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## Background

In this project we will be building a website for buying books through it. This website will be having two different interfaces. One will be the customer interface and the other will be the admin interface. Customers will be able to buy books and pay for them directly through the website. Admin will be able to add/update product details and view user and sales information. This website is being built for a client who is going to shift their book business over to the website.

## System Features

### Functional Requirements

- Admin Registration and Login
- Admin will add/update/remove products to the database
- Admin will be able to view user information and sales status
- User registration and login
- User will be able to view details of a product
- User will be able to add product to cart
- User will be able to update the cart
- User will be able to checkout and pay
- User will be able to update user information
- User will be able to rate and review a product

### Non Functional

- The website has to be available 24/7
- The website has to be secured from unauthorized access
- The website has to respond quickly
- User interface has to be easy to use and interactive

## Software Development Process

The process we will be following for building this software is the waterfall process model. The waterfall model is a breakdown of project activities into linear sequential phases, where each phase depends on the deliverables of the previous one and corresponds to a specialization of tasks. The online book store application is rather straightforward and has less chance of changing requirements. That is why waterfall approach is selected to complete this project. Waterfall model consists of 6 phases. The phases in our project according to waterfall model will be:

1. Requirements Development
2. Design
3. Implementation
4. Testing

5. Deployment
6. Maintenance

## Project Management

Software project management is dedicated to the planning, scheduling, resource allocation, execution, tracking, and delivery of software and web projects. Without proper management of any software project peek success cannot be assured. Project management can be done manually using papers or it can be managed using a project management tool. In manual paper work updating changes and keeping everything at one place is not possible without redoing the whole thing. Project management tools efficiently handle most of the management work, keep it tidy and organized. Moreover it initiates real time collaboration and notification. For increasing productivity and flexibility we will be using a project management tool for managing our project.

### Description of the chosen Project Management tool

For our project we have used project management software called **monday.com**. It is a Work Operating System (Work OS) that powers teams to run projects and workflows. Many project management software are available in the market. They all come with their own advantages and drawbacks. For our project we have chosen monday.com and it has some advantages in our case which made us chose this one over other project management software. We have talked about it briefly below:

- **Plans:** The first benefit of using monday.com is that it provides a basic free plan and paid plans separately where the basic plan has various limitations. But they have a student plan which lets students access a lot of paid features for free. One of which is the ability to add more than 3 members to a project. This was one of the main reason we have chose monday.com
- **Simple to use:** The interface of Monday.com is very eye catching, modern and it is also very easy to use. It is not overwhelming for a beginner.
- **Web based tool:** Monday.com is fully a web based project management too. So, no download is required to use the tool. It also has an android application which is a plus as some tasks can be managed through our phones.
- **Progress tracking:** By using a tool like monday.com the project progress for individual tasks can be easily tracked and updated.
- **Assigning members and resources:** Person responsible for each task can be assigned to individual task itself. Resources like documents or links can also be assigned to each task.

- **Team collaboration in real time:** monday.com has a chat and discussion feature integrated in the application which can be used for real time collaboration. Notifications are also sent for any changes in the project. Notifications can also be customized easily.
- **Integration with other platforms:** monday.com can be easily integrated with other applications like gmail, google drive, github, zoom etc so that all of the work related to the project can be handled from one place.
- **Graphs and charts:** This is one of the major advantages of switching to a tool like this. By assigning time, status, resources, dependencies etc to each task charts like, Gantt chart, pie chart, bar chart will be created automatically. All of the charts can be further customized.
- **Cost management and Reporting:** Cost of each task can be calculated and assigned. Real time reporting can be done through the tool.

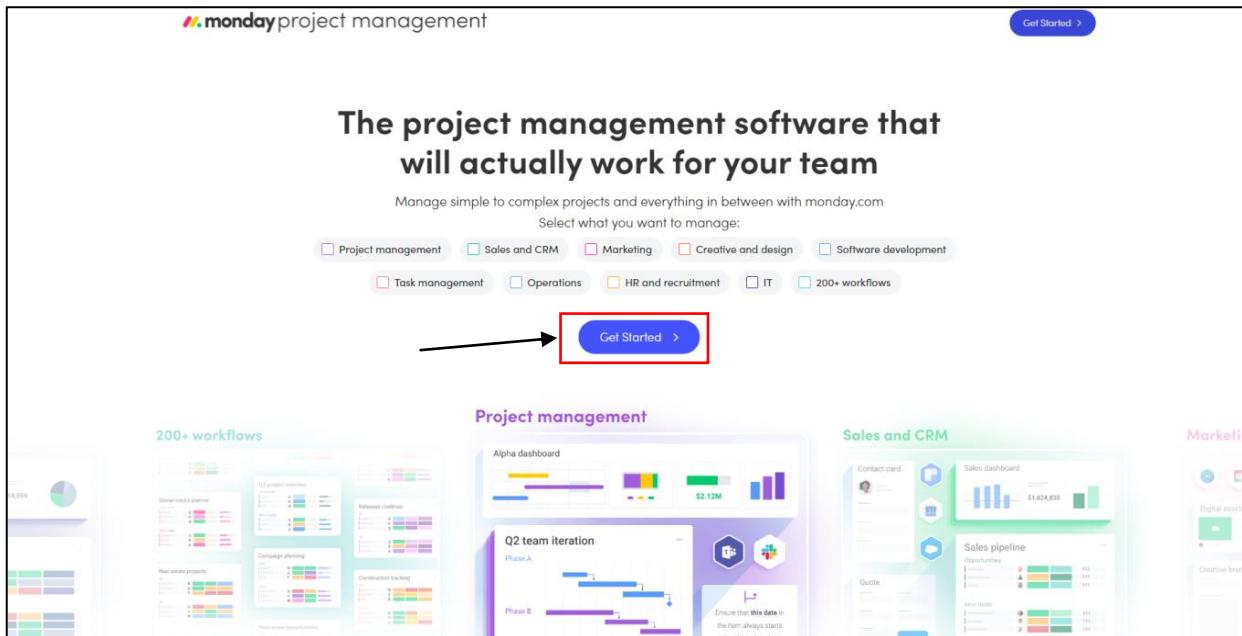
All of these features are not unique to monday.com but as a free version it provides more features than most other software's free version which motivated us to choose this one over other software. Which tool to use depends on the type of project we are trying to manage. For our case monday.com was the most feasible choice to manage our project.

### **Project management using the software**

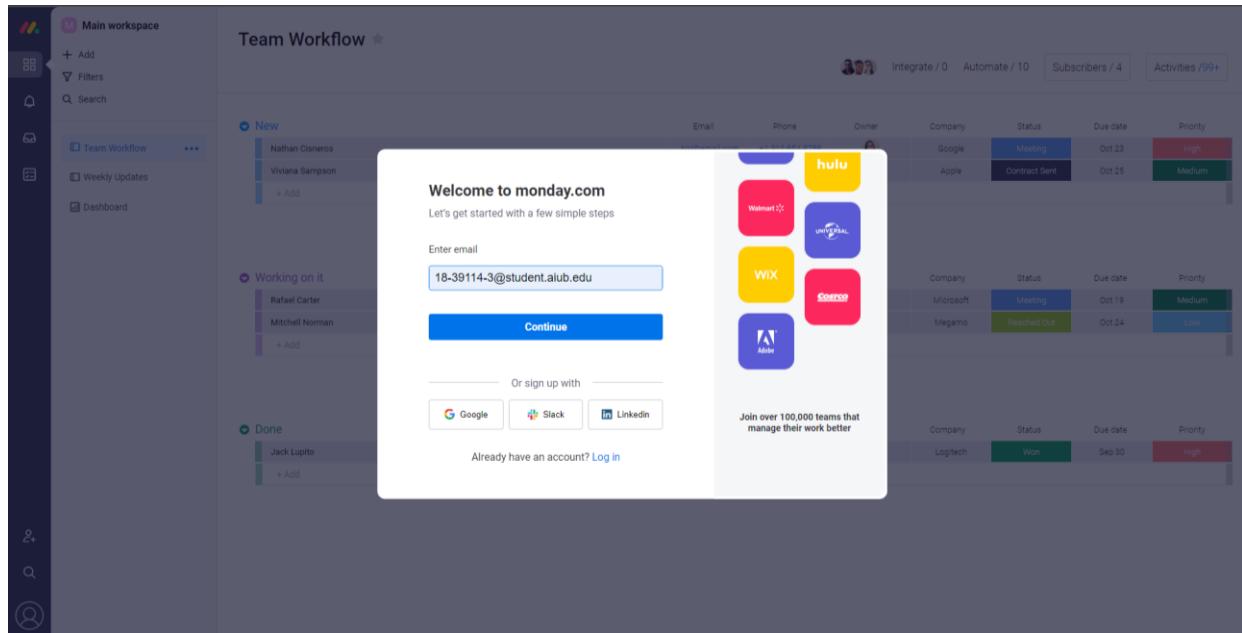
To create our project and manage it with monday.com all of the team members need to register to monday.com using their website. This is a web based project management tool so everything will be managed through their website only. The very first step is to go to their official website at <https://monday.com> which will lead to their homepage.

