V

This page shows the contribution of the employee in various tasks. It is divided into 2 zones, one is the tasks for which the employee acts as a task manager. In this he has an additional power to create a new subtask. The normal table is the status of various on which the user works as a normal employee.

User-Personal Stats

A Web Page

http://teamflowy.com/users/derpina/#stats

Home | Profile | Analytics | Blog | Logout

Le Derpina

Notifications (10)

lederp@derp.in

Mumbai

Current Tasks | Calender | Contribution | Personal Stats

Derpina's Stats

Assigned Sub Tasks 13
Completed Sub Tasks: 8
Missed Deadline: 2

Derpina's Skill Ratings

Current Projects

I
II
III
IV
V

This page shows the various personal stats corresponding to the user. Namely his success ratio in tasks, his ratings earned for various skills etc.

We will now look into the project view, which the user can enter on hitting the right sidebar.
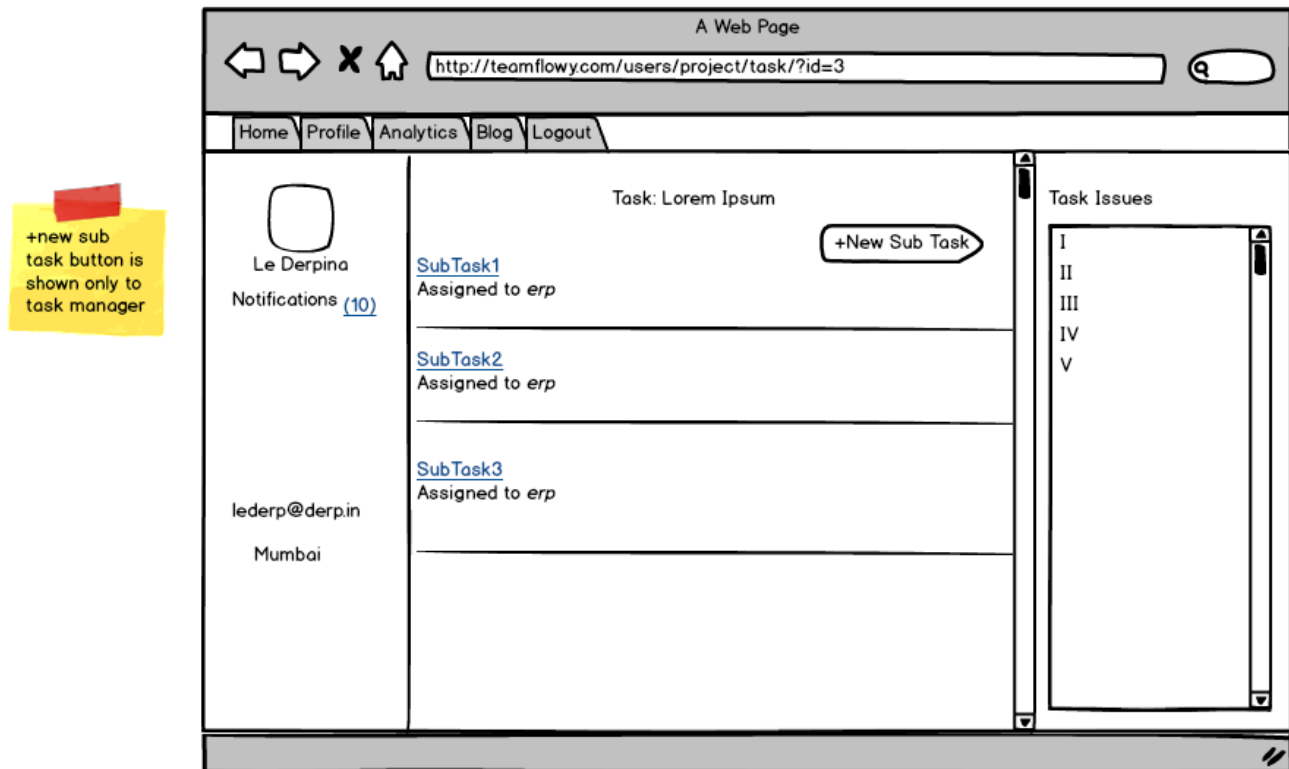The project view as mentioned earlier will be the same for the employee as the manager with the exception of a presence of a add new task button.

