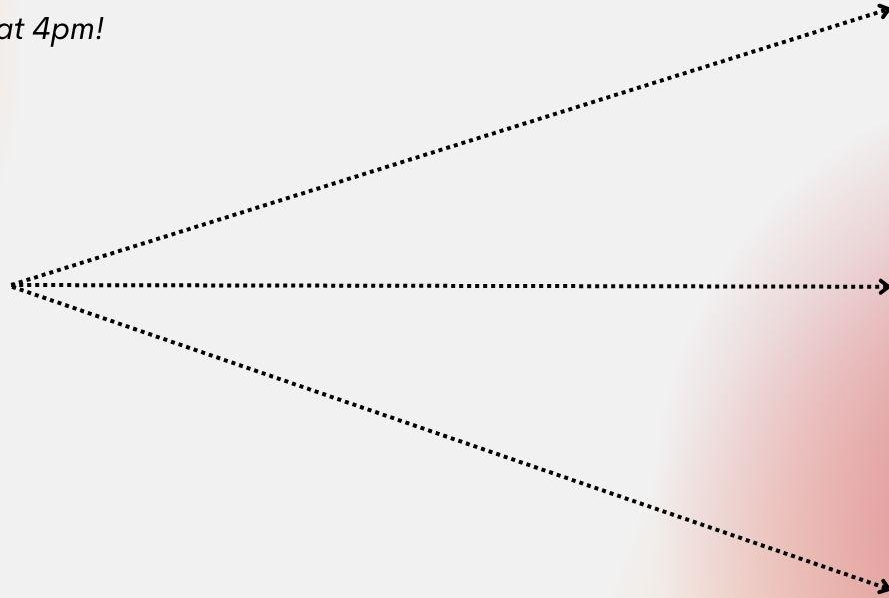
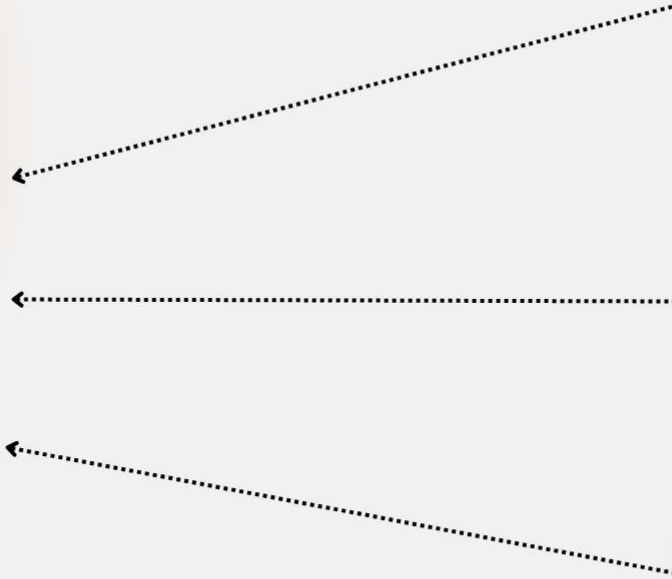


Problem!

Manager: I want this done at 4pm!





Employee1:
I'm free from
2pm-6pm



Employee2:
I'm free from
8am-2pm

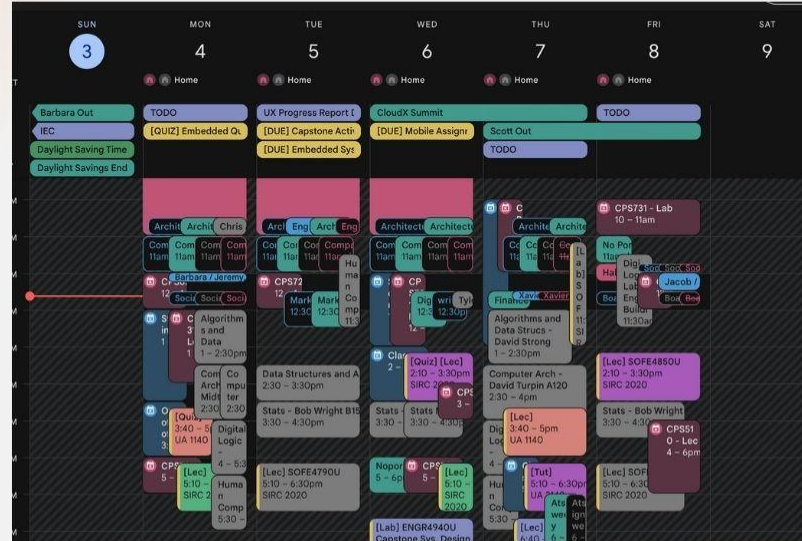


Employee3:
I'm free from
5pm-8pm



Manager: Hmm.. if my task takes 4 hours long, then employee 1 can work on it for 1 hour here, oh! but employee 2 is free at this time, so that means I can set this up with him... wait this can't work, employee 1 is out of office!