## Registration Process

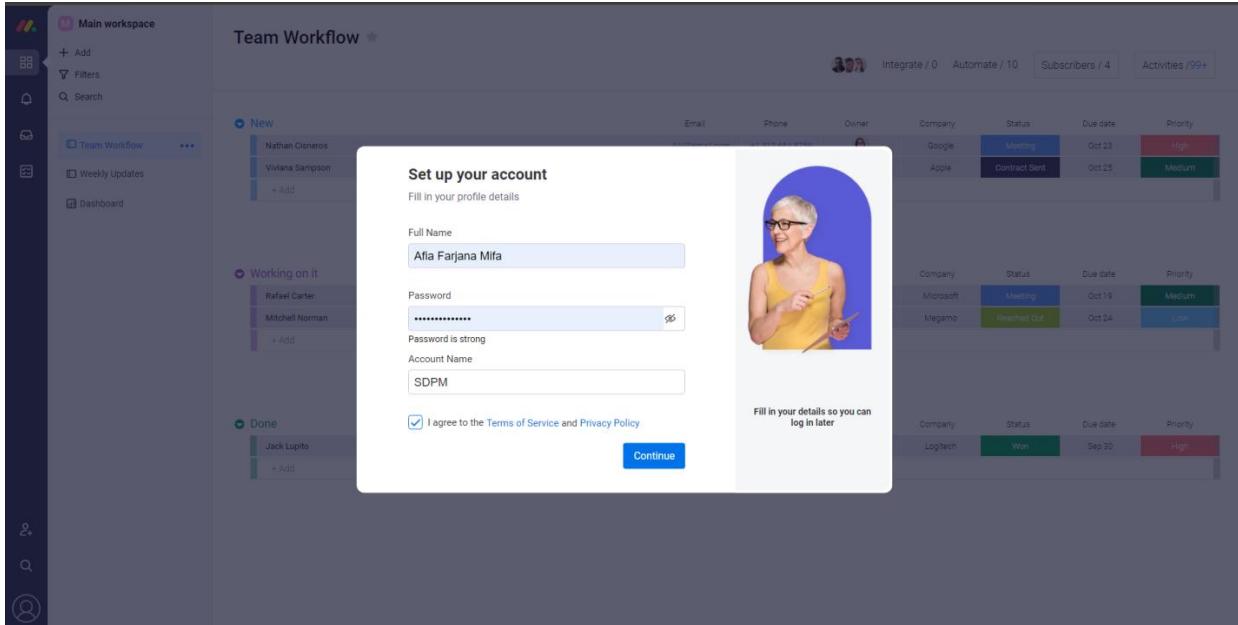
Clicking on the “Get Started” option will take us into the registration process.



