

# To-do List App “Teammy”

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## **Declaration of Sole Authorship**

We, Team 3, confirm that this work submitted for assessment is our own and is expressed in our own words. Any uses made within it of the works of any other author, in any form (ideas, equations, figures, texts, tables, programs), are properly acknowledged at the point of use. A list of the references used is included.

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## **Abstract**

This report discusses in detail the planning, implementation and methodologies used in accomplishing the development of the To-Do List application, Teammy, a modern, intuitive, productivity tool for business organizations and their employees. As the pandemic has brought in a new way of doing everything, employees and managers have been no exception. They were required to adapt to an online environment even in terms of assigning and assessing progress of tasks. Clearly, some organizations succeeded in the endeavour of managing tasks seamlessly, while others not so much. This is where Teammy comes in. Teammy is a new way of telling your co-workers your progress, assigning tasks to your team members and assessing overall progress. We do this by providing you an intuitive, modern, and simple to-do list application with boards, tasks and progress reports. We are committed to achieving our goal of easing tasks for managers and team members alike through Teammy.

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## **1.0 INTRODUCTION**

The purpose of designing "Teammy" apps is to provide space for employees to intuitively check their assigned tasks, deadlines, and progress among team members. What we consider in the Teammy project is the support of an efficient workflow environment and the improvement of team collaboration, which we hope will contribute to increasing work productivity.

This report will cover almost every technical aspect of our product. This includes a description of the software system, several software development methodologies and results, design documents, test plans, and release plans. With limited project duration in mind, we want to achieve the best results in a short time and approach them with agility as a tool for flexible communication between members. Agile methodology places more importance on people than on procedures, software that works rather than documents, agile response to change than on thorough planning, and cooperation with customers than contracts and negotiations. Analyze requirements within the scope of development and develop high-priority requirements. Through the regular meeting refers to the development of the following requirements, in which development team members share development situations, demonstrate, evaluate, and reflect customer requirements and improvements. It is planning to gradually expand the scope of development of software by repeating this method. The most important thing is to minimize overall defects by conducting tests every time the development is completed.

The technical issues we are concerned about are those that may impair the performance of desirable measures in terms of technology. The technical problem we may face is software distribution and cumbersome installation of updates. We must redistribute each time we add or change features, and the update process can be

difficult and slow for end users. If updates are needed too often, end users can be confused and annoyed.

The problem with our team is that it was difficult to take immediate action when the development team members worked in different places, and the meeting was delayed and the audio quality was reduced due to internet connection errors during the meeting. Furthermore, it was difficult to schedule a meeting because some team members lived in different time zones. Furthermore, when several members spoke at the same time, they could not know who was speaking.

## **2.0 METHODOLOGY AND RESULTS**

### **2.1 Literature Review**

#### Trello

Trello is a cloud based project management app designed by Fog Creek Software. It helps in maintaining a smooth work flow among teams. Trello boards and cards help teammates to collaborate better and in an organized way. Trello boards allow users to add a list to which further cards can be added. Cards provide many features like labels, card members, due dates and so on. The Powers-Ups feature which turns each board into living applications is admired by users. It provides users with the ability to upload files through dropbox or google drive accounts. Moreover getting started guides and trello training webinars can be accessed by the users. However, Trello is suitable for smaller projects. Big and complex projects become hard to manage on Trello. The other weak point about Trello is that it supports 10 Mb per upload for normal users which is quite limited. Furthermore, handling cards for big projects become quite hectic for team members.

## TickTick

TickTick is a To Do List App with striking features. It not only provides the features for managing professional life but also personal life. Users can schedule an agenda, collaborate with teams, prepare shopping lists and even manage their habits. It provides text as well as audio features to add and manage the tasks. For better collaboration among teams, it allows sharing lists. Tasks can be assigned, task activities can be tracked in a very organised manner. It provides reminders and alerts for deadlines. It has many more sorting, searching and tagging features for tasks. Separate calendar view is quite an attractive feature of this app. This is one of the best To do list apps with a hundred percent good review. The only demerits is its free plan provides only 9 lists, 99 tasks per list and 19 subtasks per task.

Whether you need to schedule an agenda, make memos, share shopping lists, collaborate in a team, or even develop a new habit, **TickTick** is always here to help you get stuff done and keep life on track.

## 2.2 Proposed Solution

The problem of updating desktop applications has been mentioned for a long time. To solve that, many software developers have created automatic update programs. We will use the standalone updater wyUpdate to add automatic updates to our program. wyUpdate is an open source program and is written in C#. wyUpdate can patch files using the VCDIFF delta-patch format. It can handle errors, and rollback updates if there is unrecoverable error. Also the Automatic Updater can tell wyUpdate to cancel progress, to start downloading, start extracting, etc.

Discuss the strengths and weaknesses of your system.

Considering that the application is a desktop app, security is the first thing I

come up with as a strength. It is not easy for hackers to access important data like customer's information that is collected to perform some features like login, register and task share feature. And given that this app is mostly used among workers who need to track their projects that they are working on and share the process in real-time with other users, users should enter the app frequently to check changes.

Furthermore, this app is not one-time use one since one of the objectives of using this app is to make habits of managing time.

On the other hand, devices that can access this app are limited to desktop or laptop. But as many companies tend to provide an employee with a laptop or desktop and most individuals work with their laptop or desktop, it does not cause huge inconvenience. Not enough features like not having a function for sharing files with other users could be the other weakness of the app. However, this is also compensated by continuous updates.

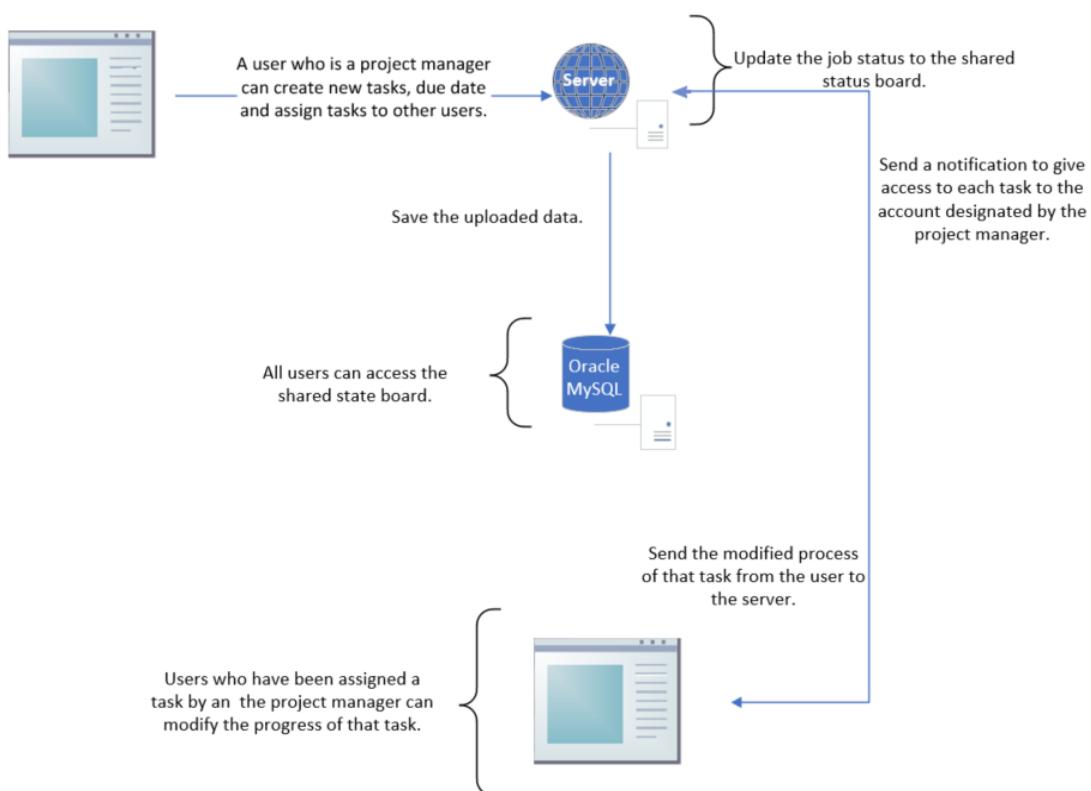


Figure 1: Predicted flow of server and database interactions

## 2.3 User Role Modelling

### 2.3.1 Brainstorm and Group

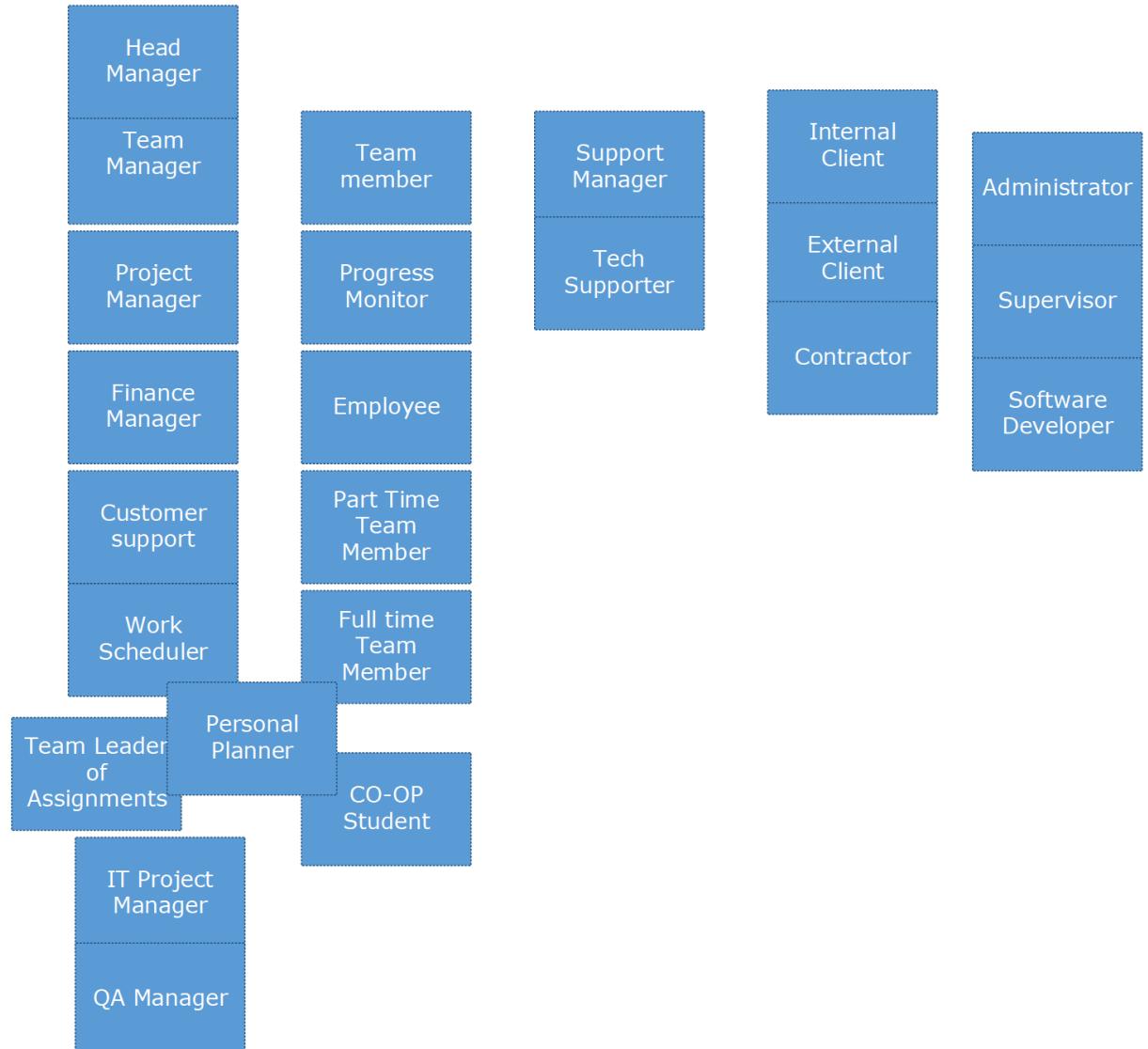


Figure 2: Organizing the user role cards on a table [1].

### 2.3.2 Consolidated User Roles

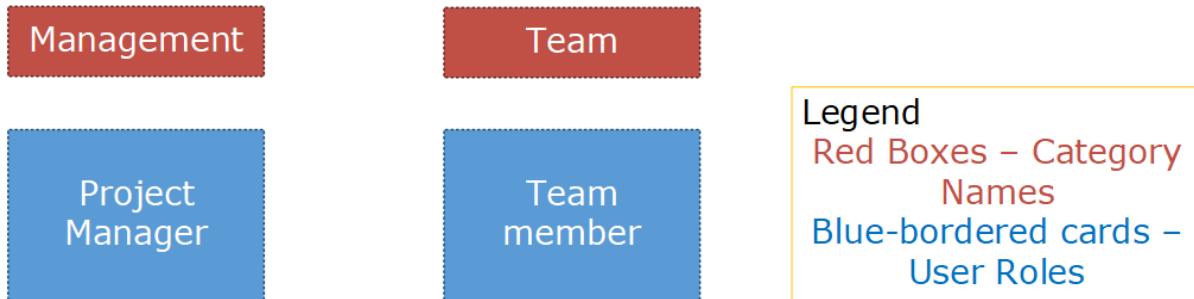


Figure 3: The consolidated role cards [1].

### 2.3.3 Description of User Roles and Persona

#### 1. Project manager

- Will use this software frequently and intensely
- Has intermediate or advanced level of understanding with the domain and software
- Is not tech-savvy, but proficient enough to use computers and learn how to use new software without big difficulty.
- Will assign specific tasks to team members and monitor the progress.

#### 2. Team member

- Is a moderately frequent user of the application as they keep others informed of their progress and check tasks assigned to them but do not have to create or manage tasks.
- Has quite a lot of expertise in the app domain as organizations often involve a culture for using task management apps.
- Expected to be proficient in using computers and software in general as most

organizations of the modern era require some level of this proficiency.

- As mentioned earlier, companies do have a task management application in place formally or informally. Hence, a team member is fairly proficient with the app we plan to create.
- Is looking for a great experience alongside the maximum features possible as this would mean they enjoy the privilege of visualizing what they are assigned to, tracking progress of dependent tasks etc.

#### **2.3.4 Additional Documentation**

Workshop video link : [User Role Modelling Workshop \(Team 3\)](#)

## 2.4 Release 1.0

### 2.4.1 User Stories

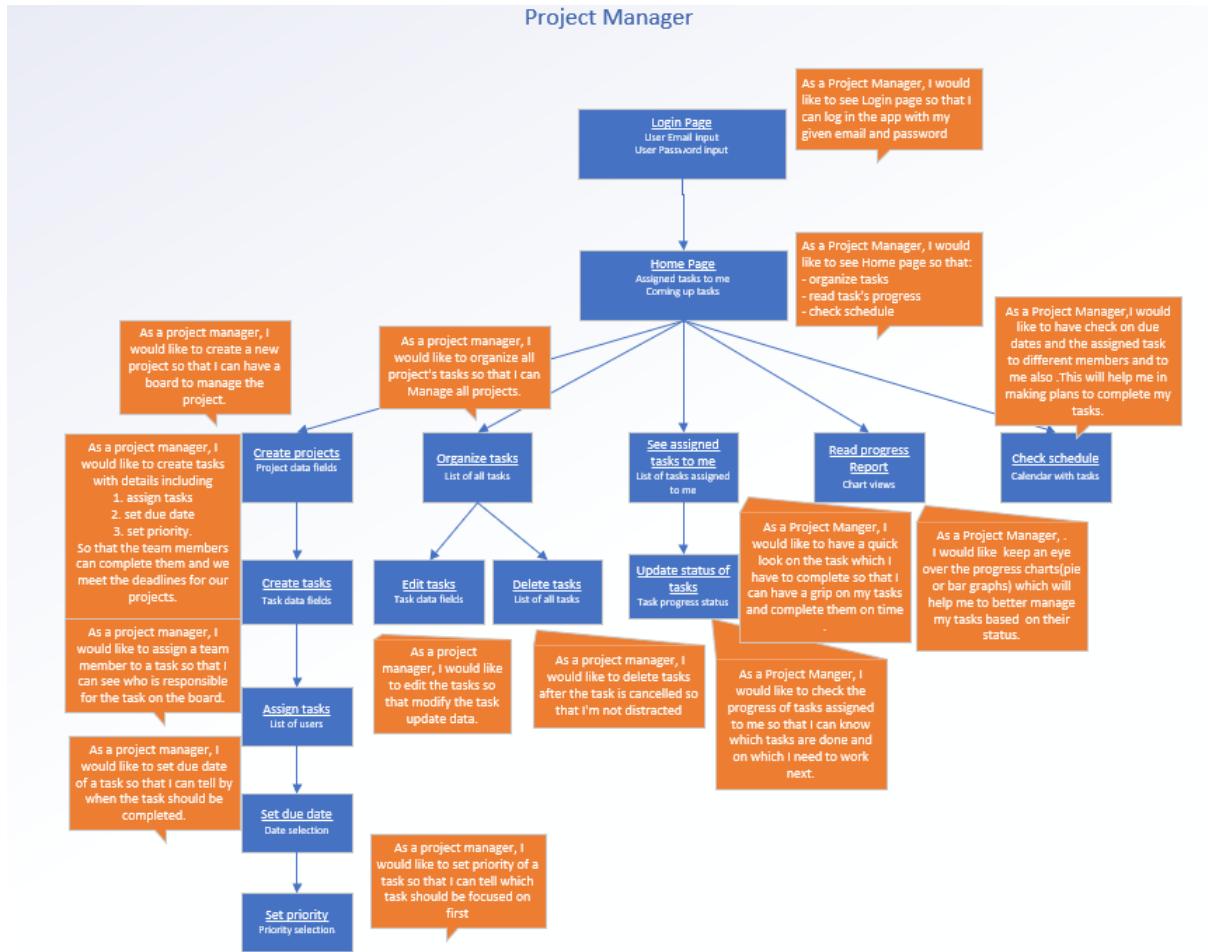


Figure 4: Consolidated Low Fidelity Prototype for Project Manager [1].

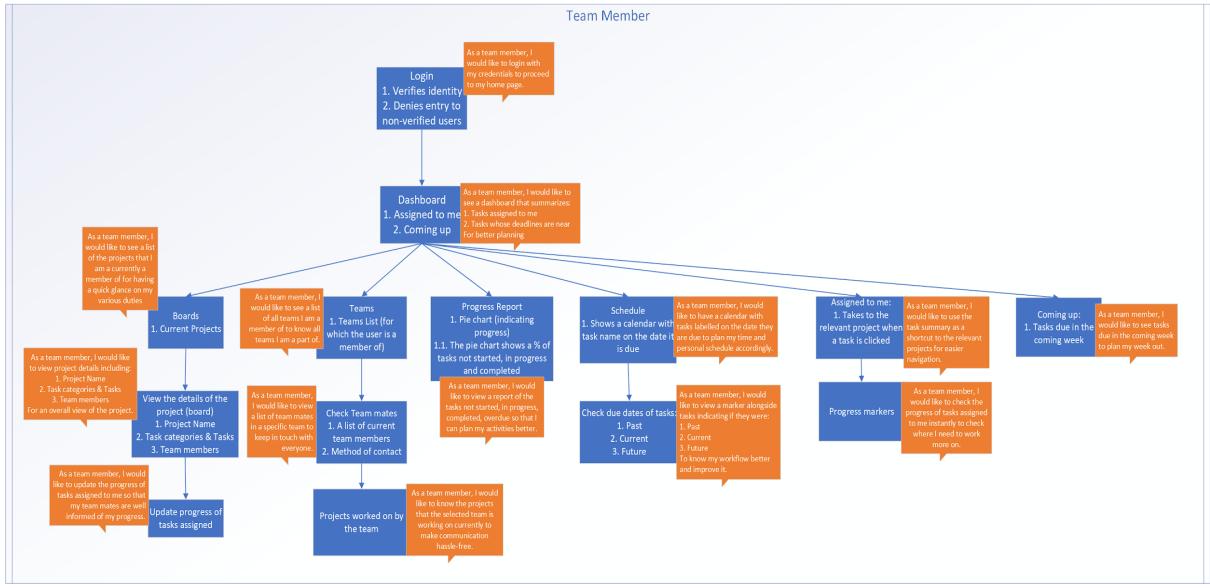


Figure 5: Consolidated Low Fidelity Prototype for Team Member [1].

## User Story cards

Login page:

A project manager can see the login page so that he/she can log in to the app by putting email and password.