User-Project View:
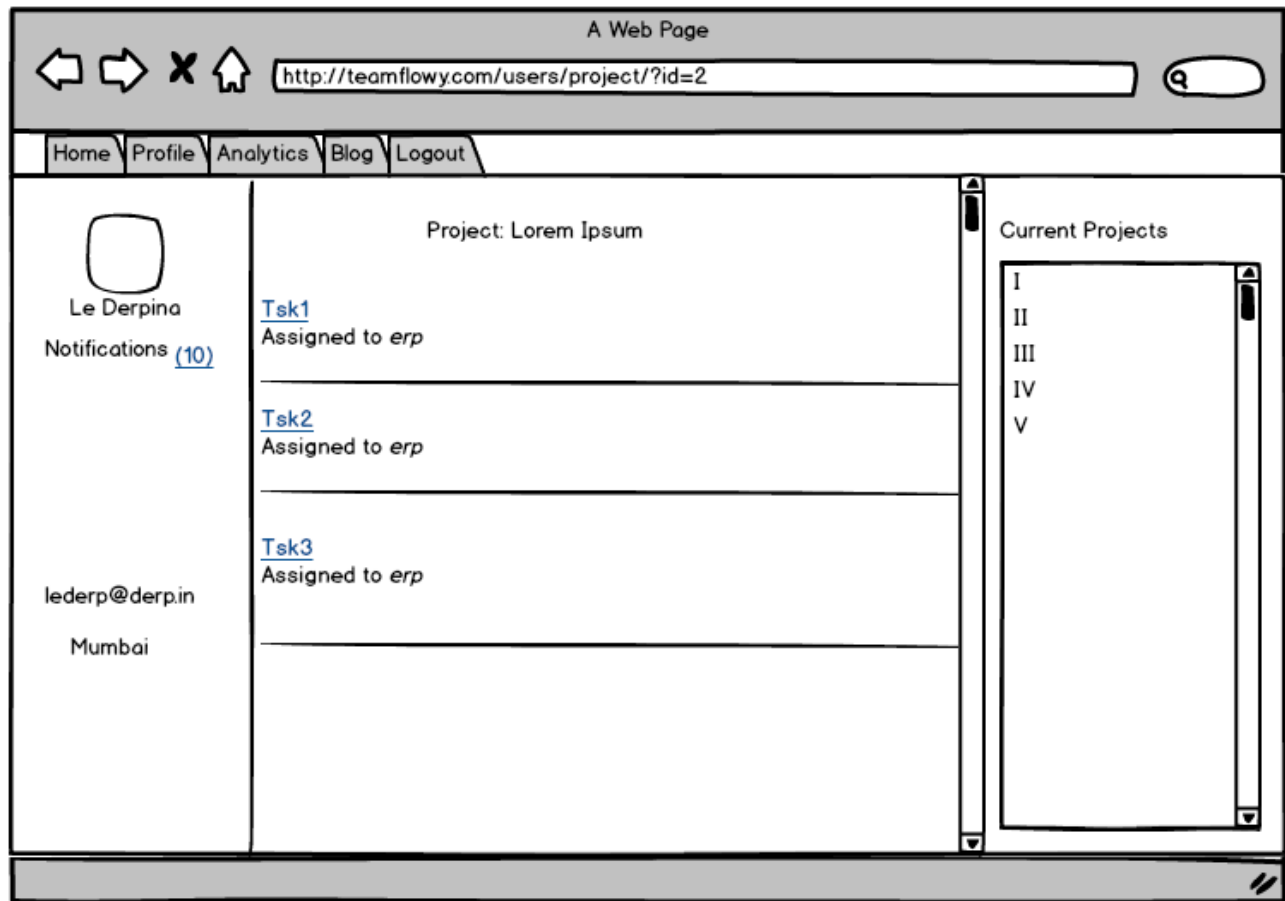
The tasks can be checked by clicking onto any of the tasks.
The task view is as follows:

Task View Page:

A Web Page

http://teamflowy.com/users/project/task/?id=3

Home | Profile | Analytics | Blog | Logout

+new sub task button is shown only to task manager

Le Derpina

Notifications (10)

lederp@derp.in

Mumbai

Task: Lorem Ipsum

+New Sub Task

SubTask1
Assigned to *erp*

SubTask2
Assigned to *erp*

SubTask3
Assigned to *erp*

Task Issues

I
II
III
IV
V

The task view page enlists subtasks.
The Task Manager can create tasks with the following page:

Task Manager-Create Task

http://teamflowy.com/users/project/?id=3&task=create

| Home | Profile | Analytics | Blog | Logout |

Le Derpina

Notifications (10)

lederp@derp.in

Mumbai

Task Name:

Task Description:

Deadline: / /

Skills Required

Assign Manager: Derp ▼   🔍 search via skill

Create Task

Tasks

I
II
III
IV
V

The newly created task will be enlisted into the task view.

Sub Task View

The subtask view as follows. A sub task can be created by task manager using the following view:

User Subtask Create

http://teamflowy.com/users/project/task/?id=3&subtask=create

| Home | Profile | Analytics | Blog | Logout |

Le Derpina

Notifications (10)

lederp@derp.in

Mumbai

Subtask Name:

Subtask Description:

Deadline   / /

Skills Required

Assign To: Derp ▼   🔍 search via skill

Create Sub Task ⟩

Sub Tasks

I
II
III
IV
V

Create Issue

A Web Page

http://teamflowy.com/users/projects/tasks/subtask/?create=issue

| Home | Profile | Analytics | Blog | Logout |

Le Derpina

Notifications (10)

lederp@derp.in

Mumbai

Issue Name:

Issue Description:

Deadline   / /

Issue Type: Bug ▼

Create Issue
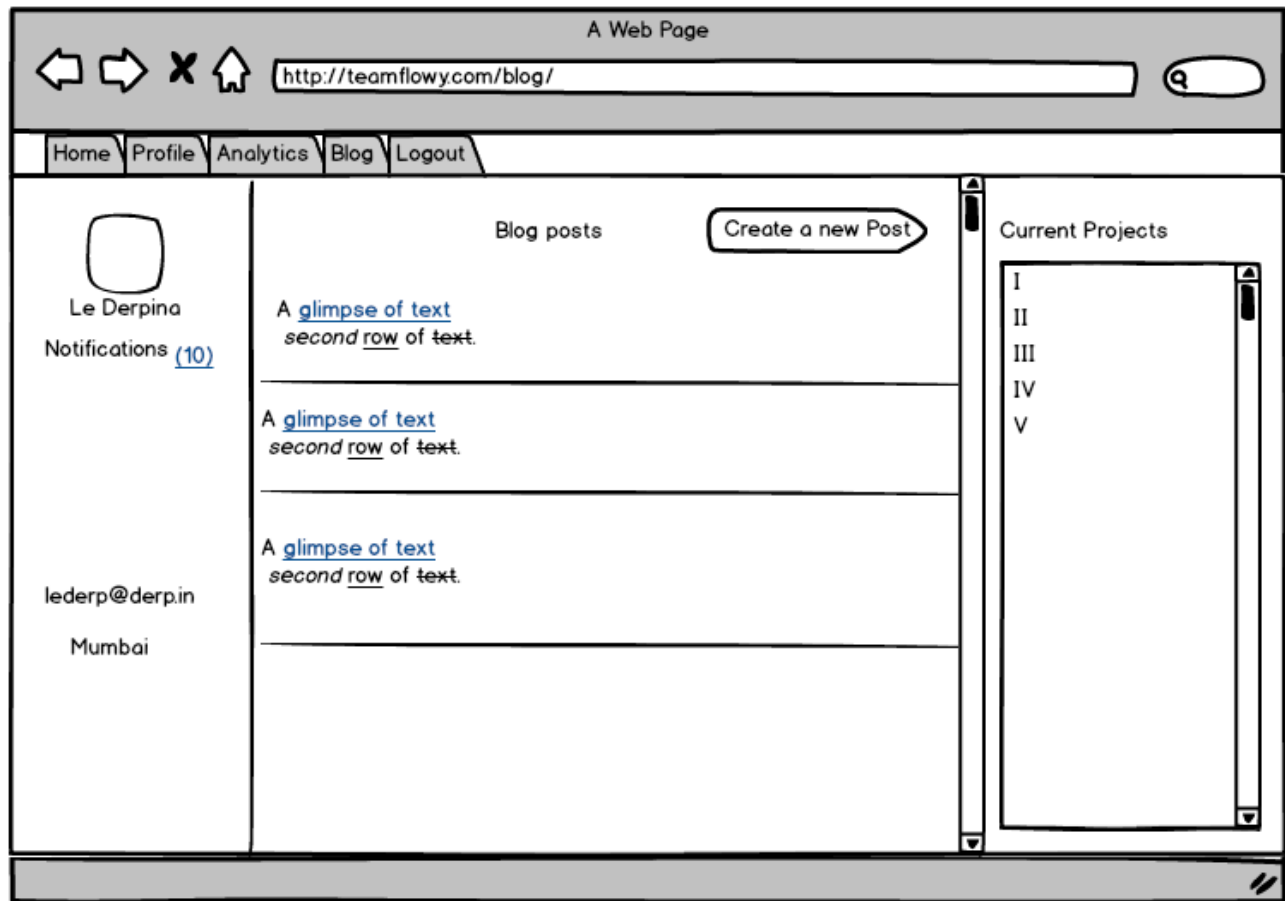
Current Issues

I
II
III
IV
V

The form can be used to create an issue.

Apart form these views we as well have the blog view.

Blog View

http://teamflowy.com/blog/

Home | Profile | Analytics | Blog | Logout

Le Derpina

Notifications (10)

Blog posts

Create a new Post

Current Projects

I
II
III
IV
V

A glimpse of text
second row of ~~text~~.

A glimpse of text
second row of ~~text~~.

A glimpse of text
second row of ~~text~~.

lederp@derp.in

Mumbai

A new blog post can be created using the following view.

Create Blog

http://teamflowy.com/users/?blog=create

| Home | Profile | Analytics | Blog | Logout |

Le Derpina

Notifications (10)

lederp@derp.in

Mumbai

Blog Name:

Blog Description

Blog ArchiveC

I
II
III
IV
V

1 Schemas

- **Person(<u>EmpID</u>, Name , Username , Address , Email , PhoneNo, Password)**

    Observe that PhoneNo is a multivalued attribute. This will introduce redundancy into the design, as all other attributes will have to be repeated for a person having two phone numbers. This is deliberate just to experiment as to what degree of redundancy this design could possibly result in. It will not be present in our final design.

- **Skill(<u>SkillID</u>, type)**

- **EmployeeResource(<u>EmpID</u>, <u>SkillID</u>, Rating)**

    EmpID and SkillID are Foreign keys into Person and SKillSet tables. Rating is a derived attribute which is basically average of ratings awarded to his tasks/subtasks which require that skill. Entry will be updated on trigger when some of his task or subtask is deleted or its rating is added/updated by supervisor.

- **Project(<u>ProjectID</u> , Name , Description , <u>BlogID</u> , BlogEntry)**

    Observe that the entity BlogPost has been merged with the Project entity. This is a deliberate redundancy that we have introduced just for experiment purposes . Redundancy because for two Blogs of the same Project the attributes Name and Description have to be repeated. This also leads to another problem. To create a blogpost one would need the entire description of the Project(Name and Description). Also if a new Project is created, one would have to necessarily create a blogpost for it since BlogID is a part of the primary key. Thus it can't be NULL). As we normalize the design, this will be removed.

- **TeamMember(<u>EmpID</u> , <u>ProjectID</u>)**

    EmpID and ProjectID are foreign keys to Person and Project respectively.

- **Task(<u>TaskID, ProjectID</u>, Priority, StartDate, Deadline, EndDate, Rating, Description, Approved, Review)**

    TaskID is a foreign key to Task. Approved will take only boolean values. Priority can be one of these values : *critical , high , normal , low.* Rating will be on the scale of 1 to 10. Approve can only be updated by the Project Manager supervising the task. Review and only be given after updating. A task is not completed until all the subtasks pertaining to that task are completed

- **SubTask(<u>SubTaskID,TaskID, ProjectID</u>, Priority, StartDate,Deadline, EndDate, Rating, Description, Approved, Review)**

    TaskID is a foreign key to Task. Approved will take only boolean values. Priority can be one of these values : *critical , high , normal , low.* Rating will be on the scale of 1 to 10. Approve can only be updated by the Task Manager supervising the subtask. Review and only be given after approval(may be positive or negative)

- **ProjectManger(<u>ProjectID, EmpId</u>)**
    ProjectID points to Project, {ProjectId, EmpID} is foreign key to TeamMember.