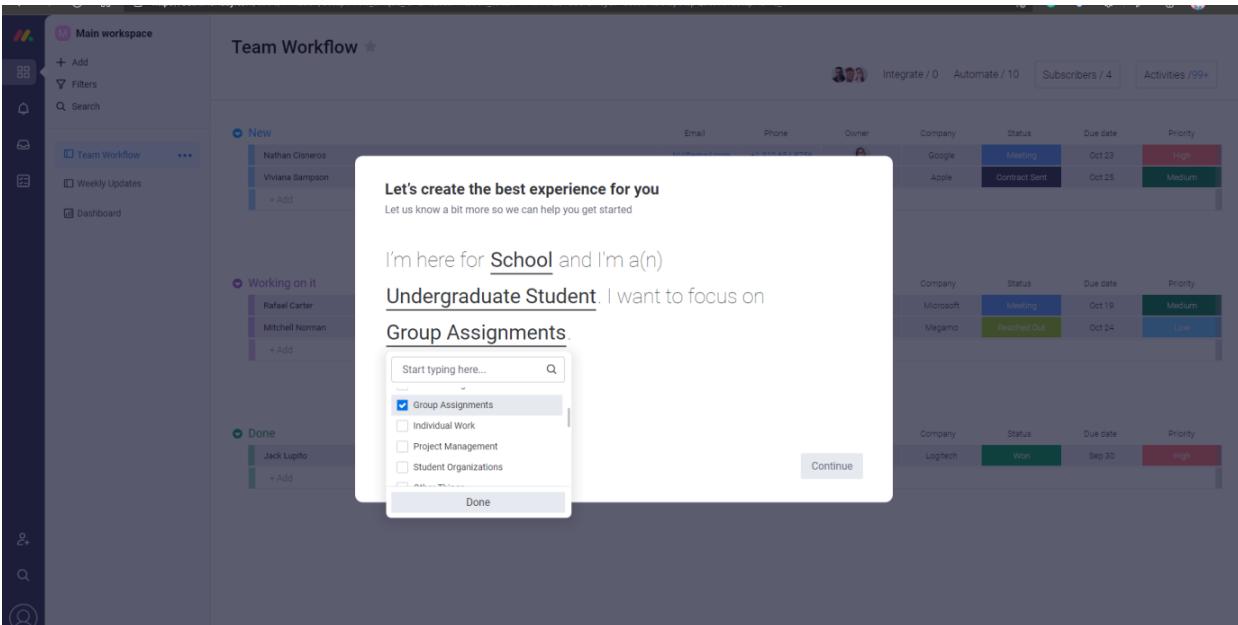
## Entering Email



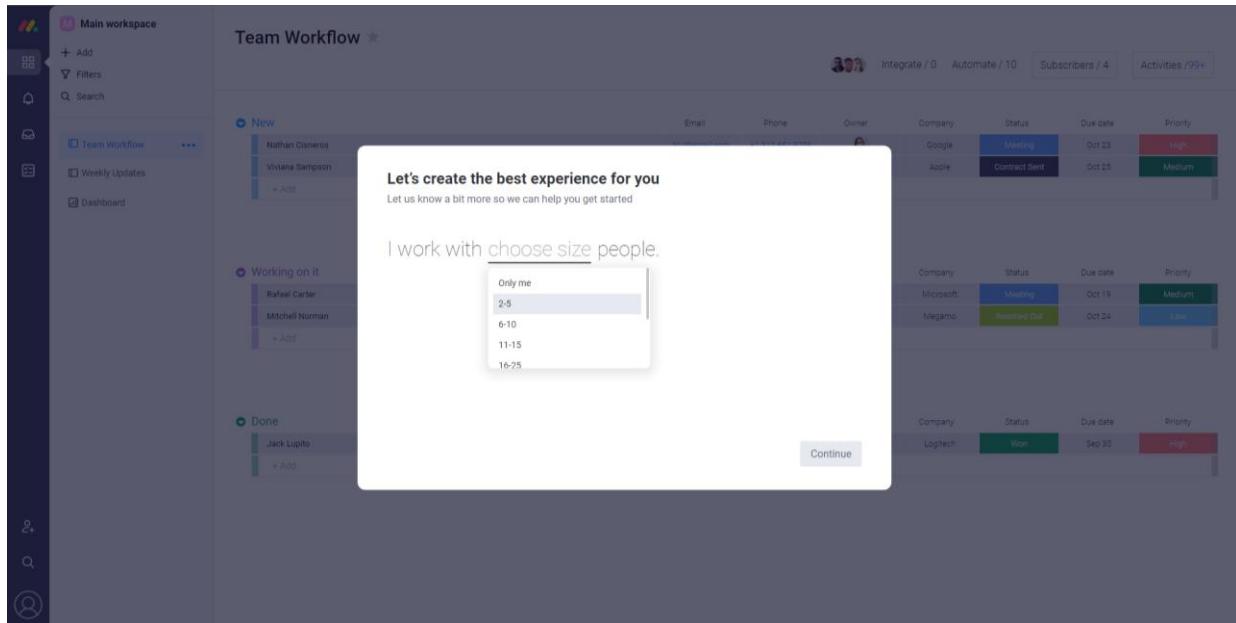
## Entering Full Name, Password & Account Name