Note:

- If the email or password that he/she put is not valid, will the UI show a message?

Note for UI: The UI will provide a message when the email or password does not exist.

Estimate: 2.5hr

Test by typing a valid email address and unmatching password and clicking the login button.

Expected outcome: The system shows a message saying the password is not correct and does not let the user log in .

Test by typing an invalid email address and clicking the login button.

Expected outcome: The system shows a message saying the email is not valid and does not let the user log in.

## Home page:

<p>A project manager can go to the home page when the application launches to organize tasks, read task's progress and check schedules.</p> <p>Note:</p> <ul style="list-style-type: none"><li>- Signing into an account allows all tests related to a user and can view a list and a summary of its tasks. (e.g. priority, progress status)</li><li>- Can the system save last login information?</li></ul> <p>Note for UI: The UI will provide a check box that "Remember me" under the password field.</p> <p>Estimate: 2hr</p>	<p>Test if it goes to the login window, after launching the application. Expected outcome: on the login window, it shows the email and password field that the user can enter.</p> <p>Test if check the "Remember me" check box, login, and log out. Then, the user login again.</p> <p>Expected outcome: the system skips the login page and the homepage screen will be launched immediately.</p> <p>Non-functional requirement: the application should quickly launch (less than 1 sec) and be ready to use after just clicking the icon.</p>
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<p>A project manager can assign a team member to a task.</p> <p>Note: Will we accept to choose multiple team members to one task?</p> <p>Note for UI: The UI will provide a dropdown for showing list of team members and a list box to show team members assigned to the task.</p> <p>Estimate: 2 hr</p>	<p>Test by selecting multiple people at random on the dropdown list. Expected outcome: under the task it will show all team members that are assigned to the task.</p> <p>Test by trying to select a team member that is already assigned to the task. Expected outcome: on the dropdown list, the system will disable the user to select the team member.</p>
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<p>A project manager can view progress charts.</p> <p>Note: Will the charts be updated whenever a task information is updated?</p> <p>Estimate: 1 hr</p>	<p>Test by changing a task progress status from 'Complete' to 'Not started' or 'In Progress'.        Expected outcome: The number of 'Complete' tasks on the chart will be reduced and the number of 'Not started' or 'In Progress' tasks on the chart will be increased in real-time.</p> <p>Test by either creating a new task or deleting an existing task on the board.        Expected outcome: The number of tasks will be changed on the chart.</p> <p>Non-functional requirement: The user should easily and intuitively be able to see the charts with one click of the menu tab.</p>
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<p>A project manager can create a new project.</p> <p>Note: Will it accept the same name of the project with that of existing one?</p> <p>Note for UI: The UI will provide a textbox for user input for project name and show a message if the user puts the same name of project as the one that already exists when the user clicks the create button.</p> <p>Estimate: 2 hr</p>	<p>Test by putting a project name on a project name field that does not already exist and clicking the create button.        Expected outcome: The system will create a new project.</p> <p>Test by putting the same project name on the project name field with the one that is already existing and clicking the create button.        Expected outcome: The system will show an error message for it and disable the user to make a new project.</p>
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<p>A project manager can create a task with details including assigning a task, setting due date and setting priority of the task.</p> <p>Note: will it accept to create the task even if the user did not either assign a task, set due date or set priority?</p> <p>Note for UI: The UI will enable the user to create a task even if the user omits to set some of these details of the task.</p> <p>Estimate: 3 hr</p>	<p>Test by omitting to assign the task to team members and clicking the create button. Expected outcome: The system will create a new task.</p> <p>Test by omitting to set the due date of the task and clicking the create button. Expected outcome: The system will create a new task.</p> <p>Test by omitting to set the priority of the task and clicking the create button. Expected outcome: The system will create a new task.</p> <p>Test by completing all the details of the task and clicking the create button. Expected outcome: It will create a new task on the board.</p>
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<p>A project manager can set priority to a task.</p> <p>Note: Will UI accept the user to change the priority to a task once he/she sets it? Note: Will UI accept to have a default value of priority?</p> <p>Note for UI: UI will allow the user to choose the other priority even after they choose the previous one.</p> <p>Note for UI: UI will show 'none' as a default value of priority on the dropdown list.</p> <p>Estimate : 2 hr</p>	<p>Test by setting priority of a task and changing it to another priority on the dropdown list. Expected outcome: previous chosen priority will be removed as a saved result and the priority that the user chooses for the final will only appear.</p> <p>Test by creating a new task to see the default value of priority to a task. Expected outcome: Before the user opens the dropdown list, the default value named 'none' will be shown on the dropdown list box.</p>
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<p>A project manager can organize tasks.</p> <p>Note: Will UI accept a user to edit or delete a task on the board by clicking the task on the board?</p> <p>Note for UI: UI will bring a window for editing a task if the user clicks the task. Also, UI will bring a window for confirming the deleting task if the user clicks the delete button.</p> <p>Estimate: 1.5 hr</p>	<p>Test by clicking a task. Expected outcome: The system will bring the window for editing the task.</p> <p>Test by clicking a delete button that is beside the task on the board. Expected outcome: The system will bring a confirmation message box for deleting the task.</p>
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<p>A Project Manager can have a preview on the task which he have to complete</p> <p>Note: Assigned to me shows the name of the task with project name to be completed.</p> <p>Note about UI: The user can click the assigned task to go to the project under which the particular task is assigned.</p> <p>Estimate:1 hr</p>	<p>Test by assigning the task to the project manager himself . Expected outcome:After the task is assigned,It should show up under the task assigned to me.</p> <p>Test by unassigning the task to the project manager himself. Expected outcome: The unassigned task gets removed from the assigned to me section in the home page.</p>
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<p>A Project Manager can set a due date of a task.</p> <p>Note: Are the dates before the current day getting set?</p> <p>Note for UI: The UI will enable the user to select the dates after the current day time.</p> <p>Estimate:1hr</p>	<p>Test by trying to set a due date which is before the current time. Expected outcome: The system will not allow the user to click the dates.</p> <p>Test by trying to set a due date which is after the current time. Expected outcome: The system will allow the user to set the due date and show the due date on the window.</p>
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### Edit of tasks assigned:

A project manager can edit a task to modify its content.  Note: Will we show the edit window as a pop-up window or on another page?  Note for UI: The UI will provide as a pop-up window.  Estimate: 1 hr	Test if the user can edit the content of a task. Expected outcome: The edit pop-up window related about the task and every content can be modified.  Test if the user can save the updated content. Expected outcome: Latest data saved in storage.
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### Delete of tasks assigned:

A project manager can delete a task after the task is cancelled.  Note: <ul style="list-style-type: none"><li>- Should we delete immediately or have a buffer? (trash can)</li><li>- Can we delete a task that is in the 'Not started' and 'Completed'?</li></ul> Estimate: 1 hrs	Test if there is a chance given to quit deleting?(i.e.“Are you sure?” message) Expected outcome: The user is asked if they're sure they want to delete when they try to delete a task.
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As a Project Manager, I can check on due dates of the assigned task to different members and to me also on the calendar.  Note: Can project manager and team members check past and future deadlines ?  Note about UI: The app will show the current month calendar with due dates and also functionality to see the previous and coming months.  Estimate:2hr	Test by checking the previous and coming months records. Expected outcome: The calendar will show all the due dates of the particular months.  Test by clicking the due dates for team members and for project manager. WILL IT BE SAME AS TEAM MEMBER?  Expected Outcome: If the name of the due date's task is long, it will show all the names, and there will be no movement.  Non-functional requirement: When the project manager changes the due date,
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	the response time should be under 0.5 second.
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## Login

A team member can login to verify his identity and proceed to his/her homepage.  Note: Will they be able to reset their password?  Note about UI: For the current release, the reset password functionality shall not be developed.  Estimate: 2.5 hr.	Test by entering registered email and password.  Expected outcome: The Team member must be redirected to their home page.  Test by entering another unregistered email address and password.  Expected outcome: Team member cannot log in. It will show an error message.
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## Dashboard

A Team member can identify briefly the tasks approaching the deadline and the assigned tasks.  Note:Can they change the status of assigned tasks?  Note about UI: Dashboard does not allow users to change a status of the assigned tasks. One list in the dashboard only shows tasks assigned to them with a green check symbol in completed tasks and another shows tasks that due date is coming up in a week.  Estimate: 1 hr.	Test by clicking the checkbox if a team member can check for completion mark on the assigned task.  Expected outcome: Team member cannot check any mark on "Assigned to me". Team members can update progress through the boards.  Test whether the due date is reflected in the coming-up when it is changed the due date within a week to after two weeks.  Expected outcome:The coming up list in the dashboard reflects the change, so It does not show the tasks that due date is changed to after two weeks.
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Update progress of tasks assigned:

<p>A team member can update the progress of tasks assigned to him/her.</p> <p>Note: Can they have custom progress markers (other than Not started, In Progress or Completed)?</p> <p>Note about UI: The UI will provide a dropdown for progress markers.</p> <p>Estimate: 1 hr.</p>	<p>Test by selecting Not Started, In Progress or Completed. Expected Outcome: The single option selected is reflected on the task.</p> <p>Test by creating a new task to see the default progress marker. Expected Outcome: The progress marker 'Not Started' should be shown on a new task.</p>
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#### Check teammates:

<p>A team member can check other team members along with their contact method for a specific team .</p> <p>Note: Are their contact methods hyperlinks to contact them?</p> <p>Note about UI: The app will redirect them to the default mail application if the contact method is an email.</p> <p>Estimate: 1 hr.</p>	<p>Test by clicking on an email address of a random team member. Expected Outcome: The default email application is opened with the 'TO:' address set to the email clicked.</p> <p>Test by clicking on a phone number of a team member. Expected Outcome: The phone number is emailed to the user's registered email address along with the team member's name.</p>
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#### Schedule

<p>A team member can look at tasks on the calendar.</p> <p>Note: Can they see the revised due date by the project manager in real time?</p> <p>Note about UI: The app will show the deadline for each task on the screen of</p>	<p>Test by clicking on the schedule tab if team members can view the calendar for the current month as the default. Expected Outcome: Team members can check the current month screen on the first schedule screen.</p>
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the current month.

Estimate: 1 hr.

#### Check due dates of tasks:

A team member can check all the due dates on the calendar.

Note: Can they check past and future deadline records?

Note about UI: The app will show the current screen of the month and a button that can be moved to a month earlier and later.

Estimate: 1 hr.

Test by moving monthly to check previous and subsequent records.

Expected Outcome: The calendar shows all the due date tasks on a month basis.

Test by clicking the date that contains the due date.

Expected Outcome: If the name of the due date's task is long, it will show all the names, and there will be no movement.

Non-functional requirement: When the project manager changes the due date, the response time should be under 0.5 second.

#### View the details of the project(board):

A team member can look at the project details.

Note: Can they edit about the project details?

Note about UI: The app will show the project full name, task categories, tasks and assigned members.

Estimate: 1.5 hr.

Test by clicking on the project name whether the name of the project can be modified.

Expected Outcome: Team members cannot be modified because only the project manager has the right to modify the detailed description of the project.

Test by clicking update the status of the task assigned to him or her.

Expected Outcome: He or She can update the progress status (not started, in progress, or completed) by task.

View the progress report:

A team member can view progress reports.  Note: Can they choose the type of progress chart?  Note about UI: The app will show the only pie chart with percentage of three sections(not started, in progress, completed).  Estimate: 0.5 hr	Test by clicking the view chart. Expected Outcome: Team members can see the progress pie chart consisted of three sections (not started, in progress, completed).  Test by changing the status of task in not started to completed and clicking the view chart again to see the chart is changed. Expected Outcome: Team members can see the percentage of a completed section is increased.
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View project worked on by the team:

The team members can see the projects that the selected team is working on.  Note: Can they see the projects that have already been done or not started?  Note about UI: The app will show the list of projects that the selected team is currently working on.  Estimate: 1 hr	Test by selecting a team. Expected Outcome: He or She can see the list of projects that a selected team is currently working on.  Test by deleting a project and see the deleted project is still shown in the list. Expected Outcome: The deleted project is not shown in the list.
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Assigned tasks to me:

<p>A team member can get a quick glance of tasks assigned to him/her in the homepage.</p> <p>Note: Are project names mentioned alongside assigned tasks?</p> <p>Note about UI: The tasks themselves will act as hyperlinks to the projects hence avoiding the need to mention project names.</p> <p>Estimate: 1.5 hr.</p>	<p>Test by assigning tasks and then checking the home page. Expected outcome: The newly assigned task appears in the assigned to me section in the home page.</p> <p>Test by unassigning a task and checking the home page. Expected outcome: The task that used to appear previously must have been removed from the assigned to me section in the home page.</p>
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### Coming up:

<p>A team member can get a quick glance of tasks in the coming week.</p> <p>Note: Are project names mentioned alongside tasks coming up?</p> <p>Note about UI: The tasks themselves will act as hyperlinks to the projects hence avoiding the need to mention project names.</p> <p>Estimate: 2 hr.</p>	<p>Test by setting the due date of a random assigned task within the current week and checking the home page. Expected outcome: The task whose deadline has been newly set must appear along with the deadline on the home page in the coming up section.</p> <p>Test by extending the due date of a random task due in the current week to the next week. Expected outcome: The task that used to appear previously must have been removed from the coming up section in the home page.</p>
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### Teams:

<p>A team member can view a list of all teams he/she is currently part of.</p> <p>Note: Will team members be listed beneath each team header?</p> <p>Note about UI: The team names will act as links to another page containing member names and current projects.</p> <p>Estimate: 1.5 hr.</p>	<p>Test by joining a team and then checking the Teams page.</p> <p>Expected outcome: The newly joined team should appear in the Teams view.</p> <p>Test by exiting a team and then checking the Teams page.</p> <p>Expected Outcome: The newly exited team must have been removed from the teams view.</p>
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### Boards:

<p>A team member can view a list of all boards (projects) that he currently has access to or is a part of.</p> <p>Note: Will a preview of teams be available on this page ?</p> <p>Note about UI: No. The UI will provide only tabs of current projects clicking upon which the task view shall be opened (Further details only in that view).</p> <p>Estimate: 1 hr.</p>	<p>Test by adding a new board (PM privilege) and check in team member's view if the board is visible.</p> <p>Expected outcome: The newly created board is visible in the boards view.</p> <p>Test by removing a project (PM privilege) in team member's view if the board is visible.</p> <p>Expected outcome: The board removed must also be removed from team member's view.</p>
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Table 1: The Must-Have stories for Release 1.0 [1].

Story	Estimate
A project manager can go to the home page when the application launches to organize tasks, read task's progress and check schedules. (PM)	2 hr.
A project manager can create a new project. (PM)	2 hr.
A project manager can create a task with details including assigning a task, setting due date and setting priority of the task. (PM)	3 hr.
A project manager can assign a team member to a task. (PM)	2 hr.
A Project Manager can set a due date of a task. (PM)	1 hr.
A project manager can organize tasks. (PM)	1.5 hr.
As a Project Manager, I can have checks on due dates of the assigned task to different members and to me also on the calendar. (PM)	2 hr.
A project manager can see the login page so that he/she can log in to the app by putting email and password. (PM)	2.5 hr.
A team member can login to verify his identity and proceed to his/her homepage. (TM)	2.5 hr.
A Team member can identify briefly the tasks approaching the deadline and the assigned tasks. (TM)	2 hr.
A team member can update the progress of tasks assigned to him/her. (TM)	1 hr.
A team member can look at tasks on the calendar. (TM)	0.5 hr.
A team member can check the due date on the calendar (TM)	1 hr.
A team member can look at the project details. (TM)	1.5 hr.
A team member can get a quick glance of tasks assigned to him/her in the homepage. (TM)	1.5 hr.
A team member can view a list of all boards (projects) that he currently has access to or is a part of. (TM)	1 hr.

Table 2: The Should-Have stories for Release 1.0 [1].

<b>Story</b>	<b>Estimate</b>
A project manager can view the progress charts. (PM)	1 hr.
A team member can check other team members along with their contact method for a specific team. (TM)	1.5 hr.
A team member can view progress reports. (TM)	0.5 hr.
A team member can view a list of all teams he/she is currently part of. (TM)	1.5 hr.

Table 3: The Could-Have stories for Release 1.0 [1].

<b>Story</b>	<b>Estimate</b>
A Project Manager can have a quick look on the task which he has to complete. (PM)	1 hr.
A project manager can delete a task after the task is cancelled. (PM)	1 hr.
A project manager can edit a task to modify its content. (PM)	1 hr.
The team members can see the projects that the selected team is working on. (TM)	1 hr

Table 4: The Would-Have stories for Release 1.0 [1].

<b>Story</b>	<b>Estimate</b>
A project manager can set priority to a task. (PM)	1.5 hr.
A team member can get a quick glance of tasks in the coming week. (TM)	2 hr.

## **2.4.2 Additional Documentation**

Link to workshop video: [User Stories Gathering Workshop \(Team 3\)](#)

### **2.4.3 Release Plan 1.0**

#### **Project Development Roadmap**

- adding corresponding project name beside the task at 'Assigned to me' on Home page
- making board for showing existing projects
- making task editing page and put detail settings on the page
- showing tasks on due date of the task on calendar
- pie chart for task status
- showing a list of team members and contact emails on teams page

The main purpose of this application is to provide a tool of managing assigned tasks and checking progress of the project in a team. Must-have user stories are functionalities that we cannot say this application achieves its purpose if this application does not have. We prioritize the most basic and irreplaceable functions to achieve our objectives as Must-Have, and additional features for supporting efficient workflow environments and improving team collaboration as Should-Have. We classify user stories into groups by functionality that can be performed together and have similar purpose.

#### **The Release Plan**

<b>Level</b>	<b>Group</b>	<b>Stories</b>	<b>Overall Estimate</b>
Must - Have	Create Projects	A project manager can create a new project. (PM)	2 hr.
Must -Have	Update progress	A team member can update the progress of tasks assigned to him/her. (TM)	1 hr.
Must -Have	Home Page /A team member can see the tasks and due	A project manager can go to the home page when the application launches to	2 hr.

	<p>date assigned to him or her at a glance, and the project manager can briefly understand the progress of the work.</p>	<p>organize tasks, read task's progress and check schedules. (PM)</p> <p>A Team member can identify briefly the tasks approaching the deadline and the assigned tasks. (TM)</p> <p>A team member can get a quick glance of tasks assigned to him/her in the homepage. (TM)</p>	
Must -Have	<p>Create tasks</p> <p>/The project manager should be able to create tasks that include details such as assigning tasks to team members, setting due date, and setting task priorities.</p>	<p>A project manager can create a task with details including assigning a task, setting due date and setting priority of the task. (PM)</p> <p>A project manager can assign a team member to a task. (PM)</p> <p>A Project Manager can set a due date of a task. (PM)</p>	2.5 hr.
Must -Have	<p>View list of project with the details</p> <p>/ A team member should be able to view a list and details of all boards(projects) that he/she currently has access to or is a part of.</p>	<p>A team member can view a list of all boards (projects) that he currently has access to or is a part of. (TM)</p> <p>A team member can look at the project details. (TM)</p>	1 hr.
Must-Have	Login Page	<p>object manager can see the login page so he/she can log in to the app by putting email password. (PM)</p> <p>am member can login to verify his identity proceed to his/her homepage. (TM)</p>	2.5 hr.

Should -Have	<p>Teams</p> <p>/A team member should be able to check a list and contact of all current teams and team members.</p>	<p>A team member can check other team members along with their contact method for a specific team. (TM)</p> <p>A team member can view a list of all teams he/she is currently part of. (TM)</p>	1.5 hr.
Should -Have	<p>Schedule</p> <p>/Project manager and team member should be able to check the due dates of the assigned tasks on calendar</p>	<p>As a Project Manager, I can check on due dates of the assigned task to different members and to me also on the calendar. (PM)</p> <p>A team member can check the due date on the calendar (TM)</p>	1 hr.
Should-Have	<p>progress report</p> <p>/Project manager and team members should be able to view progress reports through the charts.</p>	<p>A project manager can view the progress charts. (PM)</p> <p>A team member can view progress reports. (TM)</p>	1 hr.

### The actual release plan.

The release plan the team decided upon is shown in **Table 6**. Considering 3 weeks per iteration, we decided on a base of roughly 20 and 15 hours per iteration. We aimed to create a project and give each user's basic functionality for that project the first iteration as much as possible. Iteration 2 ended with slightly less time because we assumed that usage time would run faster because basic project information was already set after iteration 1. In the face of running out of time, we decided to focus on completing as many stories as possible and re-evaluating and simplifying the features so that we don't move them to the next release. However, we have acknowledged that

there may be instances where moving the story to the next release may be inevitable.