- **TaskAllocation(<u>TaskID, ProjectID, EmpID</u>)**
    TaskID, ProjectID are foreign keys into Tasks and Project . {ProjectID, EmpId} is foreign key to teamMember.

- **SubTaskAllocation(<u>SubTaskID, TaskID, ProjectID, EmpID</u>)**
    TaskID, ProjectID are foreign keys into Tasks and Project. {ProjectID, EmpId} is foreign key to teamMember.

- **TaskSkillsRequired(<u>SkillID, ProjectID, TaskID</u>)**
    SkillID and {TaskID , ProjectID} are foreign Keys into SkillSet and Task(Task is a weak entity to Project).

- **SubTaskSkillsRequired(<u>SkillID, ProjectID, TaskID, SubTaskID</u>)**
    SkillID and { SubTaskID , TaskID, ProjectID } are foreign Keys into SkillSet and SubTask(SubTask is a weak entity to Task and Task is a weak entity to Project).

- **TaskIssue(<u>IssueID</u> , TaskID, ProjectID , Priority , CreateDate , Resolved , ResolveDate)**
    {TaskID,ProjectID} is a foreign key to Task. ProjectID is a foreign key into Projects. Resolved will take only boolean values. Priority can be one of these values : critical , high , normal , low

- **SubTaskIssue(<u>IssueID</u> , SubTaskID, TaskID, ProjectID, Priority ,CreateDate , Resolved , ResolveDate)**
    {SubTaskID, TaskId, ProjectID} is a foreign key to SubTask. The attributes are rest same as that of TaskIssue.

- **Notification(<u>NotificationID</u> , Type , Time , Description , Title , GeneratedByEmpID , GeneratedByProjectID, IntendedForEmpID, IntendedForProjectID)**
    Both {GeneratedByEmpID , GeneratedByProjectID} and {IntendedForEmpID, IntendedForProjectID} are foreign keys to Team Member.

- **TaskIssueFollowee(<u>EmpID , ProjectID , TaskID</u>)**
    {EmpID, ProjectID} and {TaskID ,ProjectID } are foreign keys to TeamMember and Task respectively. Note that Task is a weak Entity.

- **SubTaskIssueFollowee(<u>EmpID , ProjectID , TaskID , SubTaskID</u>)**
    {EmpID, ProjectID} and {SubTaskID ,TaskID , ProjectID } are foreign keys to TeamMember and SubTask respectively. Note that Sub-Task is a weak Entity.

- **Document(<u>DocumentID</u> , URL , Name)**

- **DocBelongsTo(<u>DocumentID, ProjectID, EmpID</u>)**
    This is a ternary relationship relating Document, TeamMember, Project. DocumentID is foreign key to Document, ProjectID to Project, and {EmpID, ProjectID} to TeamMember.

2 Checks and Assertions

1. A Task's status can be marked as done only if all its subtasks are completed.

2. Review and rating can be given to task/subtask only if the corresponding task/subtask has been completed.

3. Deadline of subtask should be set before that of its parent task.

4. On creating a blogpost , one would have to maintain the dependency ProjectID → Name, Description in the relation **Project**.

5. Task/SubTask rating should be integer from 1-10

6. An task issue can be created only by either person doing that task or his supervisor(in case of task, ProjectManager). Similarly in case of subtask issue.

7. An issue can be followed only by a team member of the project concerned.

3 Functional Dependencies and Triggers

- In all relations, the obvious dependencies , Primary Key → All attributes.

- In the relation **Person**. Username → All attributes (as Username is also a candidate key).

- In the relation **Project**, ProjectID → Name, Description.

- In the relations **TaskIssue** and **SubTaskIssue**. ResolveDate → Resolved.

- Employee's rating will be updated whenever a task or a subtask concerning her is reviewed/changed/deleted.

- When ever a team member(working on a sub-task) creates a sub-task issue the supervisor supervising the sub-task automatically starts following the issue. Also the creator of the issue follows the issue. A notification corresponding to it is generated for the supervisor.