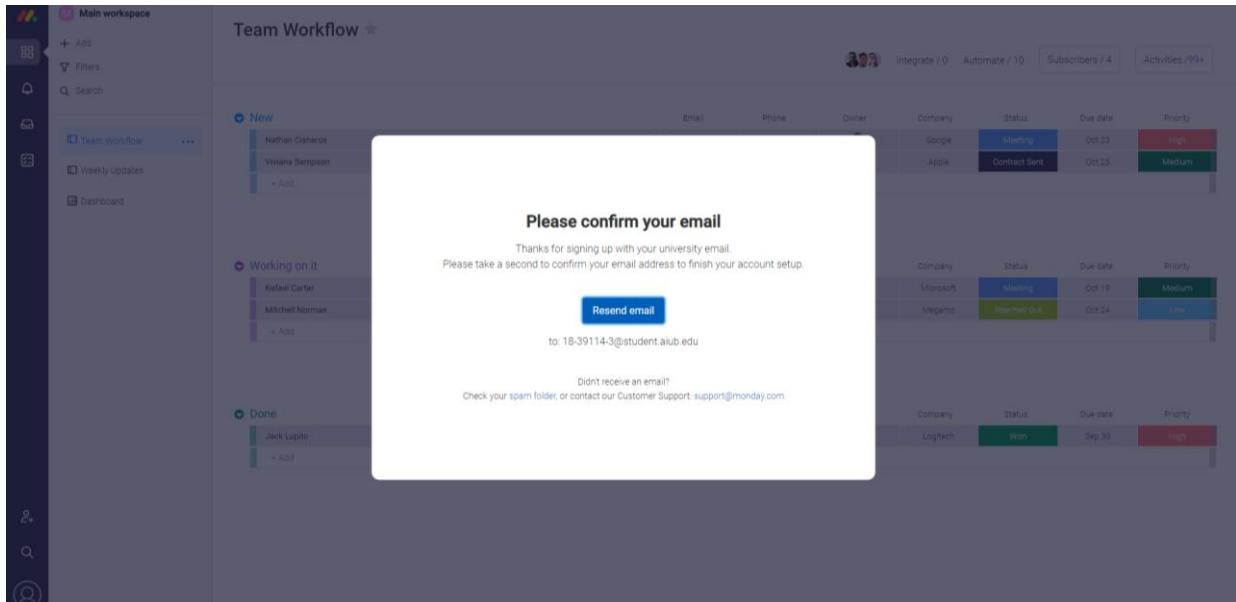
## Entering other relevant Information



## Specify the team size

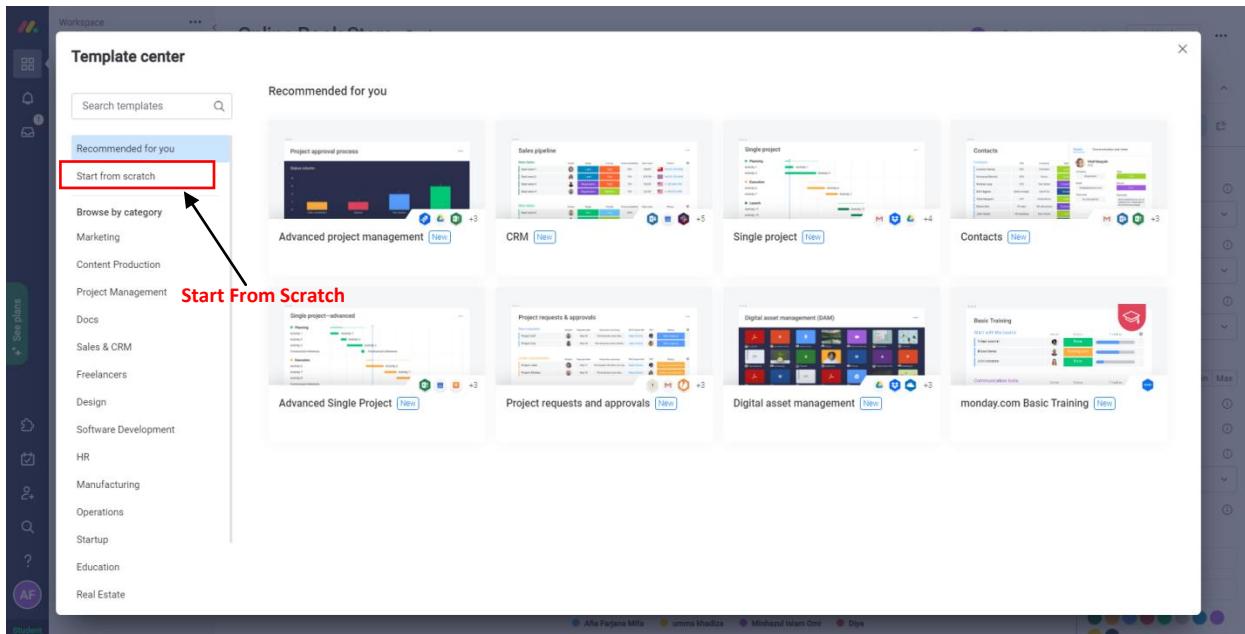


**After completing all of the steps above a verification mail will be sent**



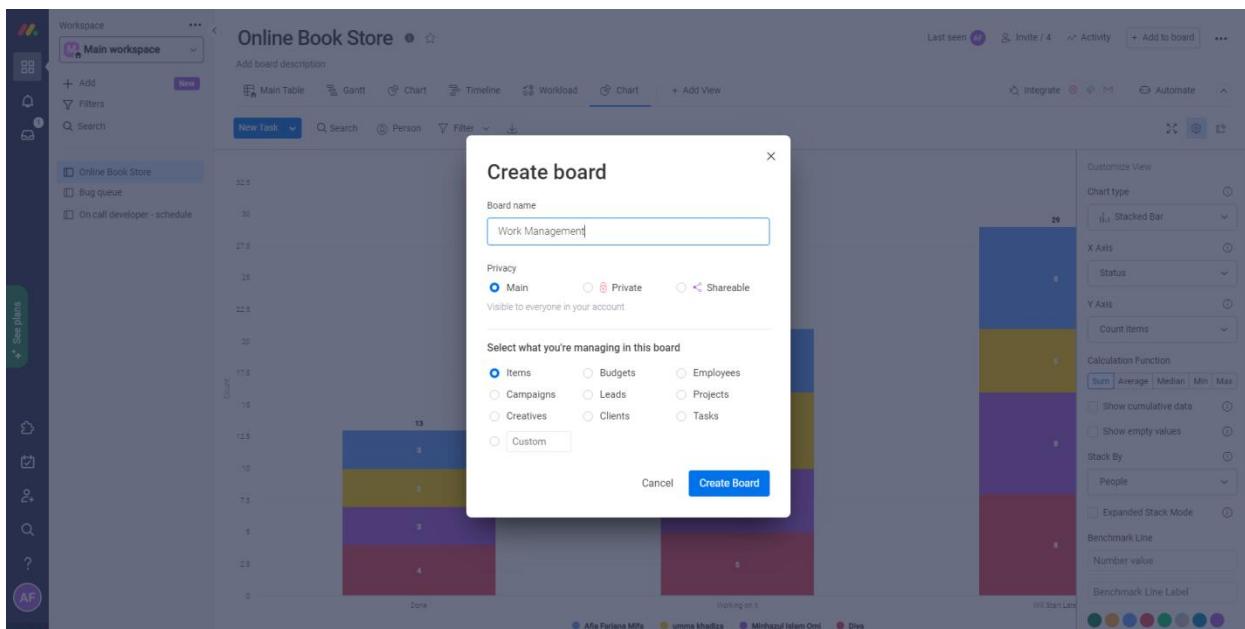
## Creating a board

For our first project we will be given the option to use a template or start from scratch. For our case we will start from scratch



## Adding Board Name

A name has to be given to each board. There can be several boards under a single project



## Board from scratch

A board started from scratch will look something like this. We can invite our team members by clicking on the invite option; add tasks, columns and various built-in chart views.

Work Management

Board can be renamed from here

Invite team members

Add more columns

Available Column options

Person	Status	Date
Essentials	Status	Dropdown
	Text	Date
	People	Numbers
Super Useful	Subitems	Timeline
	Files	Formula
	Connect boards	Tags
	Last Updated	Creation Log
More columns		

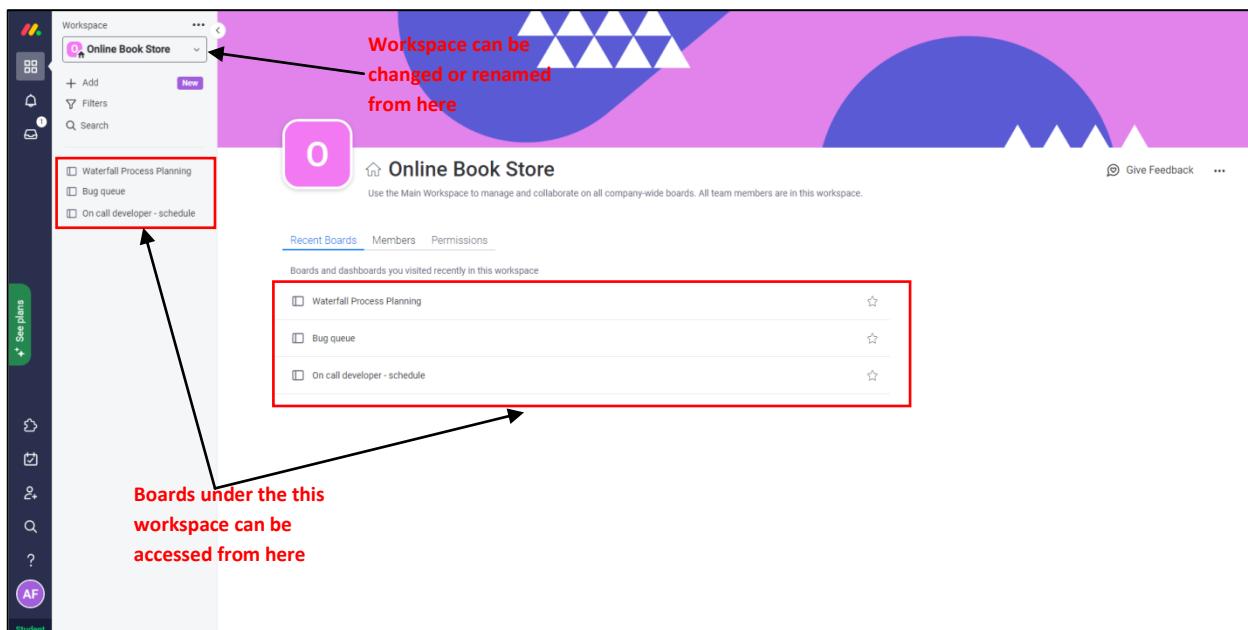
Chart Views can be accessed from here

## Inviting team members

After clicking on “Invite” Team members can be invited through their emails

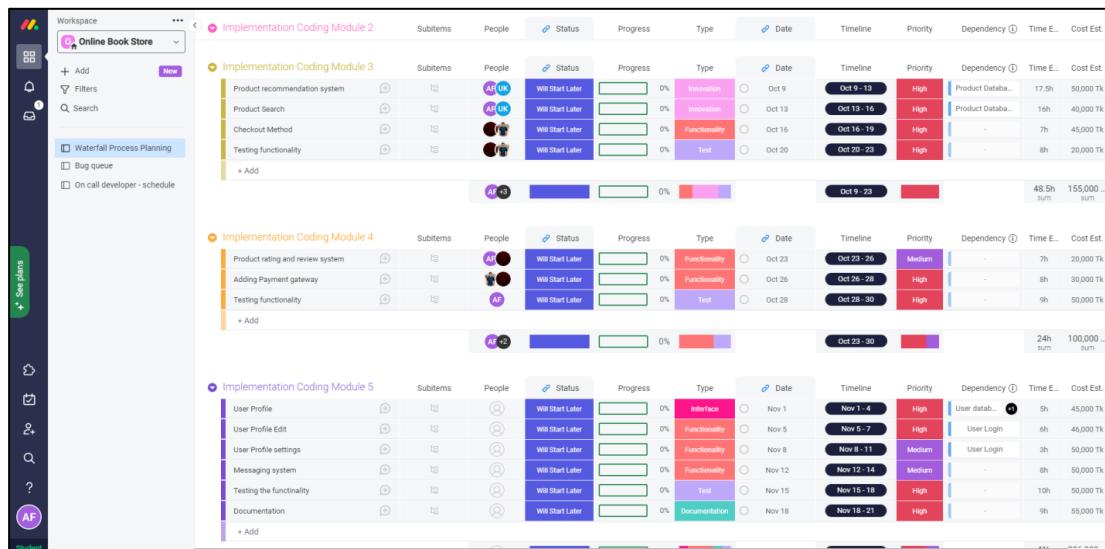
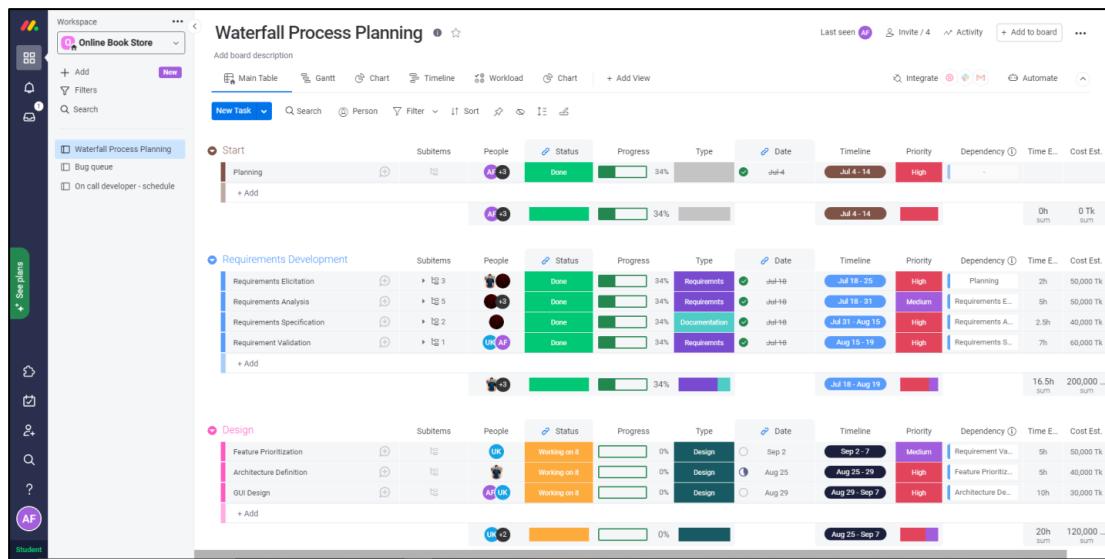
## Our project workspace