Table 6: Release Plan for Release 1.0

Iteration 1 (total 20 hrs)	Iteration 2 (total 15 hrs)
<b>March 8 ~ March 28 (3 week)</b>	<b>March 29 ~ April 11(3 week)</b>
A project manager can see the <b>login page</b> so that he/she can log in to the app by putting email and password.	A project manager can <b>edit a task</b> to modify its content and update the progress
A project manager can go to the <b>home page</b> when the application launches to organize tasks, read task's progress and check schedules.	A project manager can <b>organize tasks</b> .
A project manager can <b>create a new project</b> .	A project manager can have <b>a quick look</b> on the task which he has to complete.
A project manager can <b>create a task</b> with details including assigning a task, setting due date and setting priority of the task.	A project manager can keep an eye over the <b>progress charts</b> .

A project manager can <b>assign a team member to a task.</b>	A team member can <b>update the progress</b> of tasks assigned to him/her.
A project manager can <b>set a due date</b> of a task.	A team member can <b>look at tasks on the calendar.</b>
A project manager can <b>set priority</b> to a task.	A team member can look at <b>the project details.</b>
A project manager can <b>delete a task</b> after the task is cancelled.	A team member can <b>check other team members</b> along with their contact method for a specific team.
A Team member can login to <b>verify</b> his identity and proceed to his/her homepage.	A team member can view <b>progress reports.</b>
A Team member can <b>identify briefly the tasks</b> approaching the deadline and the assigned tasks.	A team member can get a quick glance of tasks in the <b>coming week.</b>
A team member can get a <b>quick glance</b>	

of tasks assigned to him/her <b>in the homepage.</b>	
A team member can <b>view a list of all boards</b> (projects) that he currently has access to or is a part of.	

1. Place the contents of your paper prototype in [Appendix A \(Design Document\)](#).

#### 2.4.4 Iteration Plan (Release 1.0)

- A project manager can create a new project.

Task	Who	Estimate	Actual
Develop custom control for project cards	Anirudh Babu	1.5 hr	2 hr
Write and tune the SQL query to retrieve project names from the database.	Ravleen Kaur	0.5 hr	0.5 hr

- A team member can update the progress of tasks assigned to him/her

Task	Who	Estimate	Actual
Code set progress drop down list to a task card.	Jiyeon Jeon	0.5 hr	0.5 hr
Implement the icon appearance of a task card based on the status of progress.	Chaeun Kim	1 hr	1 hr

- A project manager can see the login page so that he/she can log in to the app by putting email and password.

Task	Who	Estimate	Actual
Design & Layout of login page screen	Chaeun Kim	0.2 hr	0.2 hr
Code login window screen	Jiyeon Jeon	0.5 hr	0.3 hr
Code email input box	Jiyeon Jeon	0.3 hr	0.1 hr
Code password input box	Chaeun Kim	0.3 hr	0.1 hr
Implement change password button	Jiyeon Jeon	0.5 hr	Deferred to next release
Implement forgot password button	Chaeun Kim	0.5 hr	Deferred to next release

- A team member can login to verify his identity and proceed to his/her homepage.

Task	Who	Estimate	Actual
Code Textboxes that user can enter their password and Id, and Button accepting user inputs	Chaeun	0.5 hr	0.5 hr
Code authentication error screen	Ravleen	1 hr	0.5 hr
Code redirection to home page (when login is successful)	Seol	0.5 hr	0.5 hr

- A project manager can go to the home page when the application launches to organize tasks, read task's progress and check schedules. (PM)

Task	Who	Estimate	Actual
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Code for displaying a list of assigned tasks to me	jiyeon	0.5 hr	0.3 hr
Code for displaying a list of coming up tasks	Chaeun	0.5 hr	0.3 hr
Code setting homepage page as a the first page after Authentication success	Chaeun	0.5 hr	0.3 hr
Logic to connect with database (tasks assigned to me and tasks coming up in a week)	Anirudh	1 hr	0.5 hr

- A Team member can identify briefly the tasks approaching the deadline and the assigned tasks. (TM)

Task	Who	Estimate	Actual
Code a gridview displaying tasks that due dates are coming in a week and make Its style nice.	Seol	1 hr	0.4 h.
Code logics to retrieve tasks that due dates are in a week from database and insert into the gridview	Jiyeon	2 hr	2.5 hr

- A team member can get a quick glance of tasks assigned to him/her in the homepage. (TM)

Task	Who	Estimate	Actual
Design & Layout of home page screen	Chaeun Kim	0.5 hr	0.5 hr
Code assigned to me gridview	Jiyeon Jeon	0.5 hr	0.4 h.
Code coming up gridview and logic to retrieve the tasks which due is in a week	Chaeun Kim	1 hr	2.1 hr
Code task status image beside the task name	Jiyeon Jeon	0.5 hr	0.3 hr

- A project manager can create a task with details including assigning a task, setting due date and setting priority of the task. (PM)

Task	Who	Estimate	Actual
Design & Layout of Task Detail Window	Seol Cheon	0.5 hr	0.5 hr
Code dropbox for assigning a task	Jeongsil Baek	1.5 hr	2 hr
Code calendar for setting due date	Seol Cheon	1 hr	1 hr
Code dropbox for setting priority	Jeongsil Baek	0.5 hr	1 hr

- A project manager can assign a team member to a task. (PM)

Task	Who	Estimate	Actual
Design & Layout of Task Detail Window	Seol Cheon	0.5 hr	0.5 hr
Code dropbox for assigning a task	Jeongsil Baek	0.5 hr	0.5 hr
Code logic for retrieving team members in the dropbox	Seol Cheon	1.5 hr	2 hr

- A Project Manager can set a due date of a task. (PM)

Task	Who	Estimate	Actual
Design & Layout of project details screen	Jeongsil Baek	0.5 hr	0.5 hr
Write the code so that the project manager can see the details of each project tasks on the screen	Jeongsil Baek	1 hr	1.5 hr
The calendar pops up so that the project manager can assign a due date to each task.	Seol Cheon	0.5 hr	0.5 hr

- A team member can view a list of all boards (projects) that he currently has access to or is a part of. (TM)

Task	Who	Estimate	Actual
Design & Layout of Boards screen	Jiyeon Jeon	0.25 hr	0.5 hr

Develop custom control for project cards	Chaeun Kim	0.25 hr	1 hr
Write and tune the SQL query to retrieve team member's projects.	Jiyeon Jeon	0.30 hr	0.25 hr

- A team member can look at the project details. (TM)

Task	Who	Estimate	Actual
Design & Layout of project details screen	Jeongsil Baek	0.40 hr	0.50 hr
Write the code so that team members can see the details of their actions on the screen.	Seol Cheon	1 hr	1 hr
Code validation checks to ensure person viewing is a team member of each team displayed	Jeongsil Baek	1 hr	1 hr
Code so that team members can choose the progress status in the dropdown box.	Seol Cheon	1 hr	1 hr

- A team member can check other team members along with their contact method for a specific team. (TM)

Task	Who	Estimate	Actual
Design & Layout of Teammates screen	Jiyeon Jeon	0.5 hr	0.4 hr
Code event handlers for email and phone numbers	Chaeun Kim	0.5 hr	0.4 hr.
Optimize SQL query to retrieve teammates from Database	Jiyeon Jeon	0.25 hr	1 hr.
Code validation checks to see if the person viewing is a member of the team	Chaeun Kim	0.25 hr	0.3 hr.

- A team member can view a list of all teams he/she is currently part of. (TM)

Task	Who	Estimate	Actual
Design & Layout of Teams screen	Jiyeon Jeon	0.5 hr	0.3 hr.
Code redirection to teammates screen	Chaeun Kim	0.5 hr	0.4 hr.

Code validation checks to ensure person viewing is a team member of each team displayed	Jiyeon Jeon	0.25 hr	0.3 hr.
Optimize SQL query to retrieve teams from Database	Chaeun Kim	0.25 hr	0.4 hr.

- As a Project Manager, I can check on due dates of the assigned task to different members and to me also on the calendar. (PM)

Task	Who	Estimate	Actual
Code calendar control	Anirudh Babu	0.75 hr	0.75 hr
Design & Layout of Schedule screen	Ravleen Kaur	0.25 hr	0.3 hr
Optimize SQL query to retrieve tasks assigned from Database	Anirudh Babu	0.25 hr	0.25 hr
Code pop up window displaying further details about task assigned	Ravleen Kaur	0.5 hr	0.5 hr
Code validation checks to ensure tasks are assigned to person who is viewing	Anirudh Babu	0.25 hr	0.2 hr

- A team member can check the due date on the calendar (TM)

Task	Who	Estimate	Actual
Code calendar control	Anirudh Babu	0.75 hr	0.75 hr
Design & Layout of Schedule screen	Ravleen Kaur	0.25 hr	0.25 hr
Optimize SQL query to retrieve tasks assigned from Database	Anirudh Babu	0.25 hr	0.25 hr
Code pop up window displaying further details about task assigned	Ravleen Kaur	0.5 hr	0.5 hr
Code validation checks to ensure tasks are assigned to person who is viewing	Anirudh Babu	0.25 hr	0.25 hr

- A project manager can view the progress charts. (PM)

<b>Task</b>	<b>Who</b>	<b>Estimate</b>	<b>Actual</b>
Design the progress charts page(include visuals i.e Pie Charts)	Anirudh	0.5hr	0.5 hr
Code Charts to show progress	Ravleen Kaur	0.25 hr	0.25 hr
Optimize SQL query to retrieve progress of tasks from Database	Anirudh Babu	0.25 hr	0.25 hr

- A team member can view the progress charts. (TM)

<b>Task</b>	<b>Who</b>	<b>Estimate</b>	<b>Actual</b>
Design the progress charts page(include visuals i.e Pie Charts)	Anirudh	0.5hr	0.5 hr
Code Charts to show progress	Ravleen Kaur	0.25 hr	0.45 hr
Optimize SQL query to retrieve progress of tasks from Database	Anirudh Babu	0.25	0.25 hr

- A project manager can edit a task to modify its content and update the progress. (PM)

<b>Task</b>	<b>Who</b>	<b>Estimate</b>	<b>Actual</b>
Design & Layout of edit task page	Seol Cheon	1.0 hr	1.0 hr
Code Assignee initial Box beside assignee dropbox	Seol Cheon	1.5 hr	1.0 hr
Optimize SQL to retrieve database for team members	Jeongsil Baek	1.0 hr	1.0 hr
Optimize SQL to connect a task with details	Jeongsil Baek	2.0 hr	2.5 hr

- A project manager can organize tasks(PM)

<b>Task</b>	<b>Who</b>	<b>Estimate</b>	<b>Actual</b>
Make delete button for Category box and Task box.	Seol Cheon	1.0 hr	1.0 hr
Add functions to it by connecting them with the database.	Jeongsil Baek	1.0 hr	1.5 hr

- A project manager can have a quick look on the task which he/she has to complete. (PM)

Task	Who	Estimate	Actual
Tasks Coming up datagrid	Jiyeon Jeon	0.2 hr	0.2 hr.
Tasks Assigned to me datagrid	Chaeun Kim	0.2 hr	0.2 hr.
Optimize SQL to retrieve database for team members	Jiyeon Jeon	0.4 hr	0.3 hr.
Images showing the status of progress of every tasks in datagrid	Chaeun Kim	0.2 hr	0.2 hr.

#### 2.4.5 Additional Documentation

Link to workshop video: [Iteration 2 Planning Workshop \(Team 3\)](#)

## 2.4.7 Acceptance Tests for Release 1.0

Table 6: Stories, acceptance tests, and contributors for Release 1.0 (Green=Passed; Red=Failed).

Full description of user story	Acceptance test(s)	Name(s) of contributing Developer(s)
A project manager can see the login page so that he/she can log in to the app by putting email and password.	<p>Test by inputting to login with a created ID and password. Expected outcome: Login is possible</p> <p>Test login by entering a value different from the stored ID and password. Expected outcome: The system displays an error message, and the user is unable to login.</p>	Chaeun Kim, Jiyeon Jeon
A project manager can go to the home page when the application launches to organize tasks, read task's progress and check schedules.	<p>Test by passing login Authentication. Expected outcome: It directs a project manager to the home page.</p> <p>Test by clicking home page in a menu bar when project manager in a different page Expected outcome: It directs a project manager to the home page</p>	Chaeun Kim, Jiyeon Jeon
A project manager can create a new project.	<p>Test by trying to create a project with a unique name. Expected outcome: The system will create a new project.</p> <p>Test by trying to create a project with a duplicate name. Expected outcome: The system will show an error message for it and disable the user to make a new project.</p>	Anirudh Babu, Ravleen Kaur
A project manager can create a task with details including assigning a task, setting due date and setting priority of the task.	<p>Test with clicking the add button to see if PM can create a task on an empty category. Expected outcome : a new task with details setting is created on the empty category.</p>	Jeongsil Baek, Seol Cheon

	<p>Test with clicking the add button to see if PM can create a task on a category that has existing tasks.</p> <p>Expected outcome : a new task with details setting is created under the existing category.</p>	
A project manager can assign a team member to a task.	<p>Test by opening a dropbox for assignee.</p> <p>Expected outcome: All the team members are under the assignee dropbox.</p> <p>Test by selecting a member on the dropdown.</p> <p>Expected outcome: The name initial of the member that the PM selects appears beside the dropdown.</p> <p>Test by selecting multiple members on the drop box.</p> <p>Expected outcome: The name initials of the members that the pm selected appear beside the dropdown</p>	Jeongsil Baek, Seol Cheon
A project manager can set a due date of a task.	<p>Test by picking a date on the calendar.</p> <p>Expected outcome: The date that the PM selects appears on the date picker.</p> <p>Test by picking a date that is before the current date.</p> <p>Expected outcome: The app does not allow the PM to pick the date that is before the current date.</p>	Jeongsil Baek, Seol Cheon
A project manager can set priority to a task.	<p>Test by selecting a priority on the context menu dropdown.</p> <p>Expected outcome: The color that is corresponding to the priority appears on the button for priority.</p> <p>Test by selecting another priority on the context menu dropdown after choosing a priority.</p> <p>Expected outcome: The color that is corresponding to the priority that the PM selected recently appears on the button for priority.</p>	Jeongsil Baek, Seol Cheon
A project manager can delete a task	<p>Test by clicking a delete button on the three-dot icon of the task.</p> <p>Expected outcome: The task is deleted.</p>	Jeongsil Baek, Seol Cheon

after the task is cancelled.	<p>Test by clicking a delete button beside the category box.</p> <p>Expected outcome: The tasks that are under the category are deleted with the category box.</p>	
A Team member can login to verify his identity and proceed to his/her homepage.	<p>Test by inputting to login with a created ID and password.</p> <p>Expected outcome: Login is possible</p> <p>Test login by entering a value different from the stored ID and password.</p> <p>Expected outcome: The system displays an error message, and the user is unable to login.</p>	Chaeun Kim, Jiyeon Jeon
A Team member can identify briefly the tasks approaching the deadline and the assigned tasks.	<p>Test whether the due date is reflected in the coming-up when it is changed the due date within a week to after two weeks.</p> <p>Expected outcome: The coming up list in the dashboard reflects the change, so It does not show the tasks that due date is changed to after two weeks.</p> <p>Test whether tasks assigned to team members through the Project Manager can be found on the homepage "Assigned to me".</p> <p>Expected outcome: Each team member can view tasks assigned to team members in the "Assigned to me" area.</p>	Chaeun Kim, Jiyeon Jeon
A team member can get a quick glance of tasks assigned to him/her in the homepage.	<p>Test by assigning tasks and then checking the homepage.</p> <p>Expected outcome: The newly assigned task appears in the assigned to me section in the home page.</p> <p>Test by unassigning a task and checking the home page.</p> <p>Expected outcome: The task that used to appear previously must have been removed from the assigned to me section in the home page</p>	Chaeun Kim, Jiyeon Jeon
A team member can view a list of all boards (projects) that he currently has access to or is a part of.	<p>Test by adding a new board (PM privilege) and check in the team member's view if the board is visible.</p> <p>Expected outcome: The newly created board is visible in the boards' view.</p>	Anirudh Babu, Ravleen Kaur

	<p>Test by removing a project (PM privilege) in the team member's view if the board is visible.</p> <p>Expected outcome: The board removed must also be removed from team member's view.</p>	
A project manager can edit a task to modify its content and update the progress.	<p>Test with inputs of task name on the text box for setting a task name.</p> <p>Expected outcome: The task name is changed and appears on the text box.</p> <p>Test by selecting a priority by clicking the priority button.</p> <p>Expected outcome: The priority and the color of it is changed to recently selected priority.</p> <p>Test by selecting an assignee on the assignee dropdown.</p> <p>Expected outcome: The assignee that is selected is added beside the existing assignee.</p> <p>Test by changing a date on the calendar.</p> <p>Expected outcome: The date is changed and appears on the date picker.</p> <p>Test by changing task details on the task box and opening the edit task page.</p> <p>Expected outcome: The data is passed to the edit task page from the task box.</p>	Jeongsil Baek, Seol Cheon
A project manager can organize tasks.	<p>Test by clicking the edit button for a task.</p> <p>Expected outcome: The separate edit task page will pop up and the PM can edit a task.</p>	Jeongsil Baek, Seol Cheon
A project manager can have a quick look on the task which he has to complete.	<p>Test by assigning tasks and then checking the home page.</p> <p>Expected outcome: The newly assigned task appears in the assigned to me section in the home page.</p> <p>Test by unassigning a task and checking the home page.</p> <p>Expected outcome: The task that used to appear previously must have been removed from the assigned to me section in the home page</p>	Chaeun Kim, Jiyeon Jeon

<p>A project manager can view the progress charts.</p>	<p>Test by changing a task progress status from 'Complete' to 'Not started' or 'In Progress'. Expected outcome: The number of 'Complete' tasks on the chart will be reduced and the number of 'Not started' or 'In Progress' tasks on the chart will be increased.</p> <p>Test by either creating a new task or deleting an existing task on the board. Expected outcome: The number of tasks will be changed on the chart.</p> <p>Non-functional requirement: The user should easily and intuitively be able to see the charts with one click of the menu tab.</p>	<p>Anirudh Babu, Ravleen Kaur</p>
<p>A team member can update the progress of tasks assigned to him/her.</p>	<p>Test by selecting Not Started, In Progress or Completed. Expected Outcome: The single option selected is reflected on the task.</p> <p>Test by modifying the value that a team member selected Not Started, In Progress or Completed. Expected Outcome: The modified option is reflected on the task.</p>	<p>Chaeun Kim, Jiyeon Jeon</p>
<p>A team member can look at tasks on the calendar.</p>	<p>Test by clicking on the schedule tab if team members can view the calendar for the current month as the default. Expected Outcome: Team members can check the current month screen on the first schedule screen.</p>	<p>Anirudh Babu, Ravleen Kaur</p>
<p>A team member can look at the project details.</p>	<p>Test by clicking on the project name whether a team member can view the project details . Expected Outcome: Team members can see the project details.</p>	<p>Chaeun Kim, Jiyeon Jeon</p>
<p>A team member can check other team members along with their contact method for a specific team.</p>	<p>Test by clicking on a team in a team list page. Expected Outcome: It shows the list of team members with their email addresses and phone numbers</p>	<p>Chaeun Kim, Jiyeon Jeon</p>

	<p>Test by clicking on an email address of a random team member.</p> <p><b>Expected Outcome:</b> The default email application is opened with the 'TO:' address set to the email clicked.</p> <p>Test by clicking on a phone number of a team member.</p> <p><b>Expected Outcome:</b> The phone number is emailed to the user's registered email address along with the team member's name</p>	
A team member can view progress reports.	<p>Test by clicking the view chart.</p> <p><b>Expected Outcome:</b> Team members can see the progress pie chart consisted of three sections (not started, in progress, completed).</p> <p>Test by changing the status of task in not started to 'Completed' and clicking the view chart again to see the chart is changed.</p> <p><b>Expected Outcome:</b> Team members can see the percentage of a completed section is increased.</p>	Anirudh Babu, Ravleen Kaur
A team member can get a quick glance of tasks in the coming week.	<p>Test by setting the due date of a random assigned task within the current week and checking the home page.</p> <p><b>Expected outcome:</b> The task whose deadline has been newly set must appear along with the deadline on the home page in the coming up section.</p> <p>Test by extending the due date of a random task due in the current week to the next week.</p> <p><b>Expected outcome:</b> The task that used to appear previously must have been removed from the coming up section in the home page.</p>	Chaeun Kim, Jiyeon Jeon

Release 1.0 Demo : [Link to demo video](#)

### **3.0 CONCLUSIONS**

At the end of Release 1.0, this project has completed all the key stories required for the release, and is in the position to start for Release 2.0 planning. Through the process of user role modeling, story gathering and release and iteration planning, the development period through iterations one and two went relatively smoothly. And as a result, only one story had to be postponed to the next release. Therefore, release 1.0 of the project is considered successful and a similar action will be taken for release 2.0.