AHH!!!



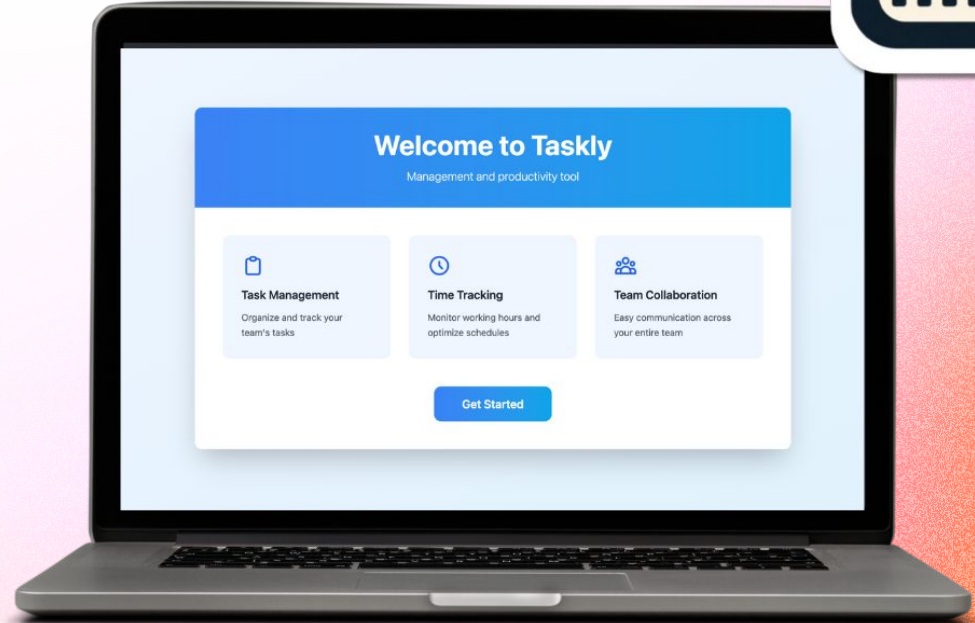
Taskl

y

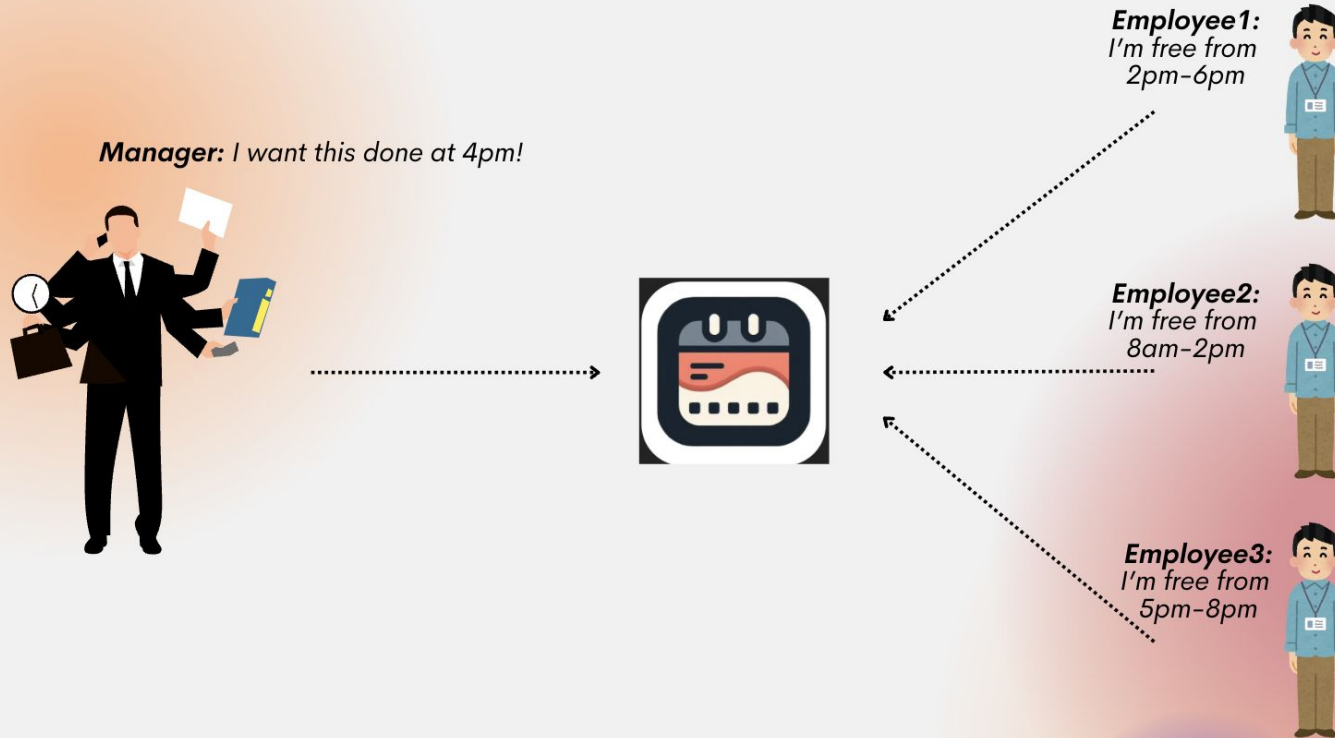
Project Management Simplified.