For our “Online Book Store” project we have created 3 boards in total. One is the board named “Waterfall process planning” where all the tasks are assigned, managed and tracked, the other is a board named “Bug Queue” which will be used for tracking the bugs. The next one is a board named “On call developer- schedule” which will be used to track which developer is present on which day and what bugs they will be handling. The “Bug Queue” board is linked to the “On call developer-schedule” board.



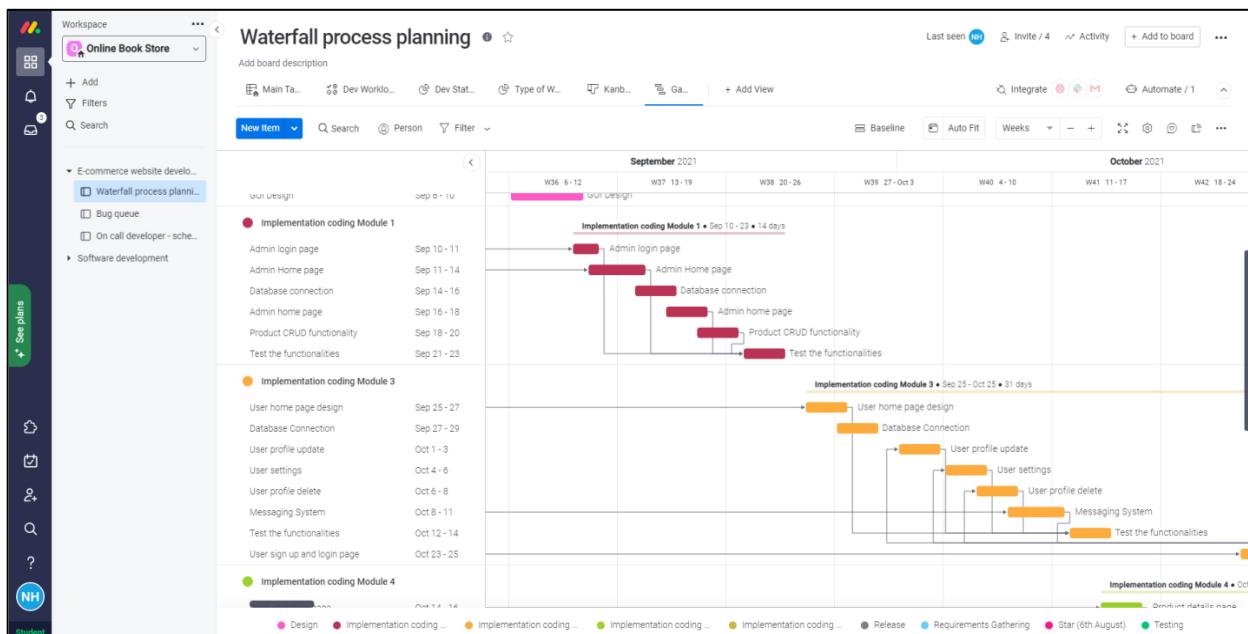
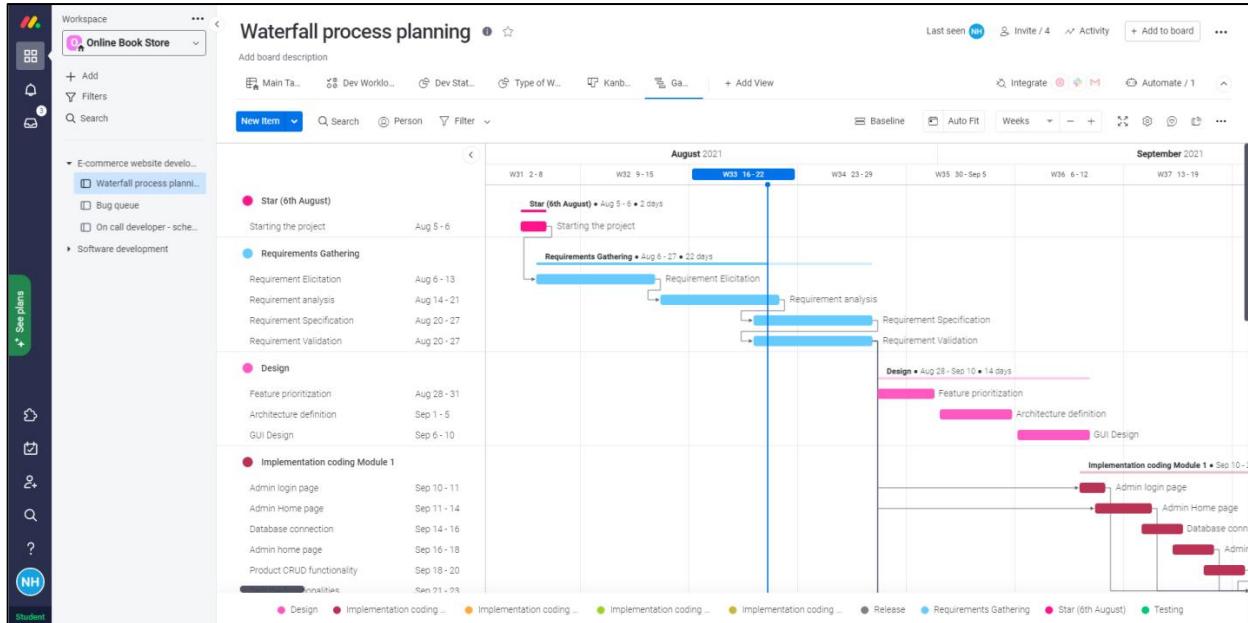
## Board 1 - Waterfall Process Planning