## **4.0 RECOMMENDATIONS**

One of the limitations that we faced was the ability to write sustainable and reusable code. Since collaboration is important in the project, a developer should write code that is clear to the other developers who will continue to work on the task that he/she worked on. However, issues occurred when communication was lacking and codes did not follow previous patterns that others already wrote. To overcome this kind of issue in the future, we will need to make more conferences to discuss the code that a developer wrote in the past. Also, developers should often check the cloud that the codes are pushed with commits to understand the pattern of the previous code. Also, the project has encountered time management issues. It is because the developers thought that completing a task would not be difficult. However, it turned out that there were unexpected complex factors that made the time delayed. To prevent this problem occurring next time, developers should figure out the factors that would make code complex to complete when they see the design prototype.

## **CREDITS, LICENSE, AND REFERENCES**

### **Credits**

Author of the template graphic layout : Hao Lac <haolac.at.centennial@gmail.com>

### **License**

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### **References**

- [1] Cohn, Mike. 2004. *User Stories Applied: For Agile Software Development*, Addison-Wesley Professional.

## APPENDIX A (DESIGN DOCUMENT)

### Design Prototypes

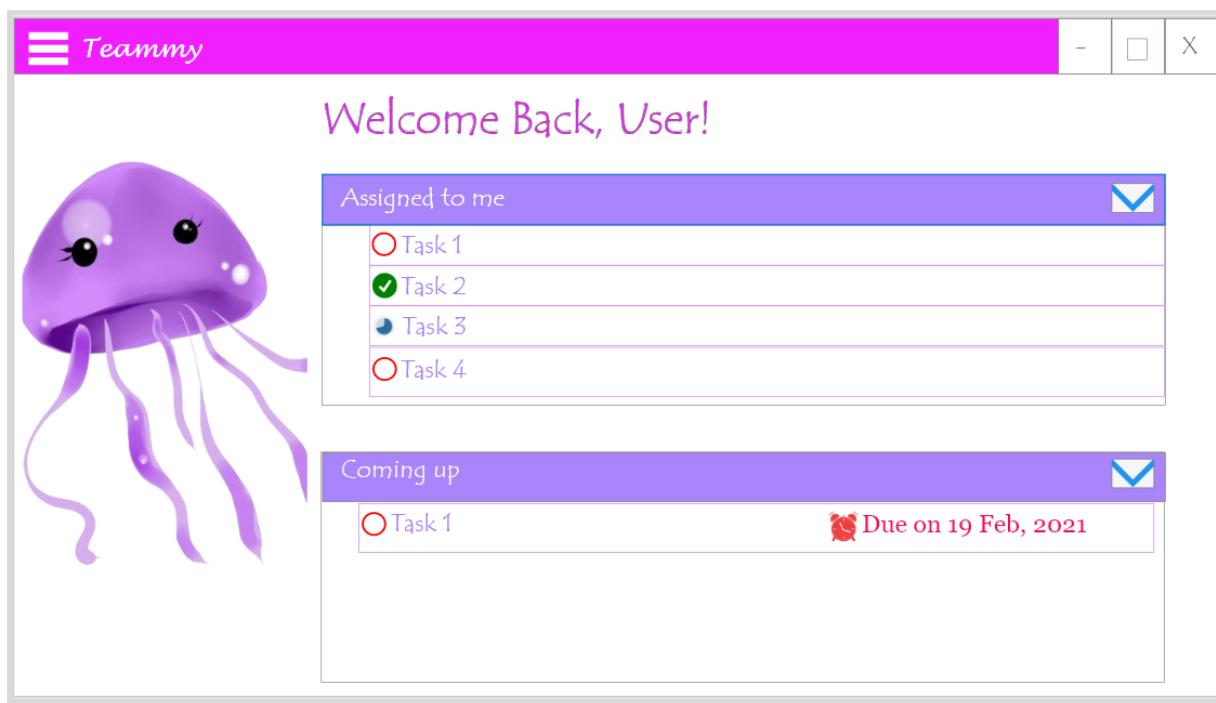


Figure 6: A Team member can identify briefly the tasks approaching the deadline and the assigned tasks

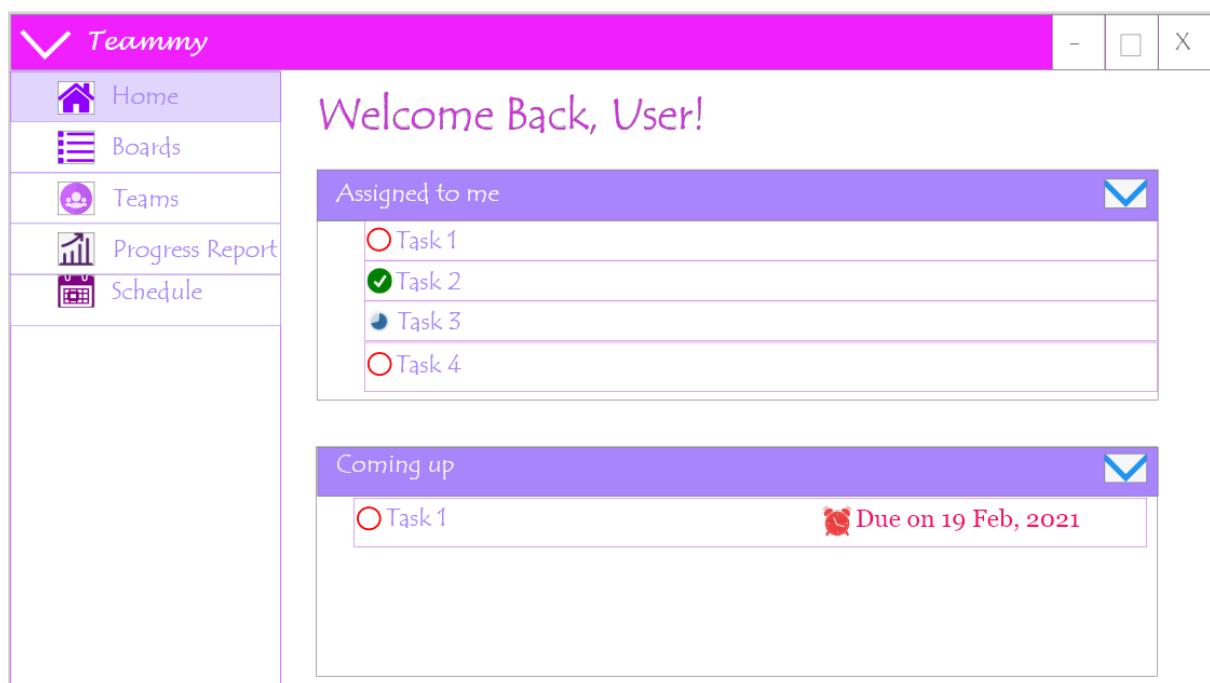


Figure 7: A project manager can go to the home page when the application launches to organize tasks,

read task's progress and check schedules

The screenshot shows the Teammy application interface. On the left is a sidebar with icons for Home, Boards, Teams, Progress Report (selected), and Schedule. The main area displays a monthly calendar for February 2021. The days of the week are labeled at the top: Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday. The dates from 1 to 28 are listed below. A legend in the bottom right corner identifies three types of tasks: 'Not Started' (blue), 'In Progress' (orange), and 'Completed' (green). A specific task, 'Code Module A', is highlighted with a red circle on the 19th of February.

Figure 8: As a Project Manager, I would like to have checks on due dates of the assigned task to different members and to me also on the calendar  
(Also, A team member should be able to look at tasks on the calendar)

The screenshot shows the Teammy application interface. On the left is a sidebar with icons for Home, Boards, Teams, Progress Report (selected), and Schedule. The main area displays a 'Progress Report' section with a pie chart. The chart is divided into three segments: a dark orange segment for 'Not Started', a light orange segment for 'In Progress', and a pink segment for 'Completed'. Below the chart is a legend with the same three categories: 'Not Started', 'In Progress', and 'Completed'.

Figure 9: A project manager should be able to keep an eye over the progress charts

(Also, A team member should be able to view progress reports)

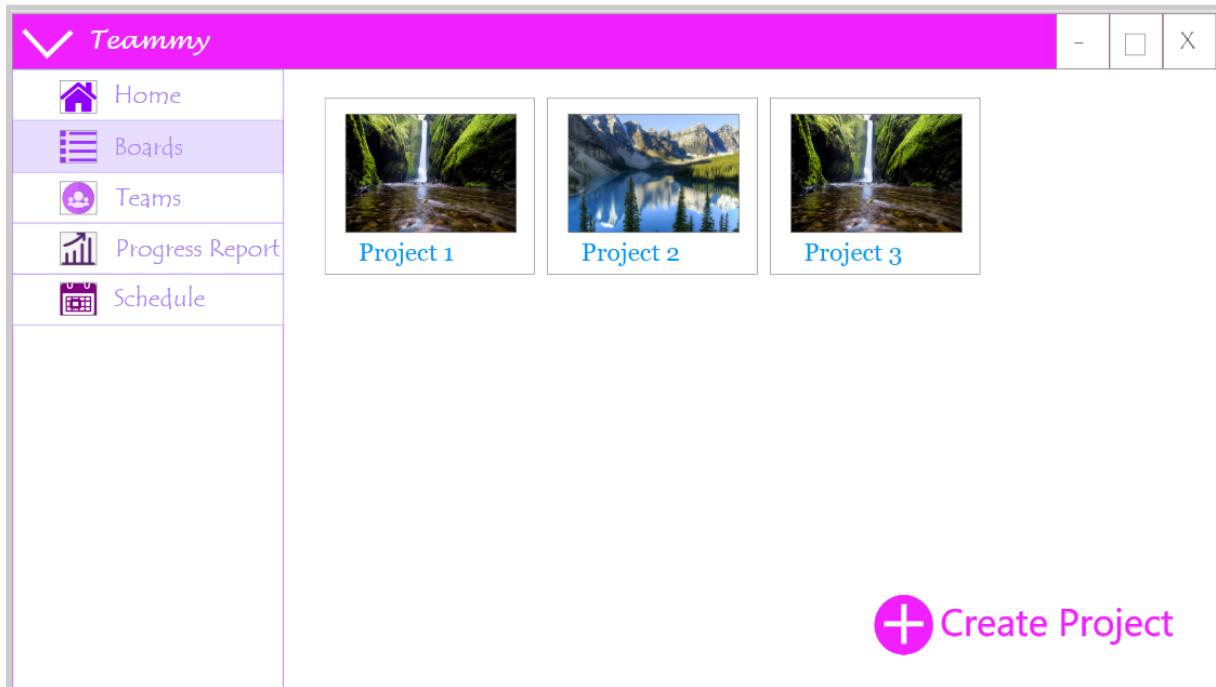


Figure 10: A project manager should be able to create a new project

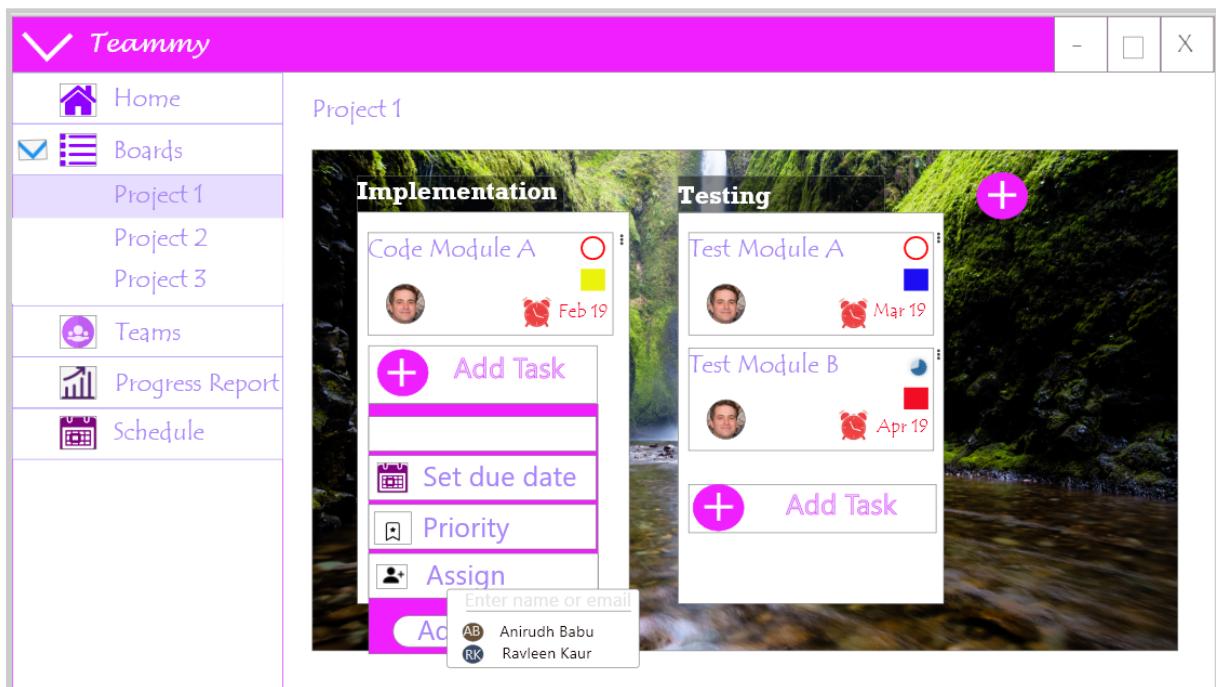


Figure 11: A project manager should be able to create a task with details including assigning a task,

setting due date and setting priority of the task

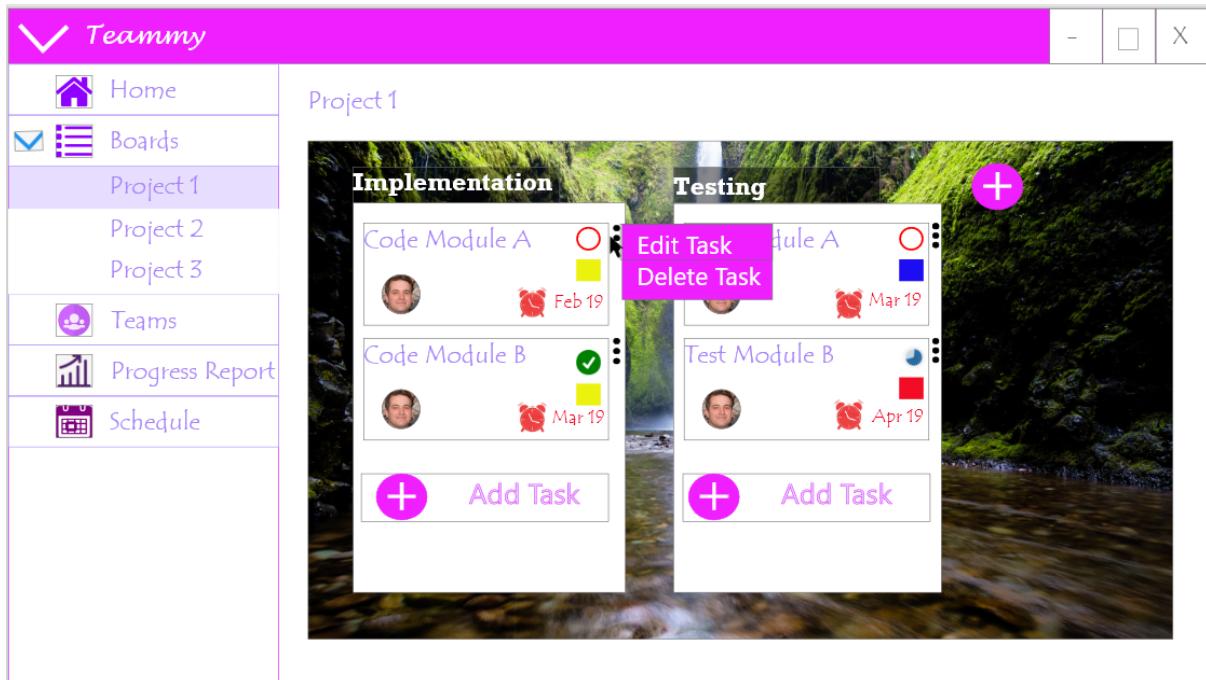


Figure 12: A project manager should be able to organize tasks

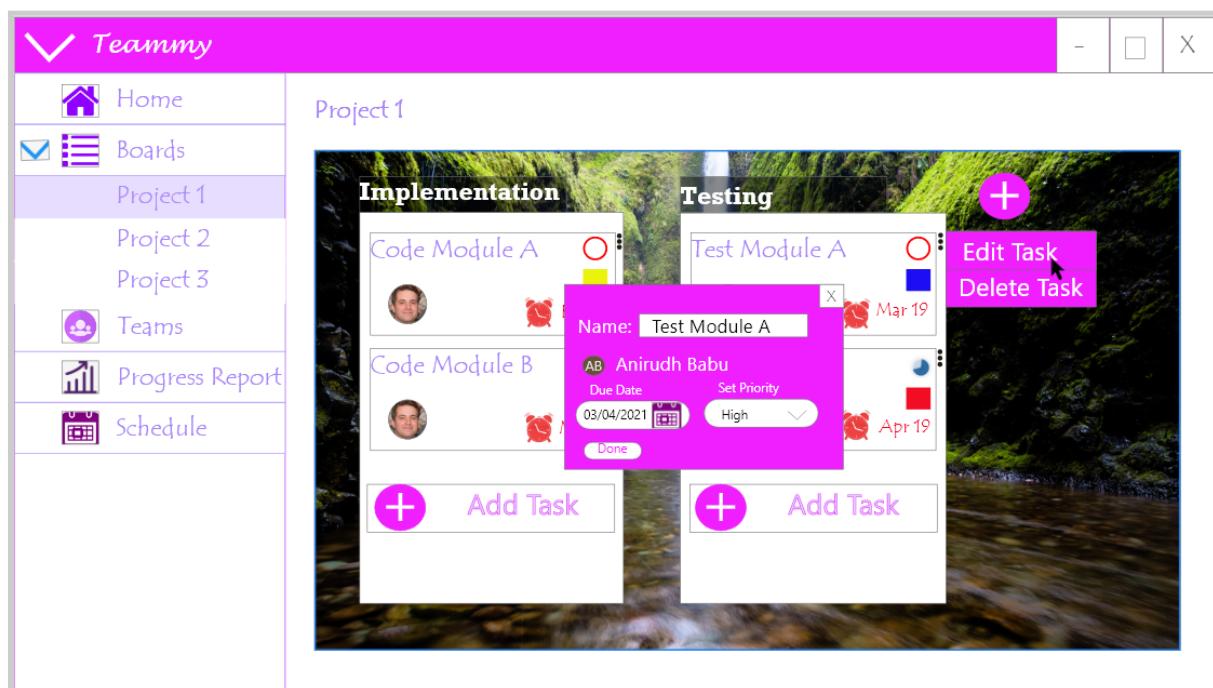


Figure 13: A project manager can edit a task to modify its content

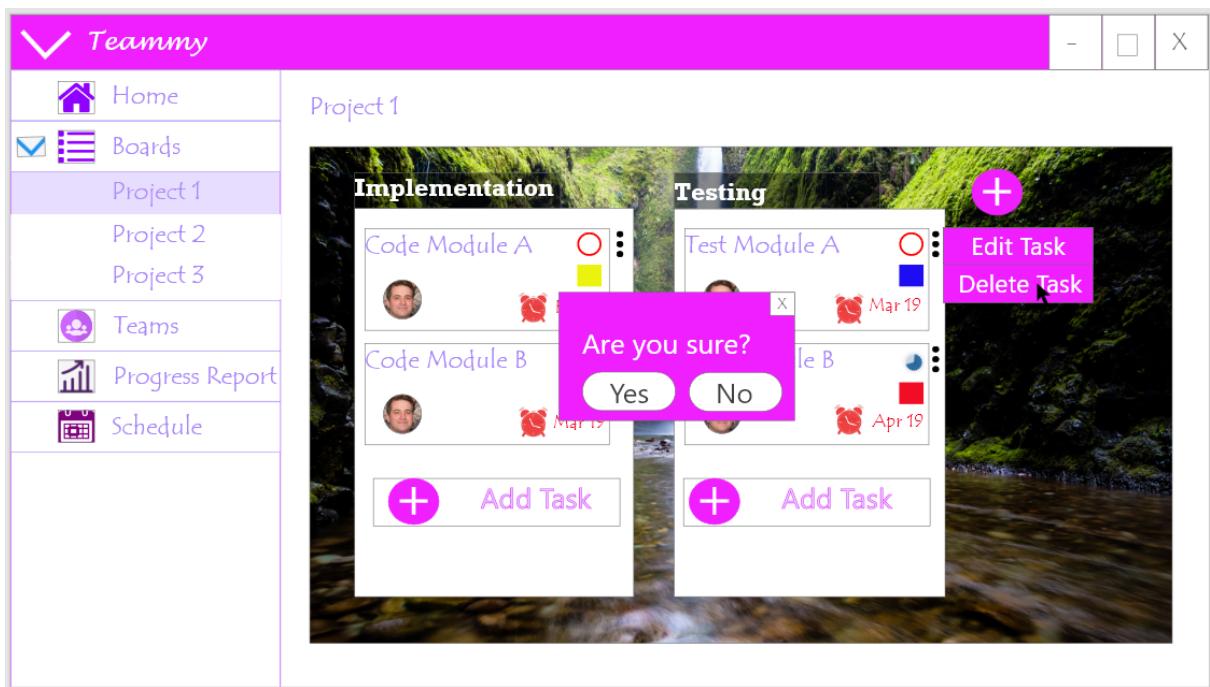


Figure 14: A project manager can delete a task after the task is cancelled

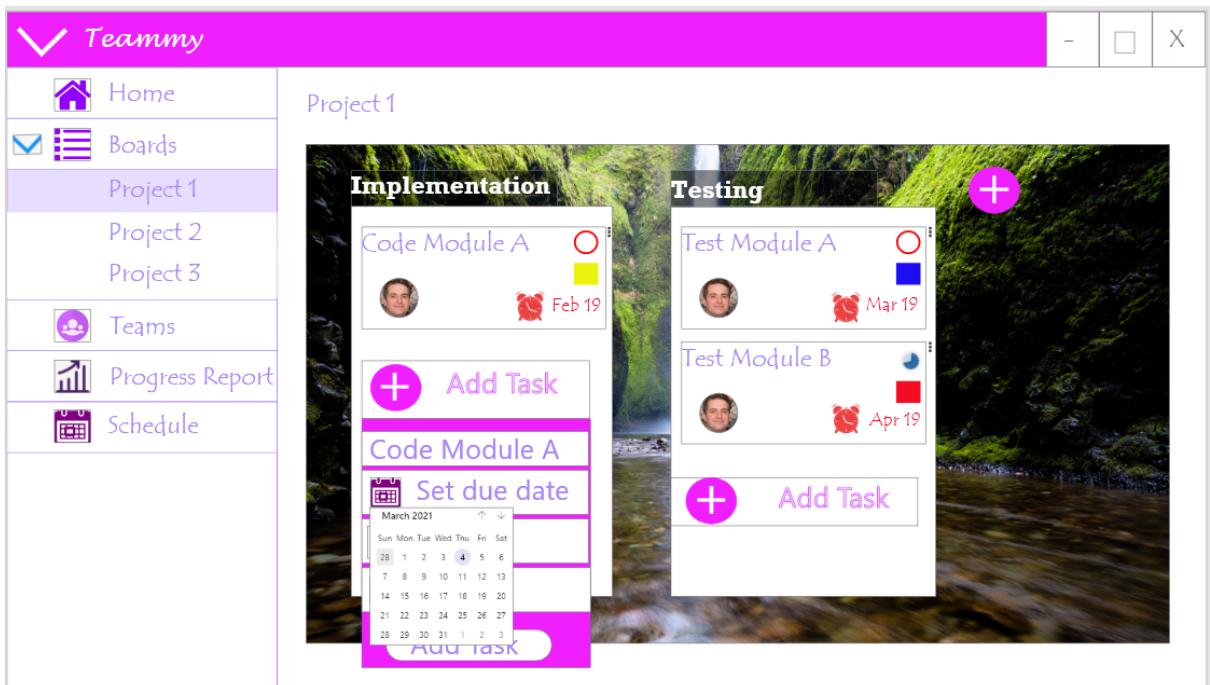


Figure 15: A Project Manager should be able to set a due date of a task

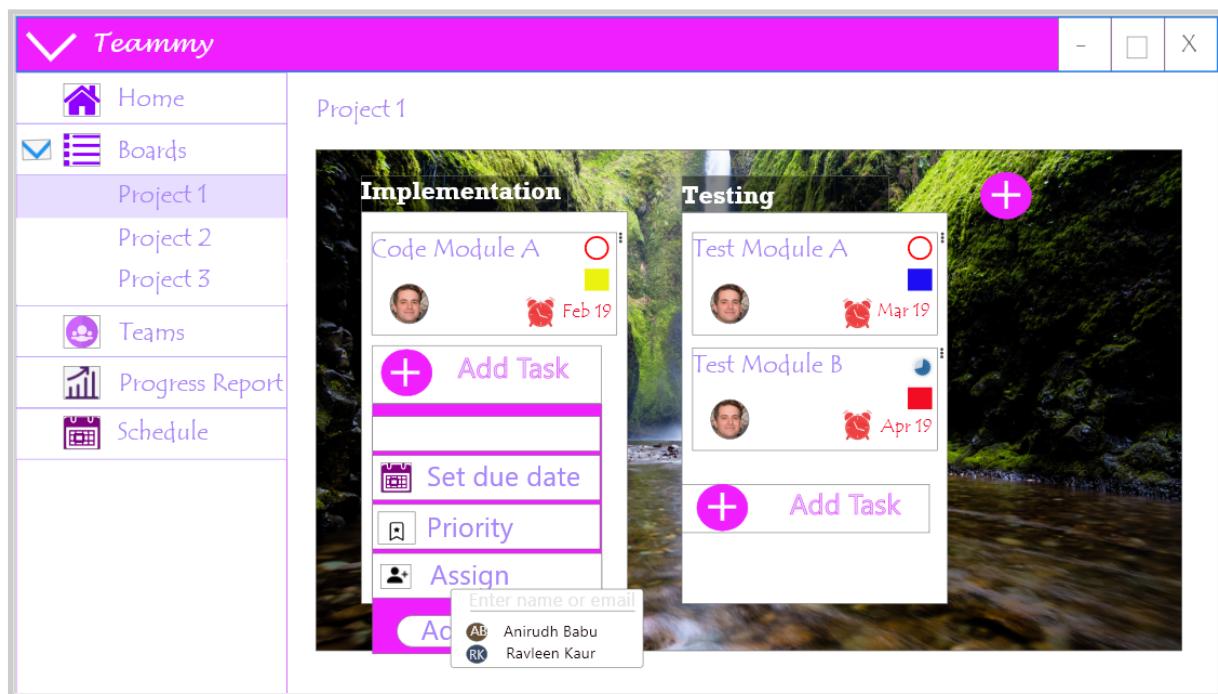


Figure 16: A project manager should be able to assign a team member to a task

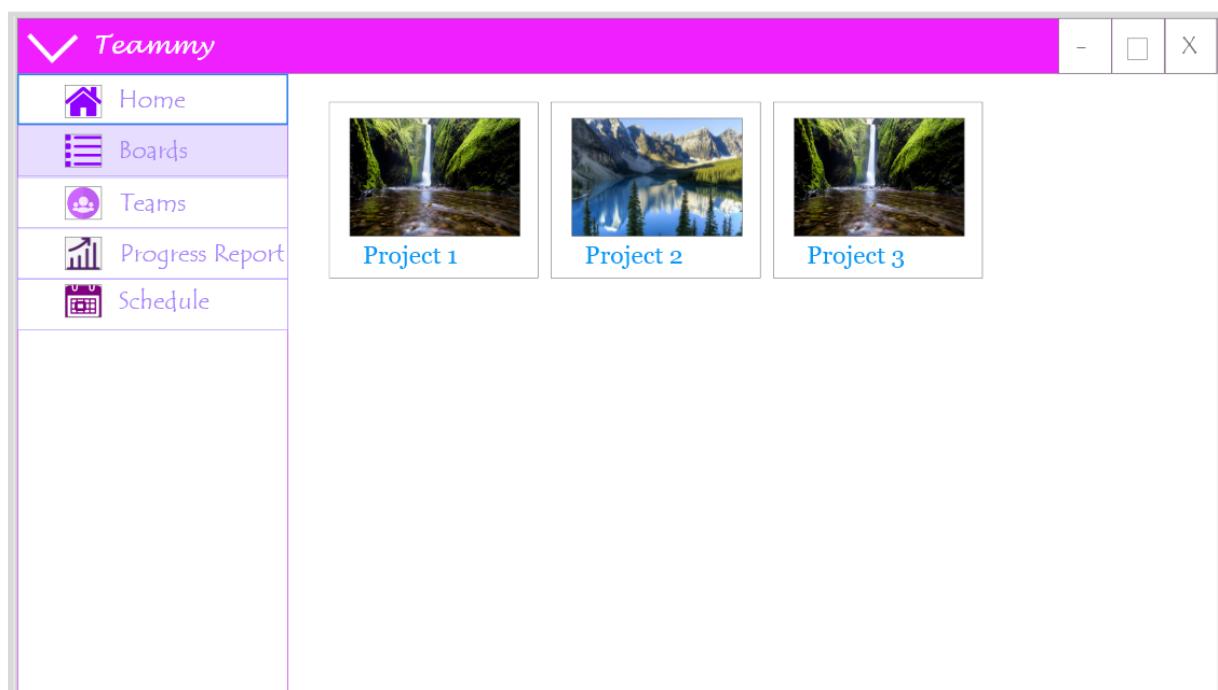


Figure 17: A team member should be able to view a list of all boards (projects) that he or she currently

has access to or is a part of

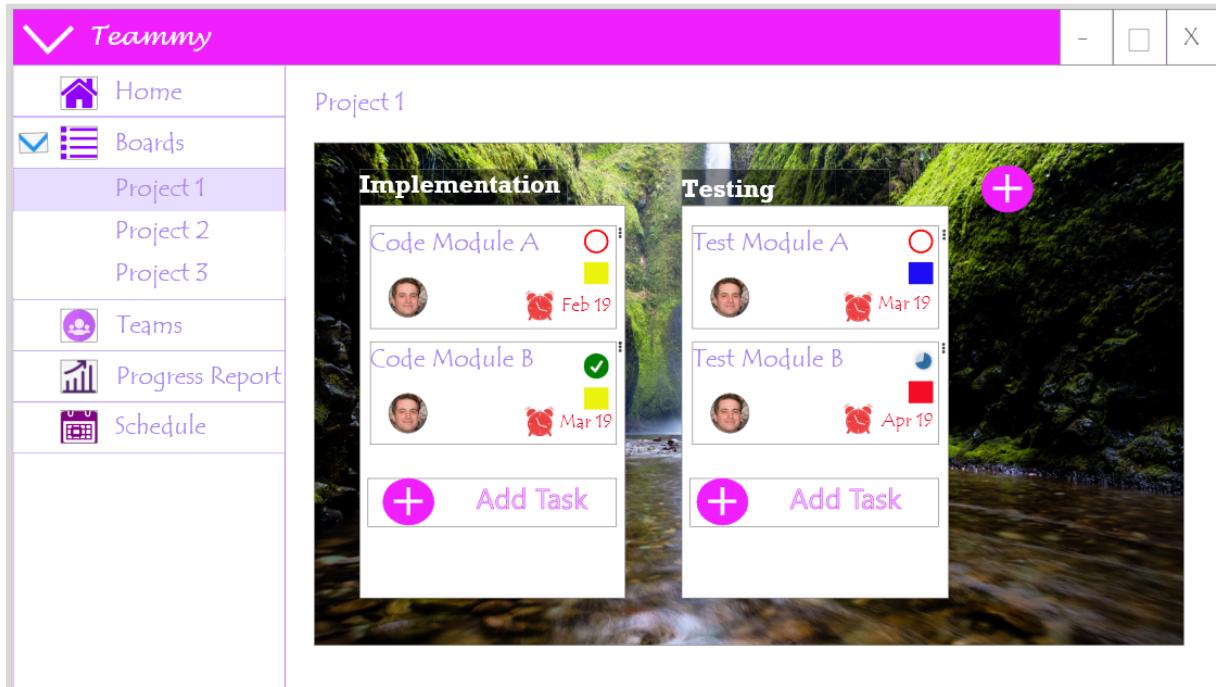


Figure 18: A team member should be able to look at the project details

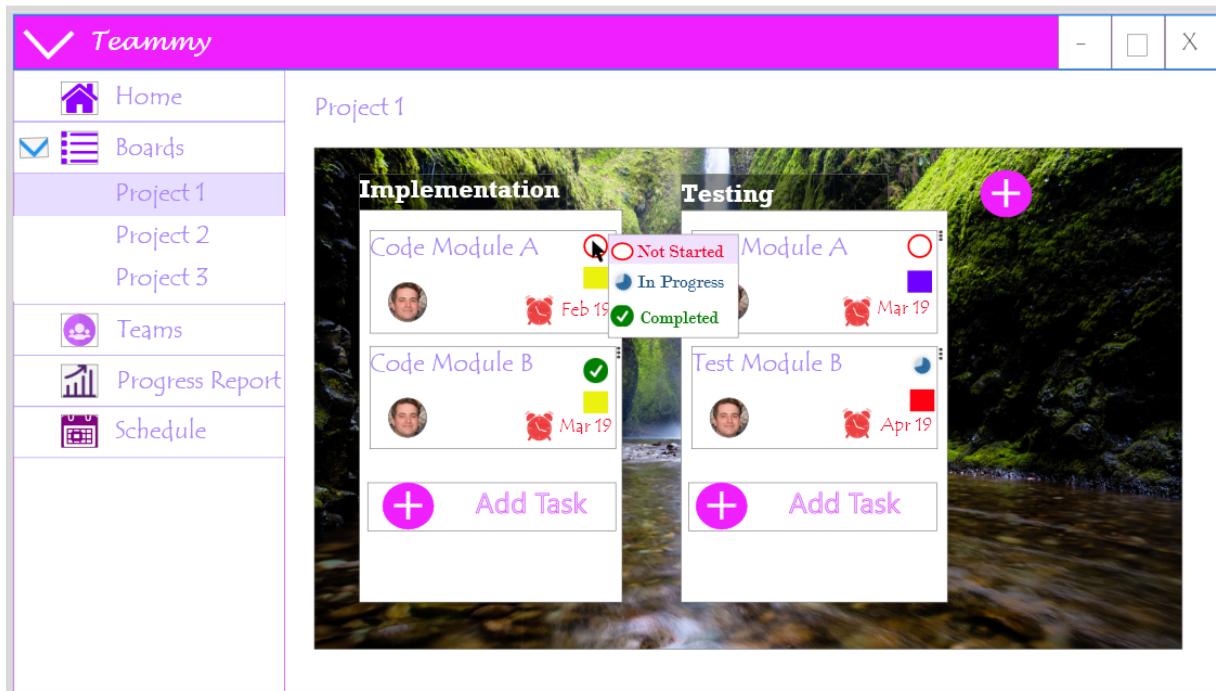


Figure 19: A team member should be able to update the progress of tasks assigned to him/her

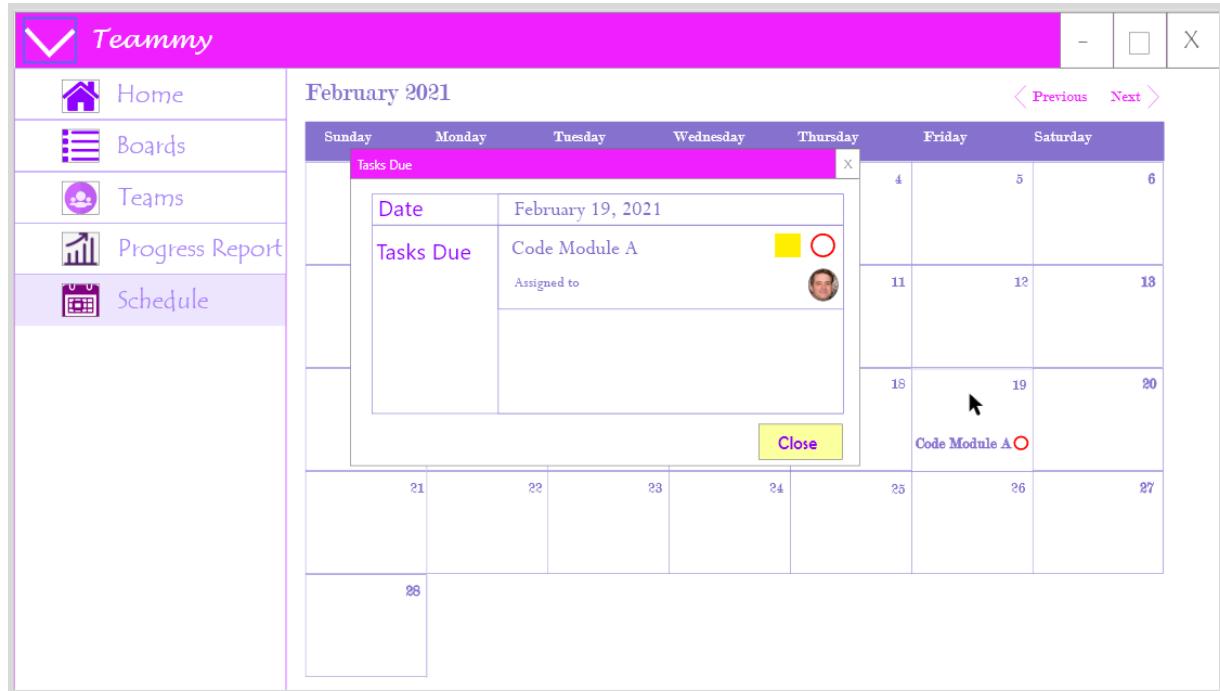


Figure 20: A team member should be able to check the due date on the calendar

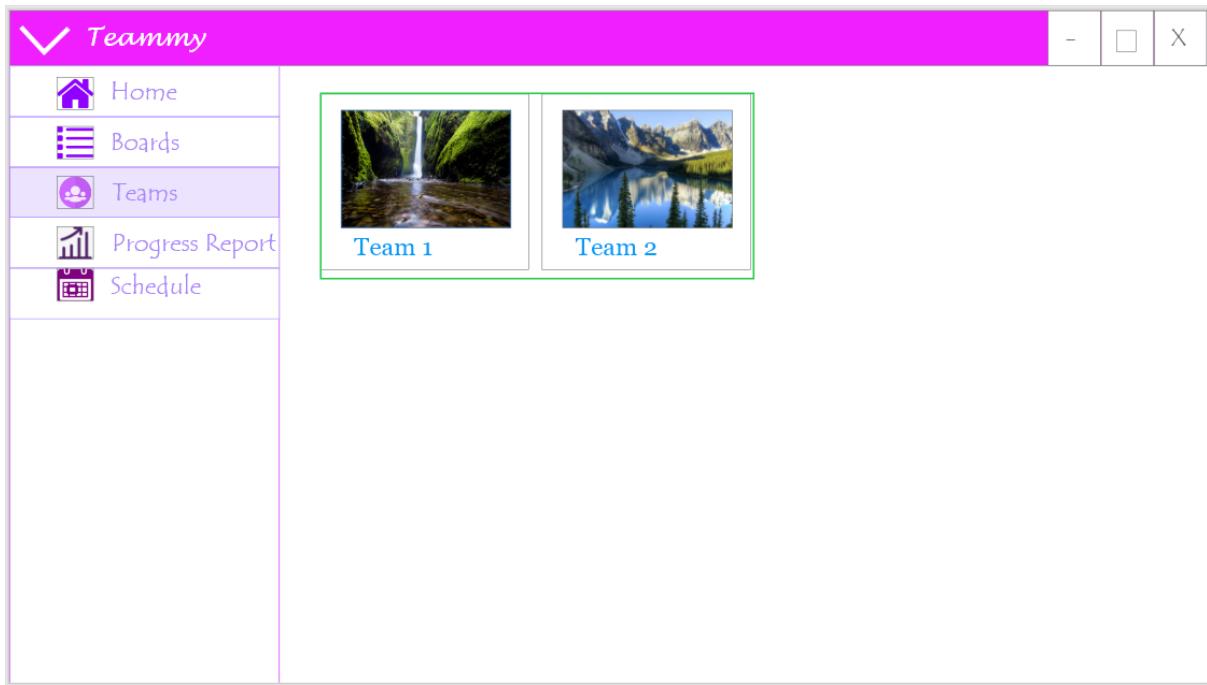


Figure 21: A team member should be able to view a list of all teams he/she is currently part of

The screenshot shows a web-based application titled "Teammy". The left sidebar has a pink header with a checkmark icon and the word "Teammy". Below it is a vertical menu with icons and text: Home (house), Boards (grid), Teams (people), Team 1 (selected, purple background), Team 2 (white background), Progress Report (bar chart), and Schedule (calendar). The main content area has a pink header "Team 1". Below it is a table with a blue border and a background image of a waterfall. The table has two columns: "Name" and "Contact". It lists four entries:

Name	Contact
Team Mate 1	tm1@gmail.com
Team Mate 2	tm2@gmail.com
Team Mate 3	(647)-888-8888
Team Mate 4	(416)-999-9999

Figure 22: A team member should be able to check other team members along with their contact method for a specific team

- Any design work your team has done in developing your system including CRC cards, UML diagrams, ERD diagrams, use cases, interaction design scenario, etc.