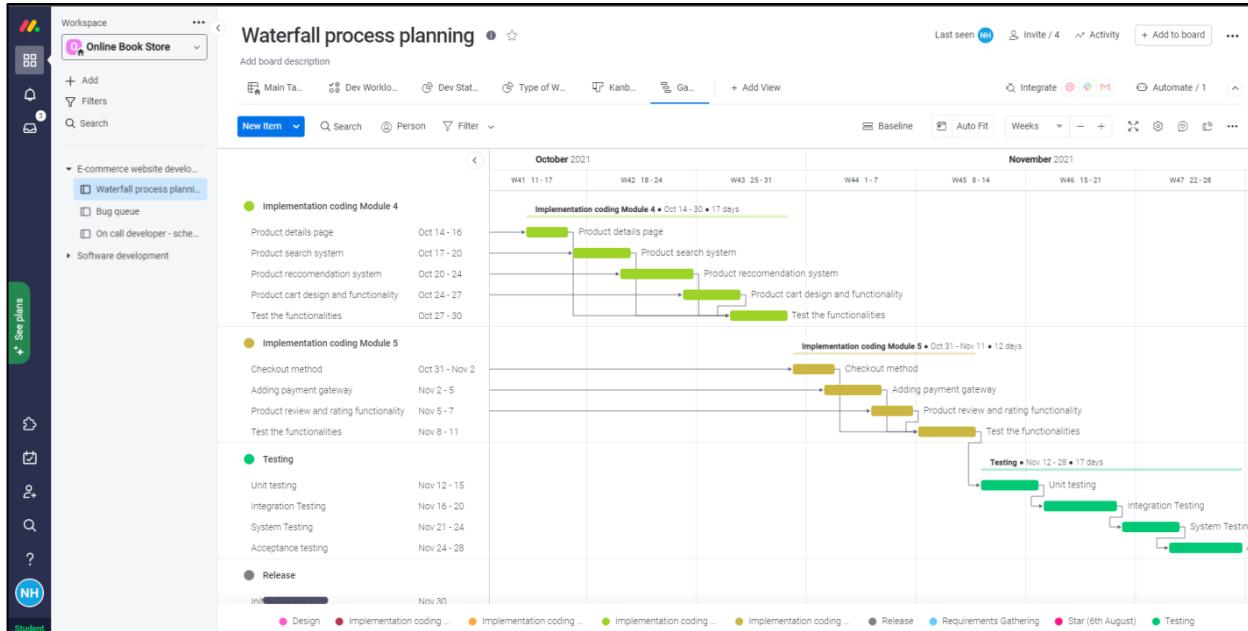
This board includes all the tasks required according to the waterfall model. It has 10 task groups. The main task groups are Requirement Development, Design, Implementation, and Deployment. The implementation group is divided into 5 subgroups from implementation of coding module 1 to 5. Each group has 12 columns. These columns include the name of the tasks, subtasks, assigned people to each task, task status, progress, type, start date, timeline, priority, dependency, time and cost estimation. Below are the snapshots of the board:



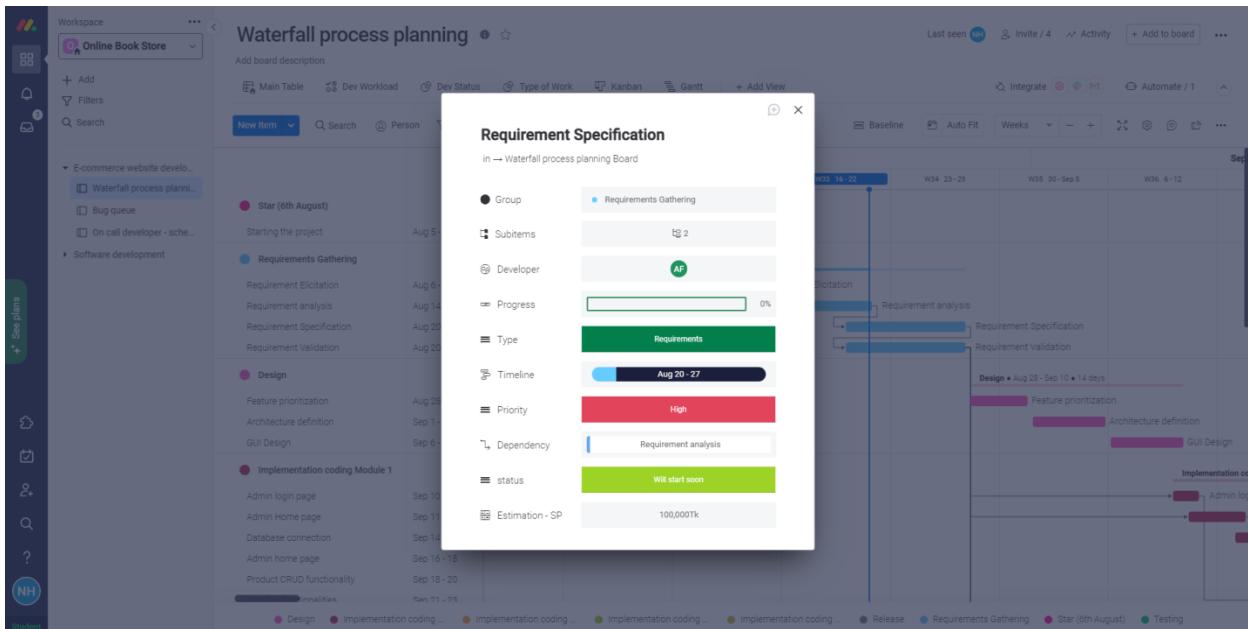


## Board 1 - Gantt chart



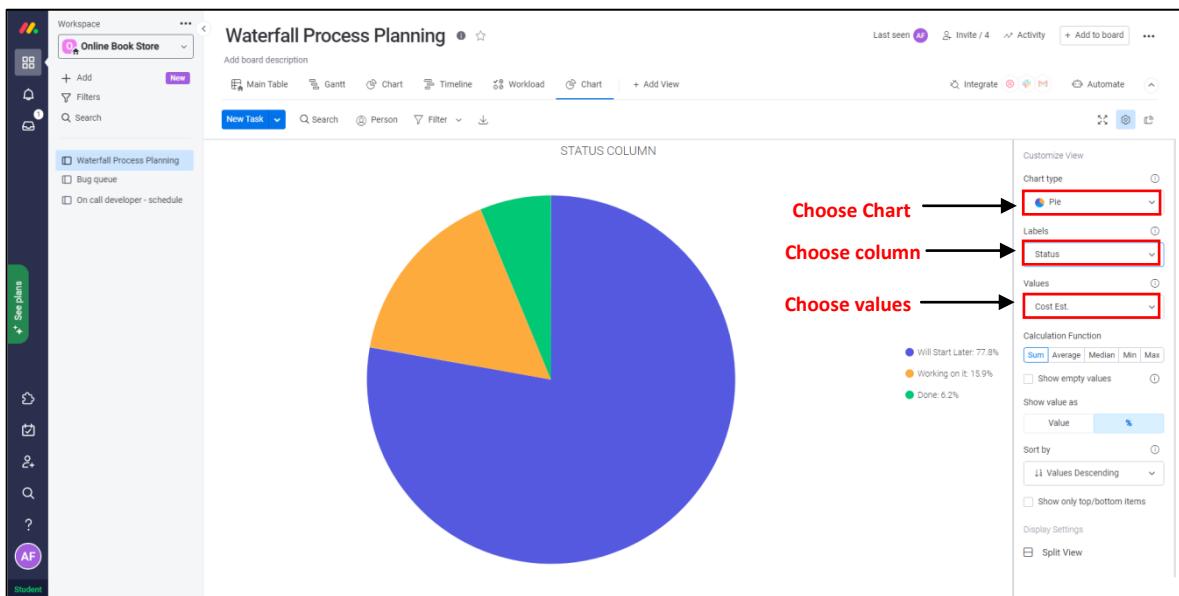


## Board 1 - Viewing task details from Gantt chart

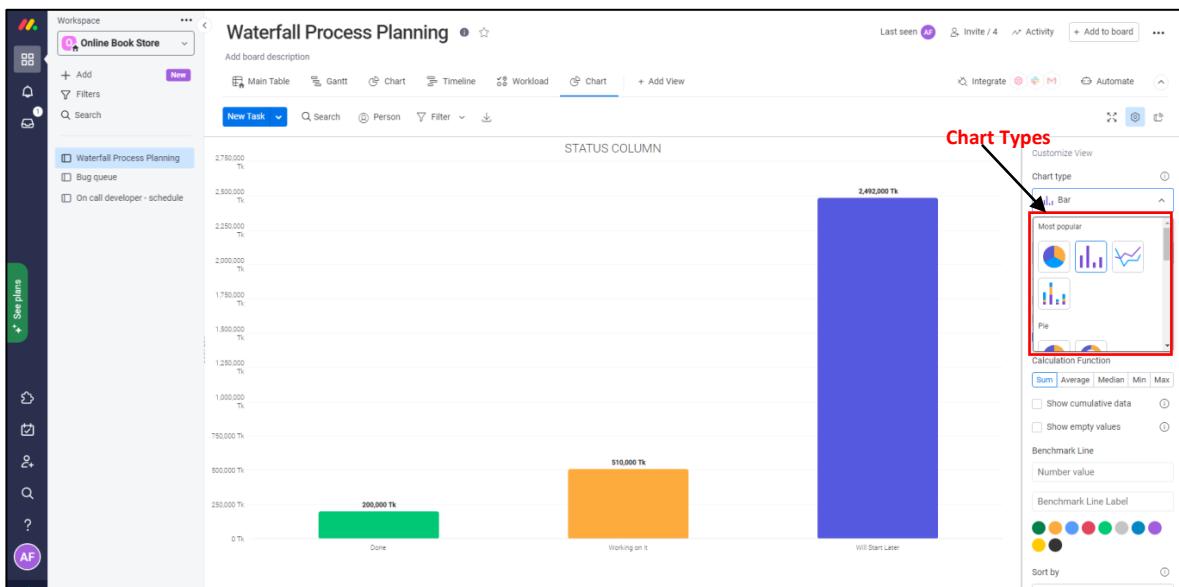


## Board 1 - Status Column (Pie Chart)

Each column can be viewed as a pie chart, bar chart, line chart etc. There are several options available to choose from. By clicking on the “settings logo” on the left side we can customize the chart type, which column to be viewed as a chart and what values to choose from the column. Below we have the status column viewed in a pie chart.

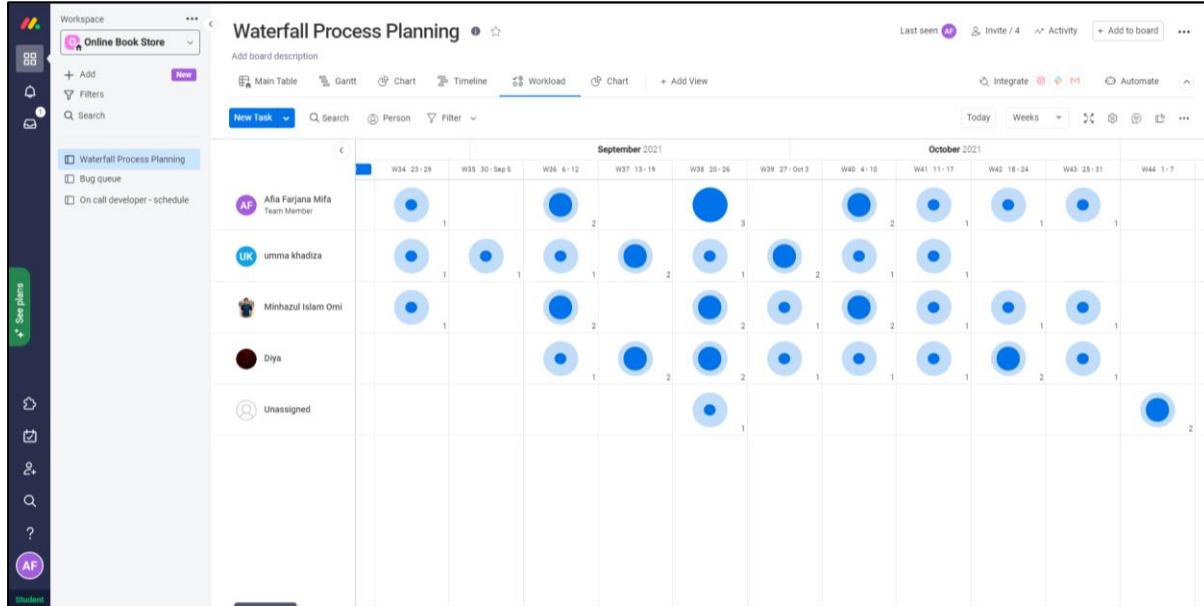


## Board 1 - Status Column (Bar Chart)

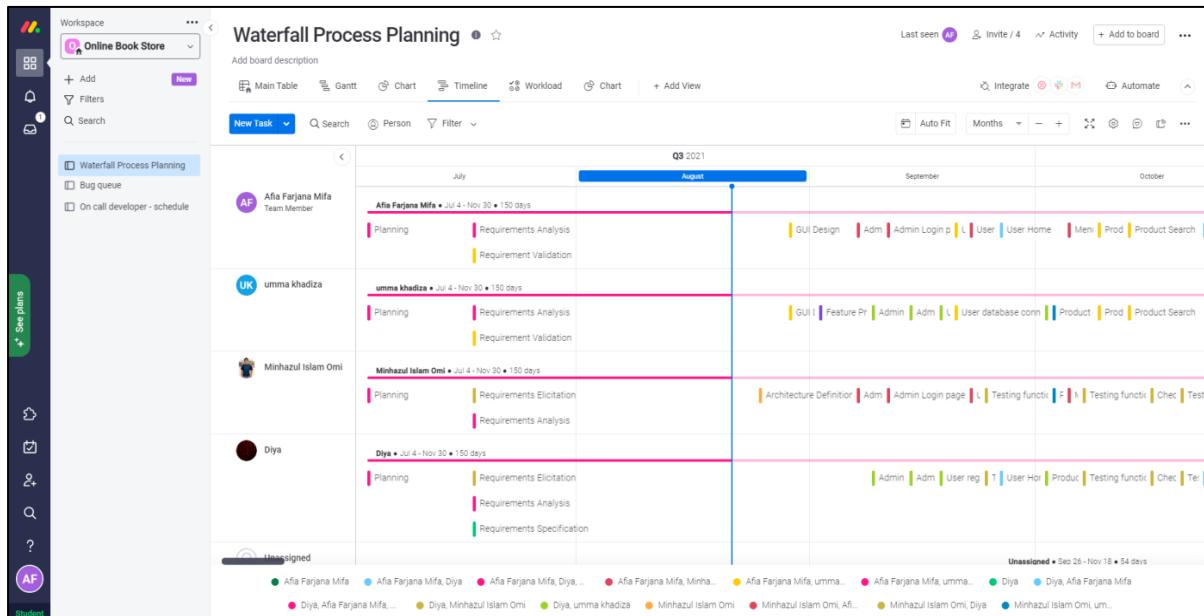


## Board 1 - Developer Workload

Workload on each developer on each week can be visualized through this chart.



## Board 1 - Timeline Chart



## Board 2 - Bug Queue

This board consists of the reported bug and relevant information on each bug like, who reported the bug, bug status, developer responsible to handle the bug, priority, description of the bug and so on. The bugs are grouped according to their status.

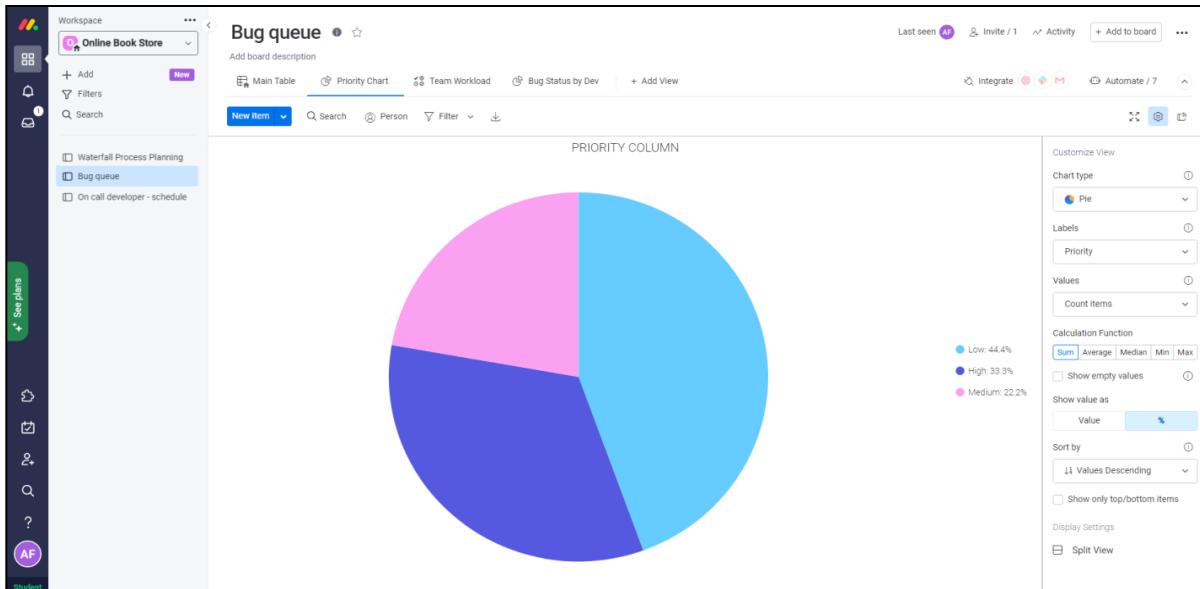
The screenshot shows a Jira board titled "Bug queue". The board has four main sections representing bug statuses:

- New bugs:** Contains two items: "Numbers column stuck" and "Login Page Error".
- Ready for dev:** Contains one item: "Notification".
- Fixed:** Contains three items: "Home page loading issue", "Database Error", and "Can not find user".
- Won't fix:** Contains no items.

Each item row includes columns for Reporter, Status, Dev, Priority, Bug description, Picture/video of ..., and Timeline. The "Status" column uses color-coded icons to represent the bug's current state.

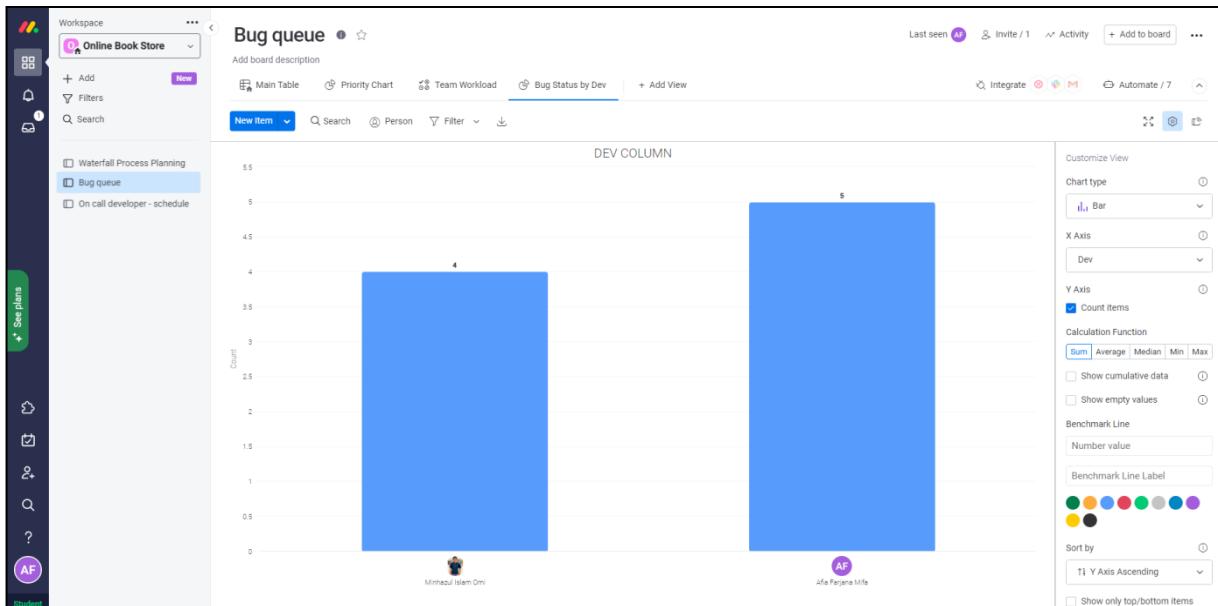
## Board 2 - Priority Chart (Pie chart)

Similar to the main board the bugs can be also viewed in various charts based on the column

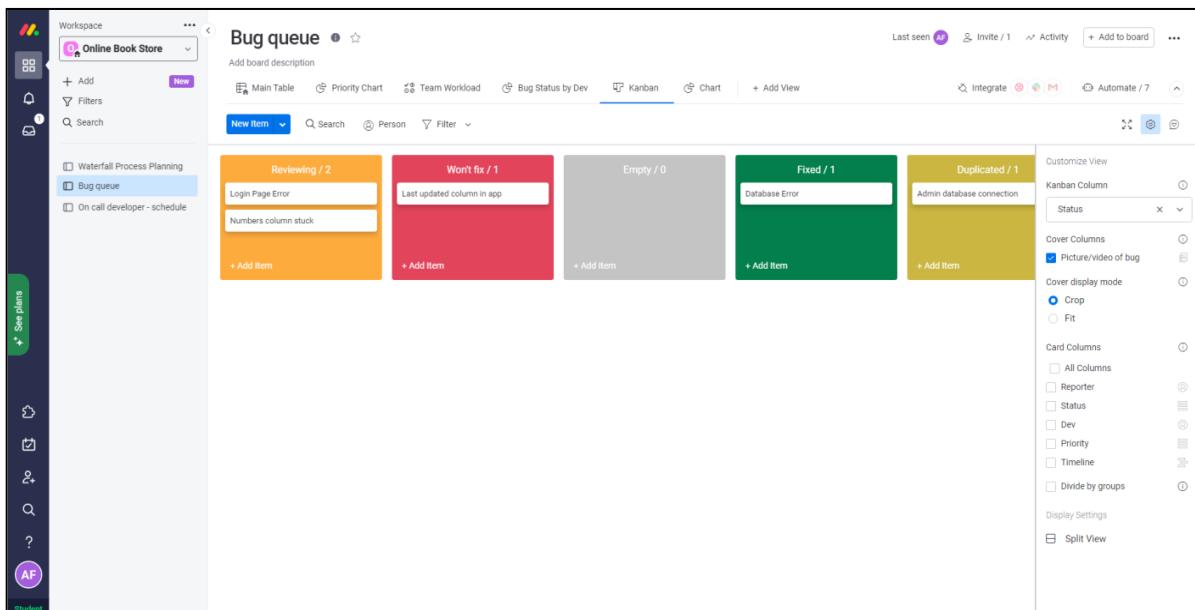


## Board 2 - Bug status by developer (Bar chart)

Here is a bar chart for the developer handling the bugs from the “Bug Queue” board. Similar to the other charts the type can be changed and chart can be customized accordingly.



## Board 2 - Kanban Board View



## Board 3 - On call developer schedule

This board is linked to bug board and will hold the information of the developer available on call each day, their contact information and information on the bug they will be handling.

Date	Developer	Telephone	Email	Connect to "Bug queue" board	Shift summary and comments
Sep 12	AF	88015172738	afaf@mail.com	Last updated column in app	
Sep 13	AF	88015172738	afaf@mail.com	Login Page Error	
Sep 14		88015172738	minhazom118@g...	Numbers column stuck	
Sep 15		88015172738	minhazom118@g...	Admin database connection	
Sep 16	AF	88015172738	minhazom118@g...		
Sep 26		88015172738	drahman024@gm...	Database Error	
Sep 27		88015172738	drahman024@gm...	Database Error	
Sep 28		88015172738	drahman024@gm...	Can not find user	
Sep 29	UK	88015172738	ummakhadiza786...	Can not find user	
Sep 30		88015172738	ummakhadiza786...	Home page loading issue	
October 3					

## Board 3 - Chart Views

Similar chart views are also available for this board. Below is the team workload chart