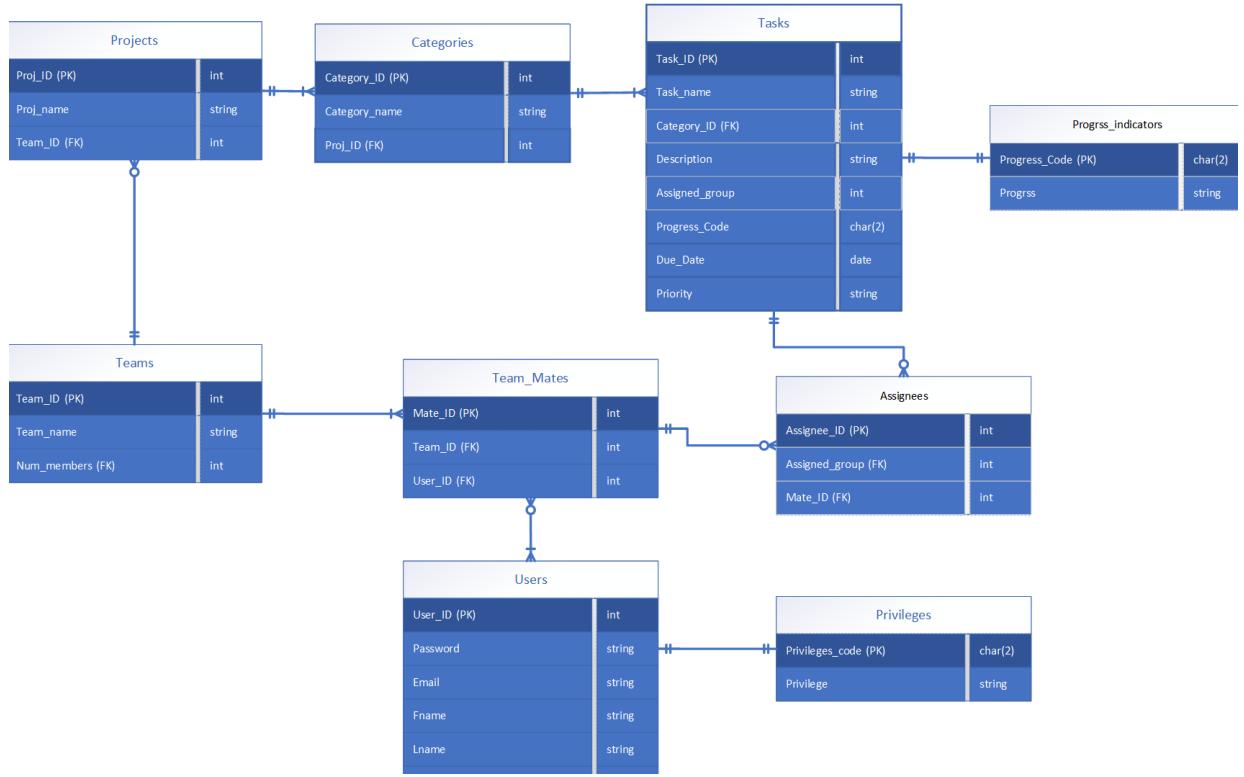


Figure 23: ERD diagram

## APPENDIX B (TEST PLAN)

### 1.0 Introduction

Testing is an essential and important process in a software development life cycle. It ensures the quality of software and cost-effectiveness. The importance of testing is more emphasized when it comes to relation with the cost of fixing defects. Testing plan should be clearly defined and executed as soon as possible since early testing leads to a reduced cost of fixing defects. Appendix B will describe a test plan with details. It includes the purpose of testing, what will be tested, testing procedures, and schedules.

#### 1.0.1 Goals

The main testing goals are to verify whether the application meets requirements and to find out defects and bugs to fix before realising the application.

### **1.0.2 Assumptions**

- Testing plan is not only designed to find defects and fix that, but also verify the software meets the functional, non-functional, and implementation requirements specified in a specification.
- Testing does not guarantee defects-free in this software. Defects can be found after all testing processes are completed. This testing plan is designed to find out the presence of defects. It does not talk about absence of defects.
- Some testing tools can be used during the testing process as needed.
- Testing scripts are added as some changes are made in the software.
- Execution Testing plan should start as early as possible since It is cheaper to fix defects in the early stages of testing.

### **1.0.3 Risks And Assets**

Describe the elements (software or hardware) that are not part of your application but still may impact its correctness and must be checked.

- This application is designed as a window application. It cannot be tested on Mac OS and any other operating systems.
- Mysql connector should be installed to run the software.

## **2.0 Scope**

### **2.0.1 Features To Be Tested**

Describe the features and functions that will be tested during the project. This should

include functional and non-functional requirements.

<b>Features</b>	<b>Function Description</b>	<b>User story</b>
Login	Login UI Login test [Registered account(Username, Password )]	- A project manager can see the login page so that he/she can log in to the app by putting email and password. - A Team member can login to verify his identity and proceed to his/her homepage.
Home	Home UI, Assigned to me and Coming up Grid view, Functionality of menu	- A project manager can go to the home page when the application launches to organize tasks, read the task's progress and check schedules. - A project manager can have a quick look on the task which he/she has to complete. - A Team member can identify briefly the tasks approaching the deadline and the assigned tasks. - A team member can get a quick glance of tasks assigned to him/her in the homepage. - A team member can get a quick glance of tasks in the coming week.
Boards(PM)	Boards UI, Create new projects, Create new tasks, Assign a team member to a task, Set a due date of a task, Set priority to a task, Edit a task(modify content and update the progress), Delete a task	- A project manager can create a new project. - A project manager can create a task with details including assigning a task, setting due date and setting priority of the task. - A project manager can assign a team member to a task. - A project manager can set priority to a task. - A project manager can delete a task after the task is cancelled. - A project manager can edit a task to modify its content and update the progress. - A project manager can organize tasks.
Boards(TM)	Boards UI, Team selection	- A team member can view a list of all boards (projects) that he currently has access to or is a part of. - A team member can update the progress of tasks assigned to him/her. - A team member can look at the project details.
Teams	Teams UI, Team ImageBox, Contact information for working group members	- A team member can check other team members along with their contact method for a specific team.
Progress Report	Progress report UI, Team and member selection(PM)	- A project manager can view the progress charts. - A team member can view progress reports.
Schedule	Schedule UI, Check for task details on	- A team member can look at tasks on the calendar.

	that date	
Reliability	Probability of failure-free operation Length of time of failure-free operation The environment in which it is executed	
Performance	Testing for Response Times	
Usability	Check for user-friendly, Whether new users can easily understand	

## 2.0.2 Features Not To Be Tested

Describe the features that will not be tested and reason why.

Compatibility testing - Currently, it is designed to function only on Windows, so it is out of scope.

Register (Login UI) - future functionality

Find Password (Login UI) - future functionality

## 3.0 Testing Procedures

Unit testing is extensively performed during each iteration within the development team, and acceptance testing is performed regularly by Agile Customers at the end of each iteration.

Describe the testing procedures that the project will use. This includes the test lifecycle, types of testing, test objectives, and test criteria.

### 3.0.1 Test Objectives

The purpose of the testing process is to properly implement business requirements and user stories, and to ensure that individual features function properly at each stage of development.

### **3.0.2 Types Of Testing**

This project incorporates unit testing and acceptance testing, as detailed below.

#### **3.0.2.1 Unit Testing**

Unit tests are written for individual subsystems and sections that each programmer is responsible for. The [NUnit testing framework](#) is used for unit testing. It's a good idea to create and perform unit tests on a regular basis as you integrate new code and debug existing code across your development team.

#### **3.0.2.2 Acceptance Testing**

Acceptance testing is performed by Agile customers at the end of each iteration. In order for the test to pass, the developer must be aware of the acceptance tests associated with a specific area of development and prioritize the required tests to pass until the end of the iteration period. The acceptance test of the core story will require the most attention, and if necessary, work on the acceptance test of the less important story can be abandoned to support work on the acceptance test of the core story.

### **3.0.3 Testing Tools**

For Unit tests, we used the [NUnit Testing Framework](#). For acceptance testing, no particular tool was incorporated.

## 4.0 Schedule and Deliverables

- Schedule of Tasks

Iteration Week	Tasks	Responsibility
Week 1	-Test plan creating - Unit test creation/updating	Developers Developers
Week 2	- Unit test creation/updating	Developers
Week 3	- Unit test creation/updating - (iteration 1) Acceptance testing	Developers Agile Customer
Week 4	- Unit test creation/updating	Developers
Week 5	- Unit test creation/updating	Developers
Week 6	- (iteration 2) Acceptance testing -Test Summary Report completion - (Final day) Acceptance testing	Agile Customer Developers Agile Customer

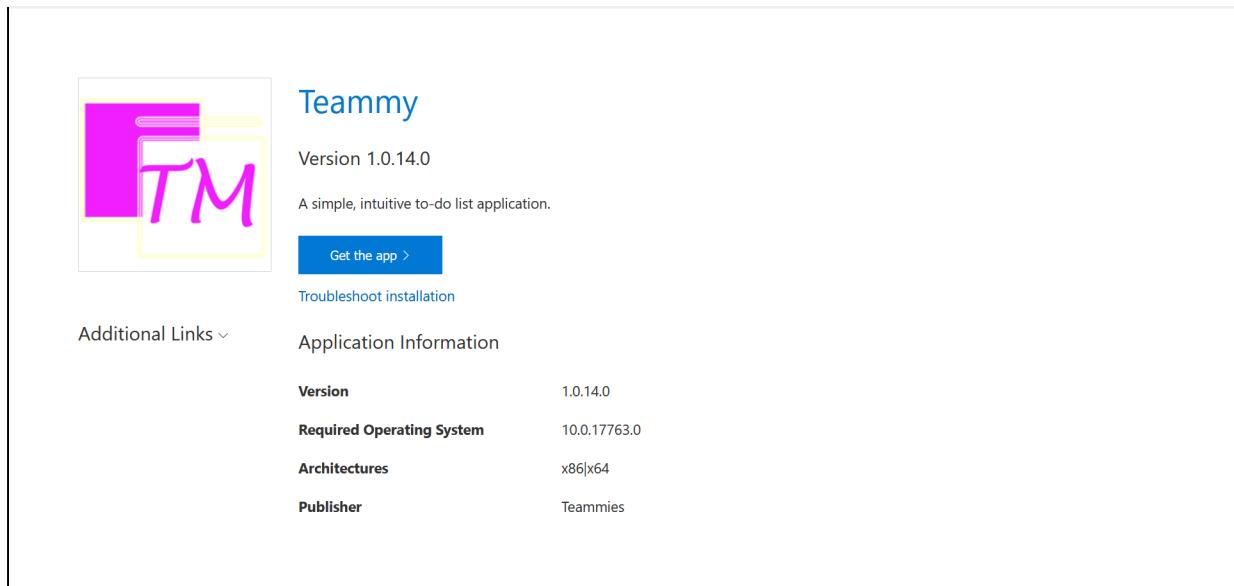
- Test Deliverables

Test Deliverable	Description	Responsibility
Unit Test Suite	A suite of unit tests that are created or updated during iterations	Development Team
Acceptance Test Table	A table representing acceptance tests that passed or failed until the end of the iteration	Agile Customer
Test Summary Report	A report with details about the Unit Test Suite and Acceptance Test Table, as well as other details related to testing during iteration.	Agile Customer

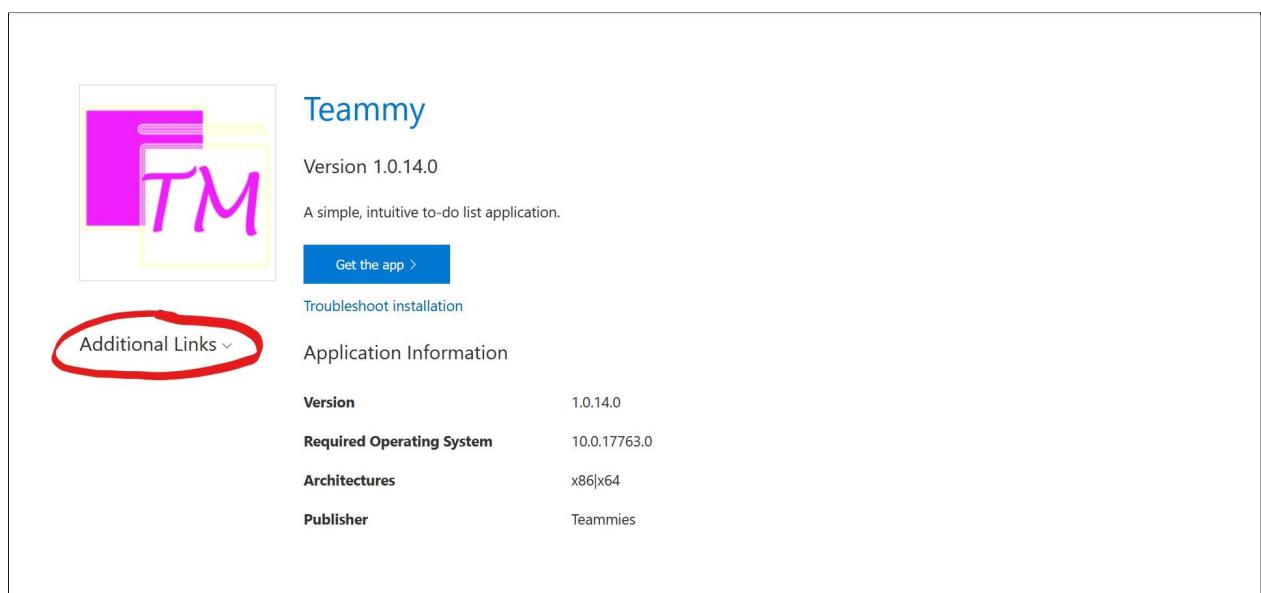
## APPENDIX C (END-USER & ADMINISTRATOR MANUALS)

### Installation Instructions:

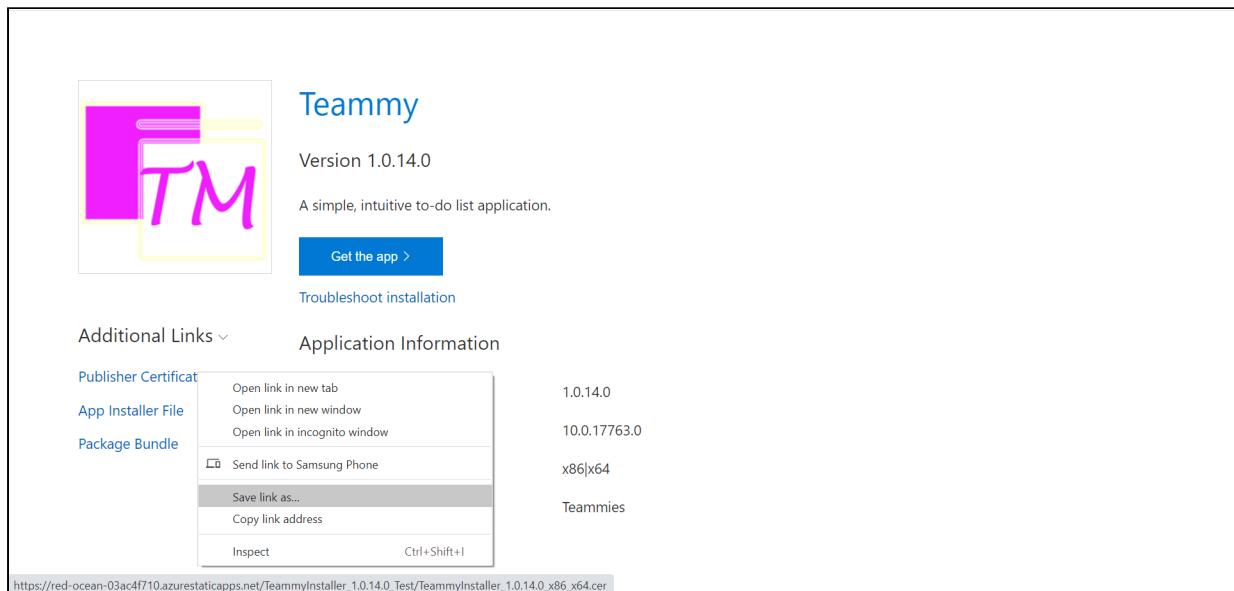
1. Visit the website [Install Teammy](#). You should be presented with a website that looks like so.



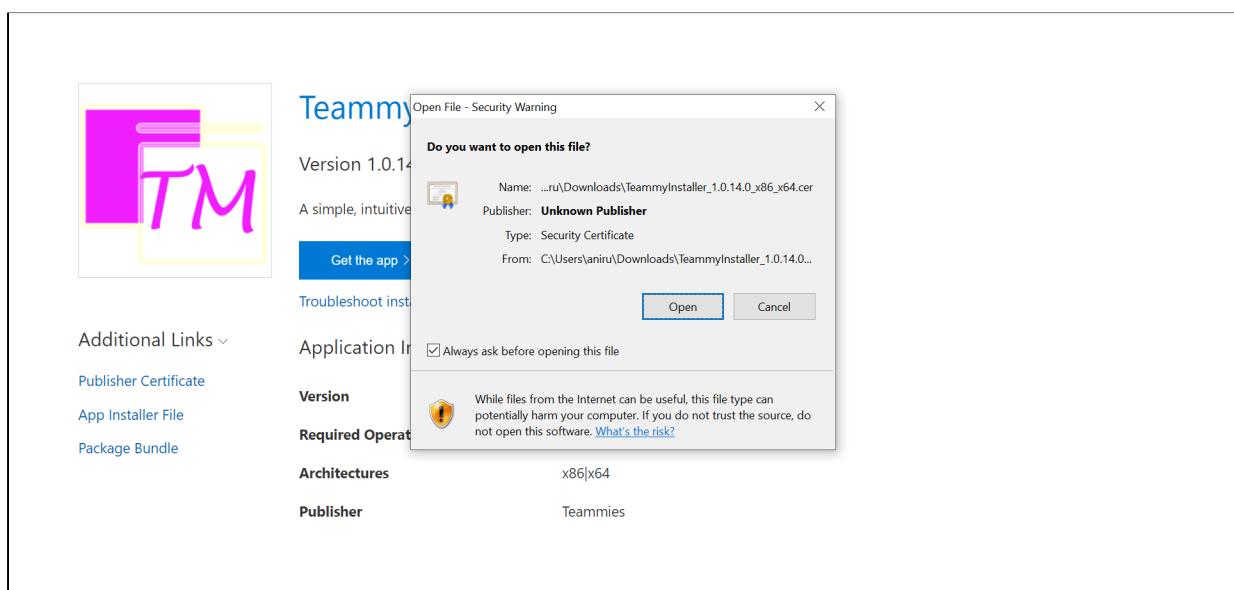
2. Click to expand Additional Links



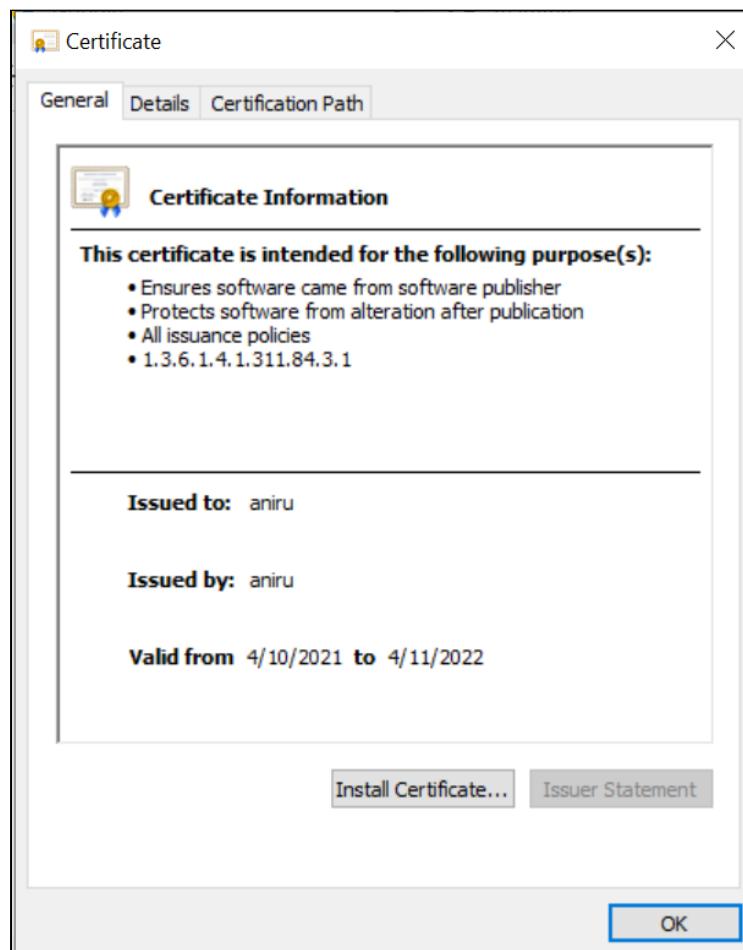
3. Right Click on the Publisher Certificate item and save it in a location of your choice.



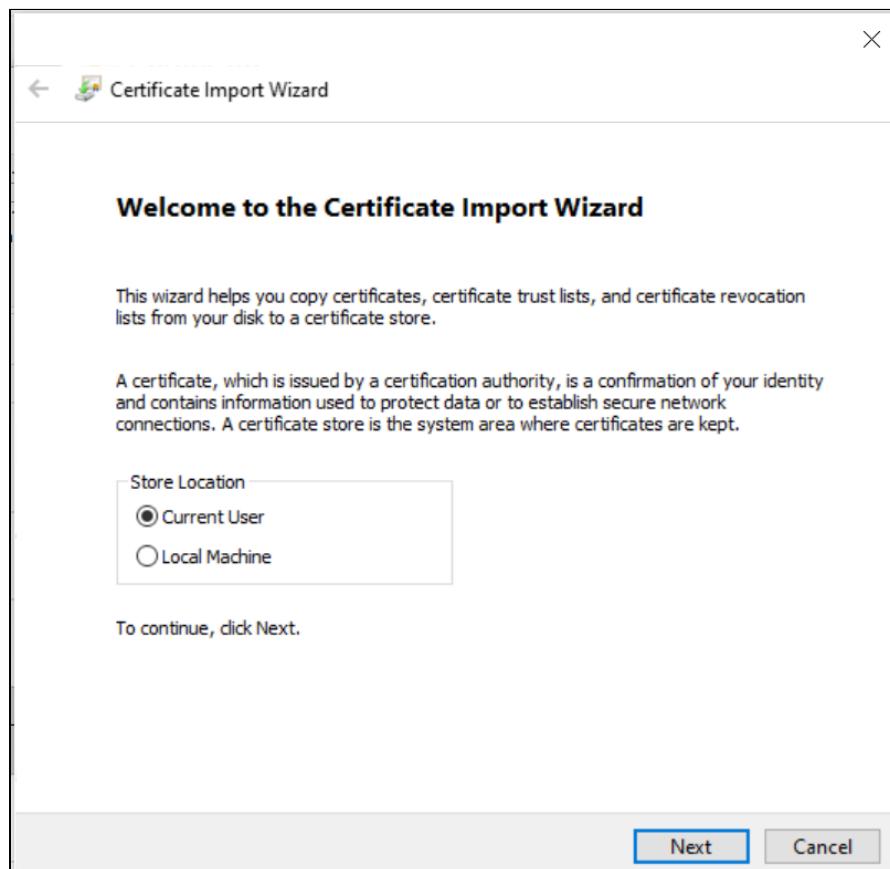
4. Open the certificate file. A dialog box pops up prompting for permission to proceed. Proceed by clicking 'Open'.



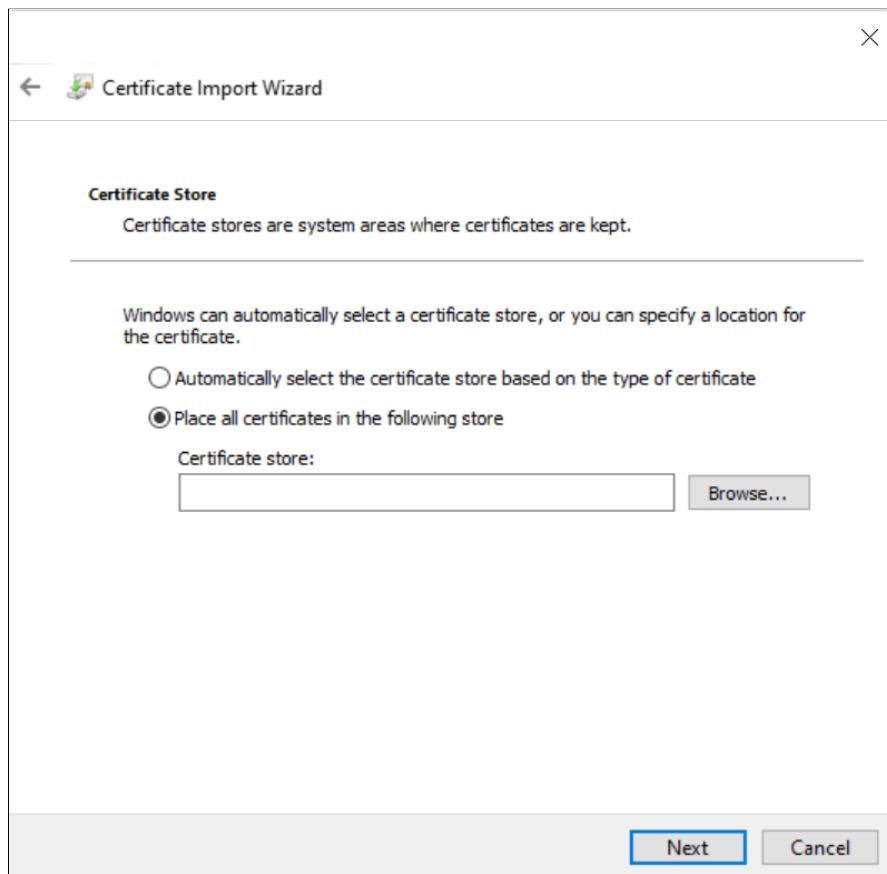
5. On the window that opens next, click 'Install certificate'.



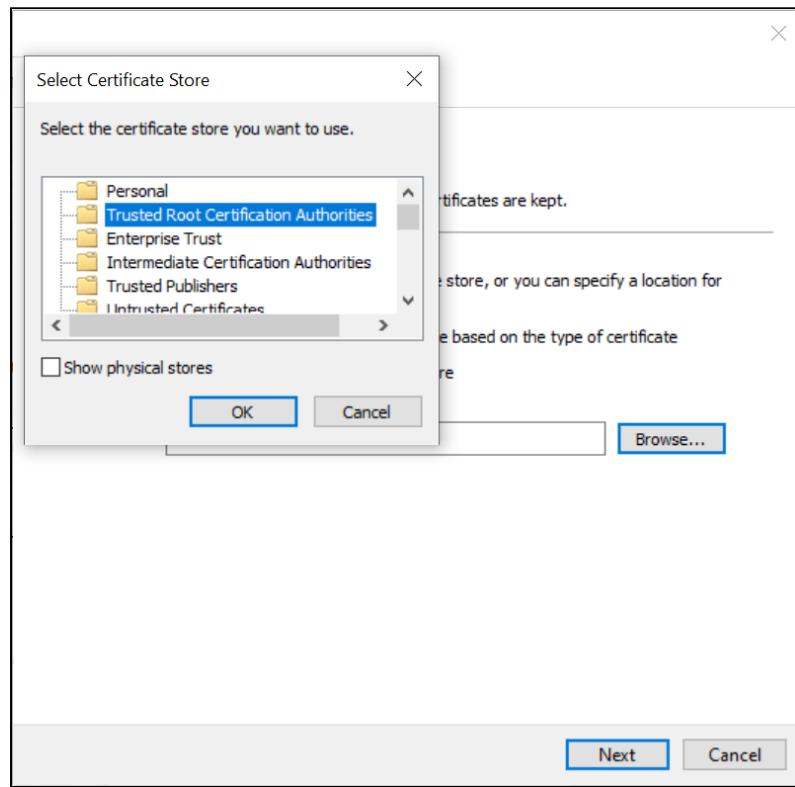
6. If you would like to install the application only for one user, keep the default of 'Current User'. In case that the application will be used by multiple users on the system, select 'Local Machine'. Click 'Next'.



7. In the next step, select 'Place All Certificates in the following store'.

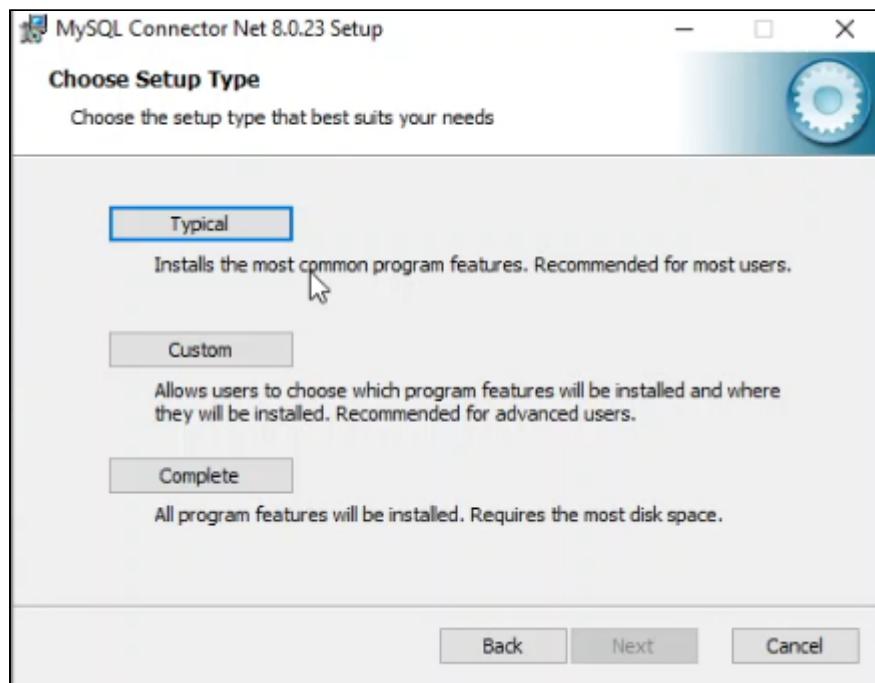


8. Click Browse and select ‘Trusted Root Certification Authorities’. Press ‘OK’ and click ‘Next’.

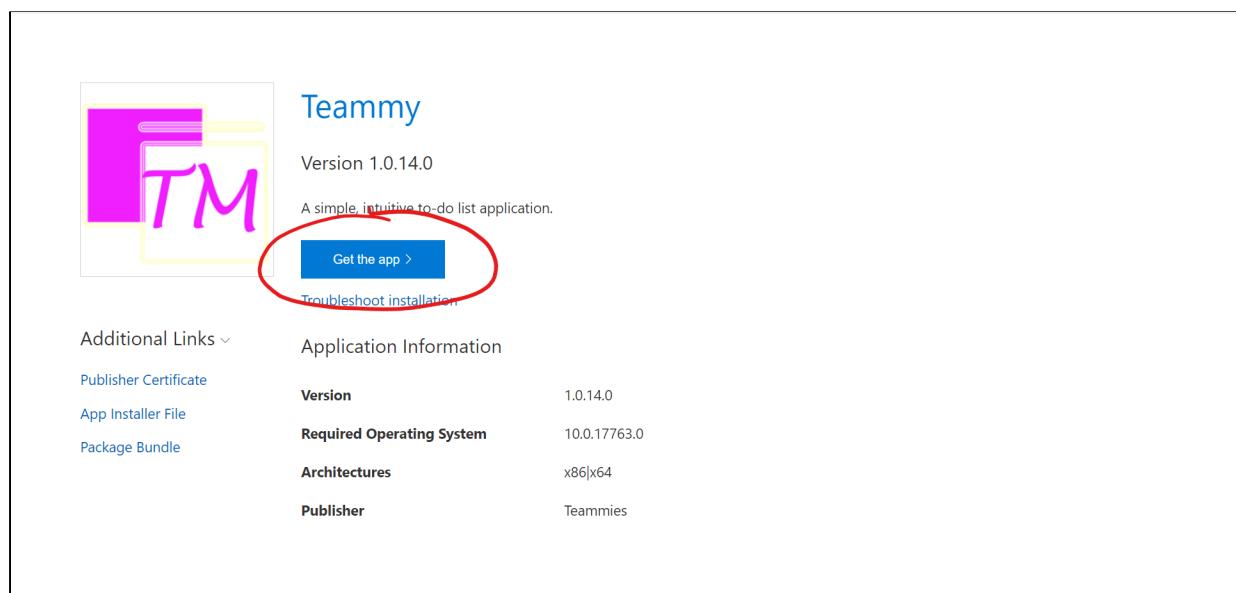


9. Verify details at Finish Screen and click ‘Finish’. You should be presented with a message that says import was successful.

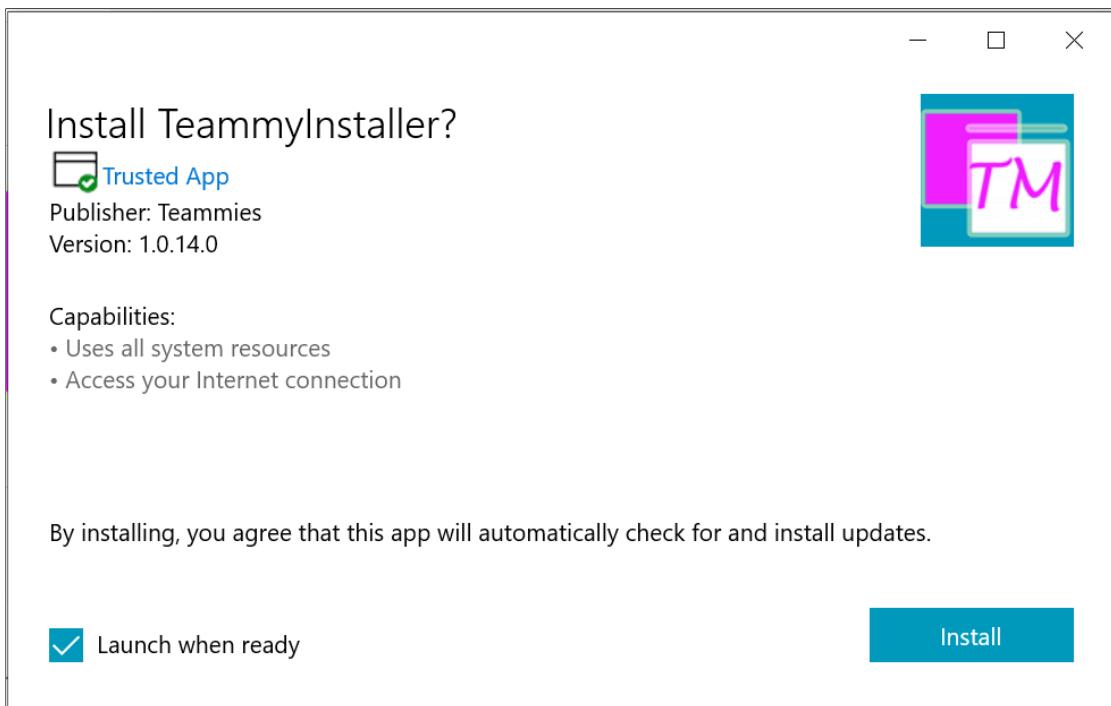
10. Install the MySQL Connector for ADO.NET using the ‘Typical’ Mode from <https://dev.mysql.com/downloads/connector/net/>.



11. Go back to the website in Step 1 and Click ‘Get The App’.

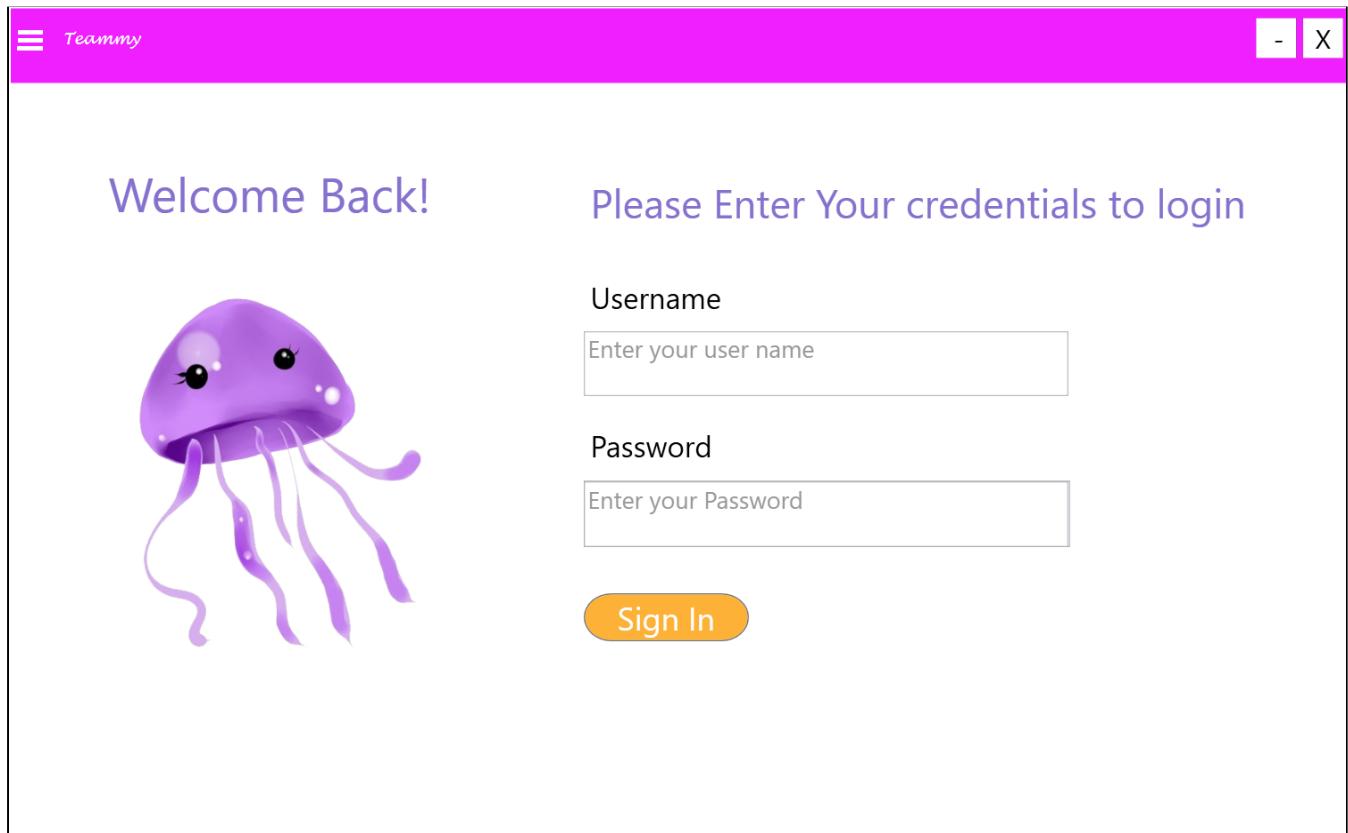


12. An installer is presented. Click 'Install'. The application will launch when completed.



## User Guide:

### 1. The Login Page



The Login page is the first page that greets any user when launched. Users are prompted to enter a username and password, which when validated successfully, leads to the home page.

## 2. The Home page



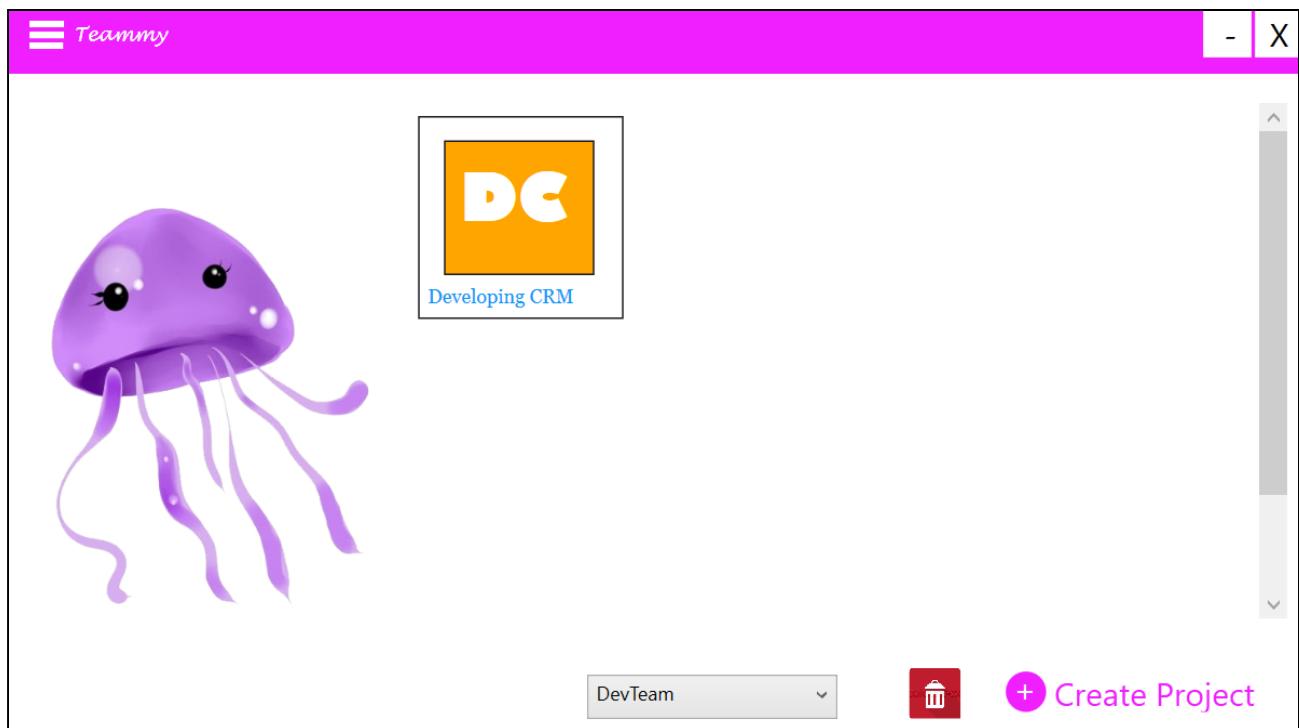
The screenshot shows a web application interface titled "Welcome Back, User!". At the top left is the "Teammy" logo. On the right are standard window control buttons for minimize and close. The main content area has a white background. On the left side of the content area, there is a large, stylized cartoon illustration of a purple jellyfish with black eyes and several long, flowing tentacles. To the right of the jellyfish, there are two main sections: "Assigned to me" and "Coming Up". The "Assigned to me" section has a purple header bar with the text "Assigned to me". Below it is a list of four tasks, each with an icon and a status indicator (green checkmark or red circle). The tasks are: "Create ERD Diagram" (green checkmark), "Create Database and Host it" (green checkmark), "Code Module D" (red circle), and "Update ERD" (green checkmark). The "Coming Up" section has a purple header bar with the text "Coming Up". Below it is a large, empty rectangular area with a light gray background, likely representing a placeholder for future tasks or events.

Assigned to me	
	Create ERD Diagram
	Create Database and Host it
	Code Module D
	Update ERD

Coming Up	

Upon successful validation, the user is led to the home page, displaying tasks assigned to them, and tasks due in the week. Using the menu available on this page, users may navigate to the page of their choice.

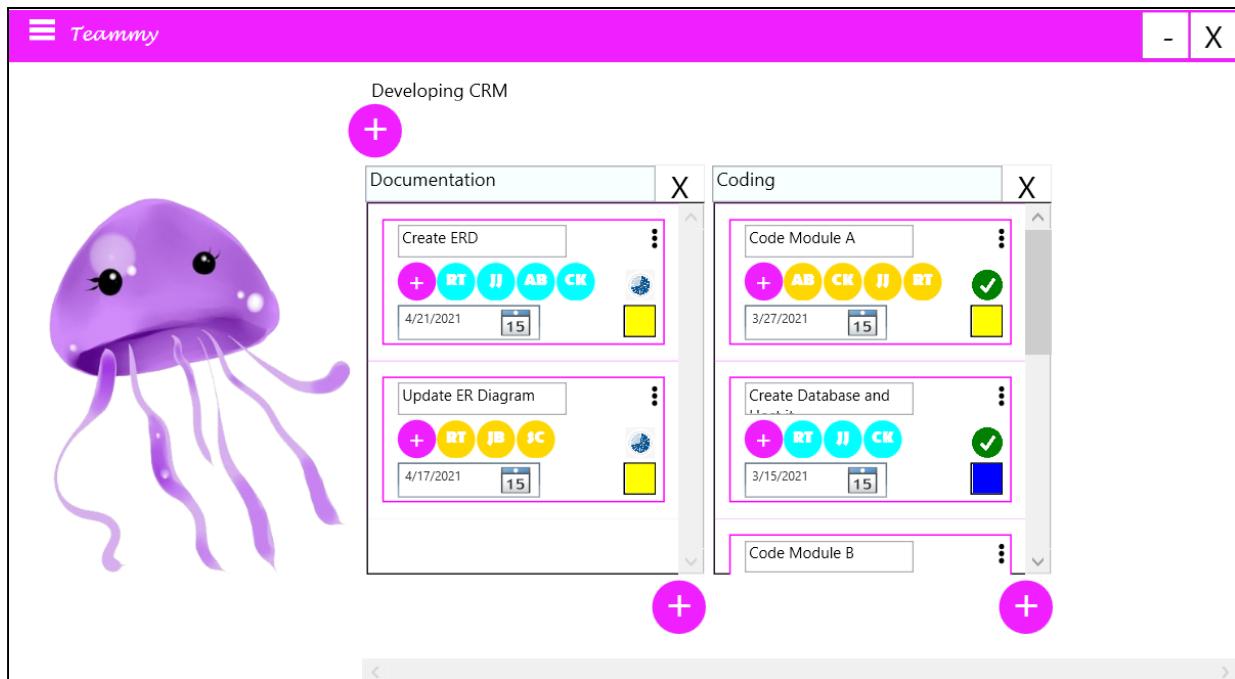
### 3. The Boards Page



The Boards page displays a list of projects the user is a member of, sorted by team.

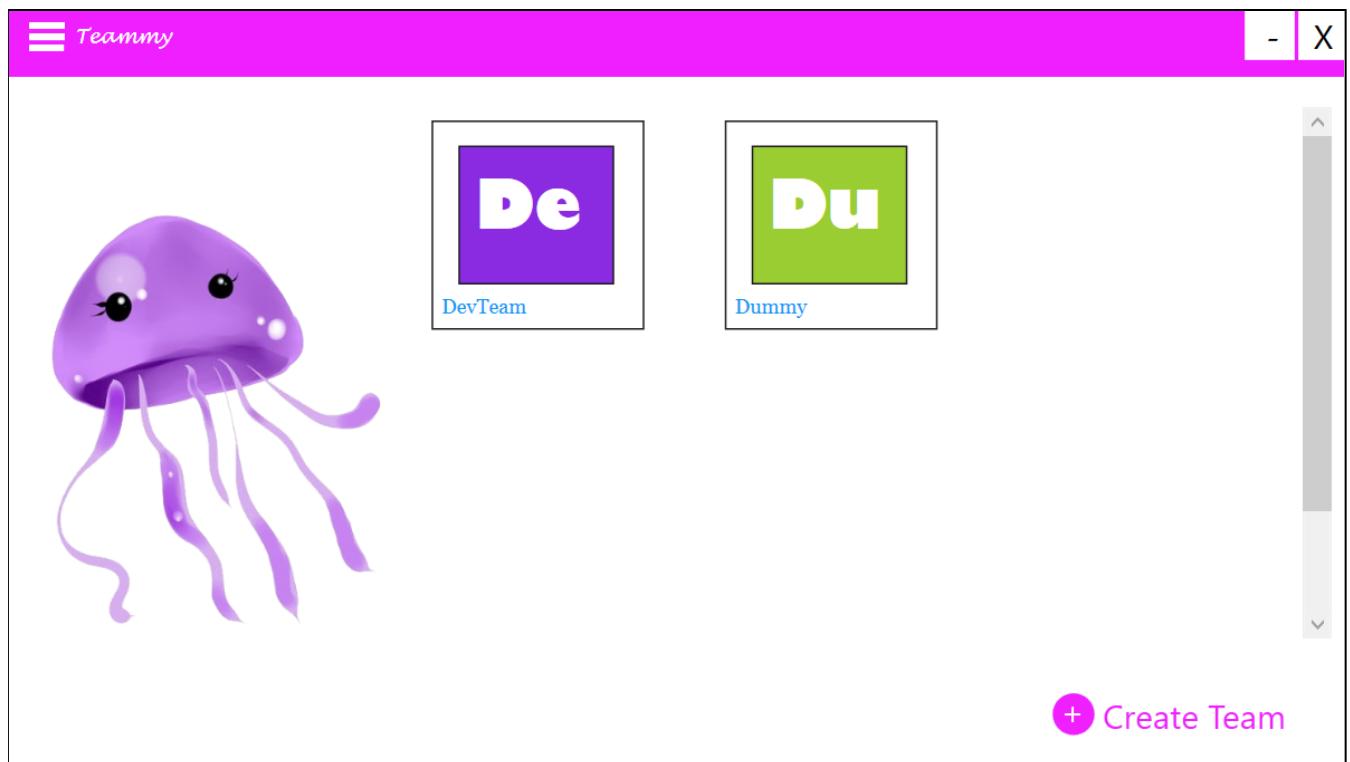
Users with the Project Manager privilege may add or delete projects on this page.

#### 4. The Project Details Page



The Project details view displays all categories with the corresponding tasks. The add, update and delete functionalities are limited to users with a Project manager privilege at the moment.

## 5. The Teams Page



The Teams page displays a list of Teams that the user is currently a part of. Users with the Project Manager privilege may create new teams here.

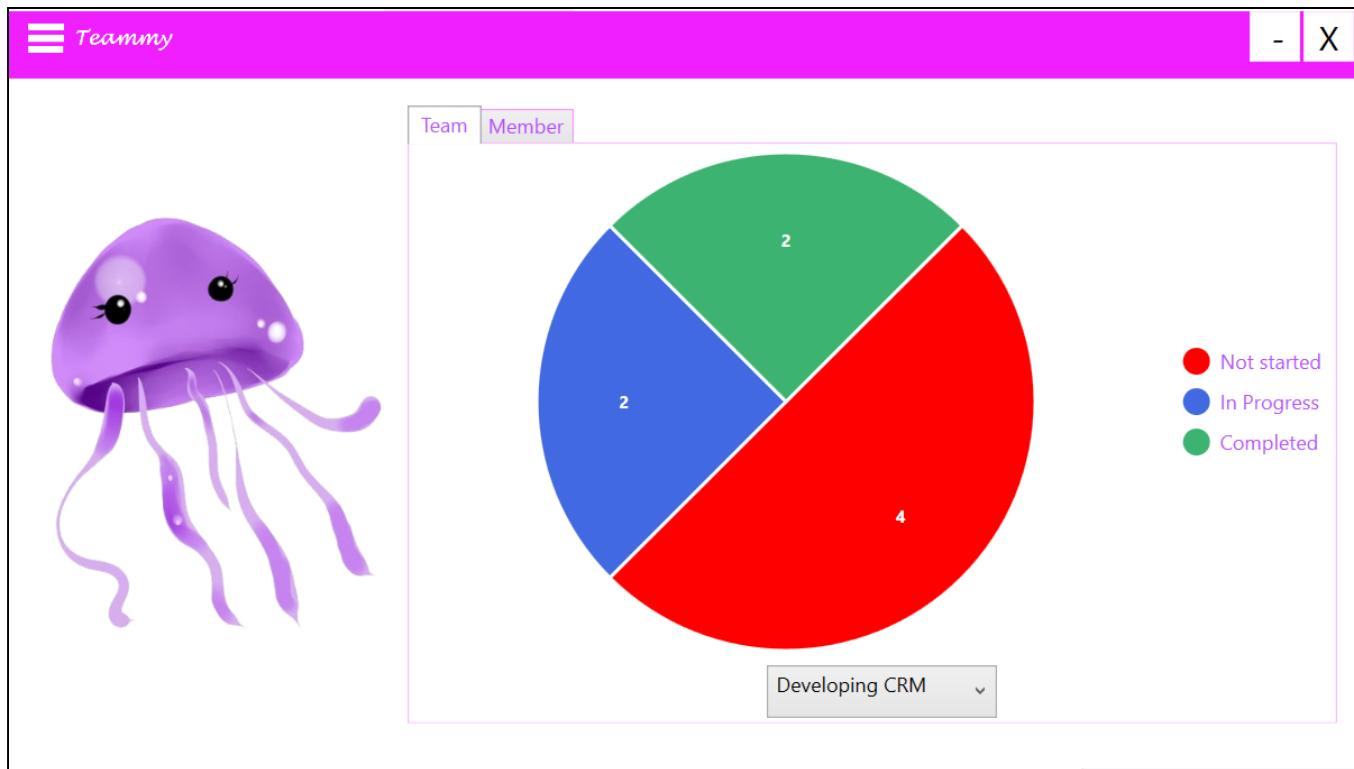
## 6. The Contacts Page

The screenshot shows a mobile application interface titled "Team mates" at the top left and a close button "X" at the top right. Below the title, the team name "DevTeam" is displayed in large, bold, purple letters. A table follows, listing six team members with their names, emails, and phone numbers. The table has three columns: "Name", "Email", and "Phone". The names are Chaeeun Kim, Jiyeon Jeon, Anirudh Babu, Ravleen Tumber, Jeongsil Baek, and Seol Cheon. Their corresponding emails are chaeeun@gmail.com, jiyeon@gmail.com, anirudh@gmail.com, ravleen@gmail.com, jeongsil@gmail.com, and seol@gmail.com. Their phone numbers are 6475554444, 6476665555, 6477776666, 6474443333, 6478887777, and 6479998888. At the bottom of the table is a navigation bar with a left arrow, a right arrow, and a central search bar.

Name	Email	Phone
Chaeeun Kim	<a href="mailto:chaeeun@gmail.com">chaeeun@gmail.com</a>	6475554444
Jiyeon Jeon	<a href="mailto:jiyeon@gmail.com">jiyeon@gmail.com</a>	6476665555
Anirudh Babu	<a href="mailto:anirudh@gmail.com">anirudh@gmail.com</a>	6477776666
Ravleen Tumber	<a href="mailto:ravleen@gmail.com">ravleen@gmail.com</a>	6474443333
Jeongsil Baek	<a href="mailto:jeongsil@gmail.com">jeongsil@gmail.com</a>	6478887777
Seol Cheon	<a href="mailto:seol@gmail.com">seol@gmail.com</a>	6479998888

Clicking on any team in the Teams Page opens up the Team Mates view. The contact methods for each team member in the team is listed in here. Clicking on emails will open the default email application of the system.

## 7. The Progress Report Page



The Progress Reports Page displays the overall status of tasks in a pie chart, with an option to gaze at other projects. Users with the Project Manager status can also view progress reports per member per project.

## 8. The Schedule Page



The screenshot shows a calendar interface titled "April 2021" from the "Teammy" application. The calendar grid spans from Sunday, April 28, to Saturday, May 8. The days of the week are labeled at the top: SUNDAY, MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, and SATURDAY. The dates are displayed in a light blue font. A pink header bar at the top includes the "Teammy" logo, a minimize button, and a close button.

Key tasks listed in the calendar:

- Sunday, April 28:** Update ERD (represented by a small icon)
- Monday, April 29:** Complete feature T (represented by a green checkmark icon)
- Tuesday, April 30:** Code Module B (represented by a red circle icon)
- Wednesday, April 30:** ... (three dots indicating more tasks)
- Wednesday, April 28:** Code Module C (represented by a red circle icon)

Navigation controls include "Previous" and "Next" arrows at the top right, and a date input field with a placeholder "dd/mm/yyyy" at the bottom center.

The Schedule Page displays a calendar for a quick look at what tasks are due and when. Upon clicking a date with tasks due, a details window will pop up. As can be seen, three dots displayed horizontally on any date would mean more than one task is due at that date.

## 9. The Tasks Due Detail Page

The screenshot shows a modal window titled "Tasks due" with a pink header. The window contains a table with two rows. The first row has a "Date" column with "April 7, 2021" and a "Tasks due" column. The second row has a "Tasks due" column with "Code Module B" and "Code Module D". Each task row includes priority icons (red square for high, blue circle for low), assignee icons (JJ for Code Module B, RT and AB for Code Module D), and a scroll bar on the right. A yellow "OK" button is at the bottom right.

Date	Tasks due
April 7, 2021	Code Module B Assigned To Code Module D Assigned To

OK

The Tasks Due Details Page displays when a date that has tasks due is clicked. It displays the date in question and tasks due on that date along with details such as Priority (Rectangles, Red = High, Yellow = Medium and Blue = Low), assignees of the task and others.

## APPENDIX D (PROGRESS MONITORING)

Table: Iteration Burndown data

	Iteration 1	Iteration 2
Story points at start of iteration	69	61
Completed during iteration	32	61
Changed estimates	2	0
Story points from new stories	22	0
<b>Story points at end of iteration</b>	<b>61</b>	<b>0</b>

We were able to save time when making a login page. However, for making a screen for showing a project board, user controls for categories and tasks were needed which makes estimates increase. And logic to retrieve assignees who are assigned to a task was another factor that makes estimates higher. Also, logic for showing tasks which due coming up on the home page required more estimate. As for story points from new stories, Login page was a page requirement found during the iteration, which required new logic and a new page, hence those points have been mentioned.

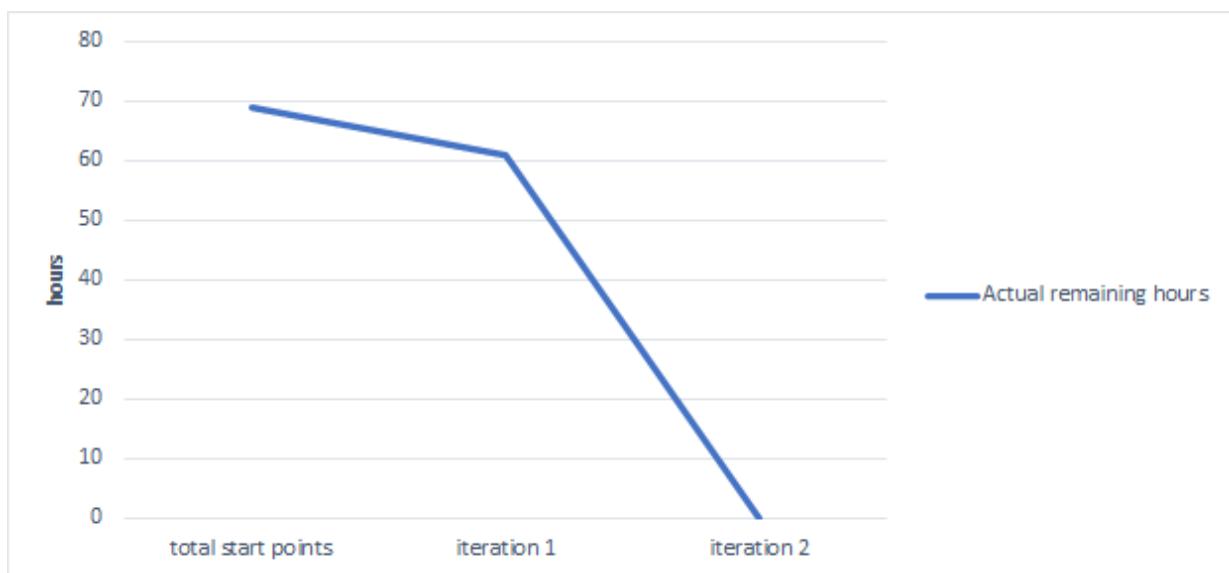


Figure 24: Iteration burndown chart for data from Table []