By Team Wesley

Jerry Shum
Jeremy Mark Tubongbanua
Nehmat Farooq
Wesley Kyle De Guzman



How Taskly Works



How Taskly Works



assignment

*id=1
employee_id=2
start_time
end_time*

assignment

*id=2
employee_id=3
start_time
end_time*

assignment

*id=3
employee_id=3
start_time
end_time*



Data Model

Data Model

User

- +id
- +name
- +role (employee or manager)

Task

- +id
- +task_name
- +description
- +start
- +deadline
- +hours

EmployeeWorkingHours

- +id
- +user_id
- +start_time
- +end_time

Assignment

- +id
- +task_id
- +user_id
- +start_timestamp
- +end_timestamp

Timezones are in UTC format

The Product

Time For A Live Demo!

Dashboards

Employee Dashboard

The Employee Dashboard in Taskly features a blue header with the logo and navigation links. It includes a 'Select User' dropdown set to 'Alice', a 'Tasks Assigned to Alice' section showing a task named 'my new task' with details like description, due date, and start time, an 'Employee Working Hours' section with a time range of 09:00 - 17:00, and an 'Employee Form' with input fields for start and end hours and a 'Submit' button. A 'Task Calendar' on the right shows a weekly view for November 03 - 09, with a vertical task list on the left side of the calendar grid.

- Define Working Hours
- View tasks
- View tasks on calendar

Manager Dashboard

The Manager Dashboard in Taskly features a blue header with the logo and navigation links. It includes a 'New Task Creation' form with fields for 'Task Name', 'Task Description', 'Start Date & Time' (set to November 3, 2024 1:08 PM), 'Deadline' (set to November 3, 2024 1:08 PM), and 'Estimated Hours' (with a hint to enter estimated hours like 5.5). A 'Create New Task' button is at the bottom.

- Define and Broadcast Tasks

Manager Dashboard

Manager Dashboard

Create and manage your team's tasks efficiently

New Task Creation

Task Name

Task Description

Provide detailed task description and requirements

Start Date & Time

Deadline

Estimated Hours

Create New Task

Employee Dashboard

Taskly

DashboardEmployee DashboardManager Dashboard

Select User

Alice

Tasks Assigned to Alice

my new task

Description: 3

Due Date: 2024-11-03T23:00:00

Hours Allocated: 4

Start Time: 11/3/2024, 1:00:00 PM

Employee Working Hours

Working Hours: 09:00 - 17:00

Employee Form

Start Hour

09:00 AM

End Hour

05:00 PM

Submit

Task Calendar

TodayBackNext

November 03 – 09

MonthWeekDay

	03 Sun	04 Mon	05 Tue	06 Wed	07 Thu	08 Fri	09 Sat
10:00 AM							
11:00 AM							
12:00 PM							
1:00 PM	1:00 PM – 5:00 PM my new task						
2:00 PM							
3:00 PM							
4:00 PM							
5:00 PM							
6:00 PM							
7:00 PM							

Brainstorming/ Prototyping

Initial Design and Planning using Figma

Initial Design: iteration 1

employee view

Employee

jeremy

manager

Nov 3, 2024

Working Hours

8am-8pm

8am

Tasks

Fix Bug #312

Fix Bug #311

8pm

Work on Fix Bug #312

Work on Fix Bug #311

MacBook Air - 2

manager

jeremy

wesley

Create a Task

Task Name

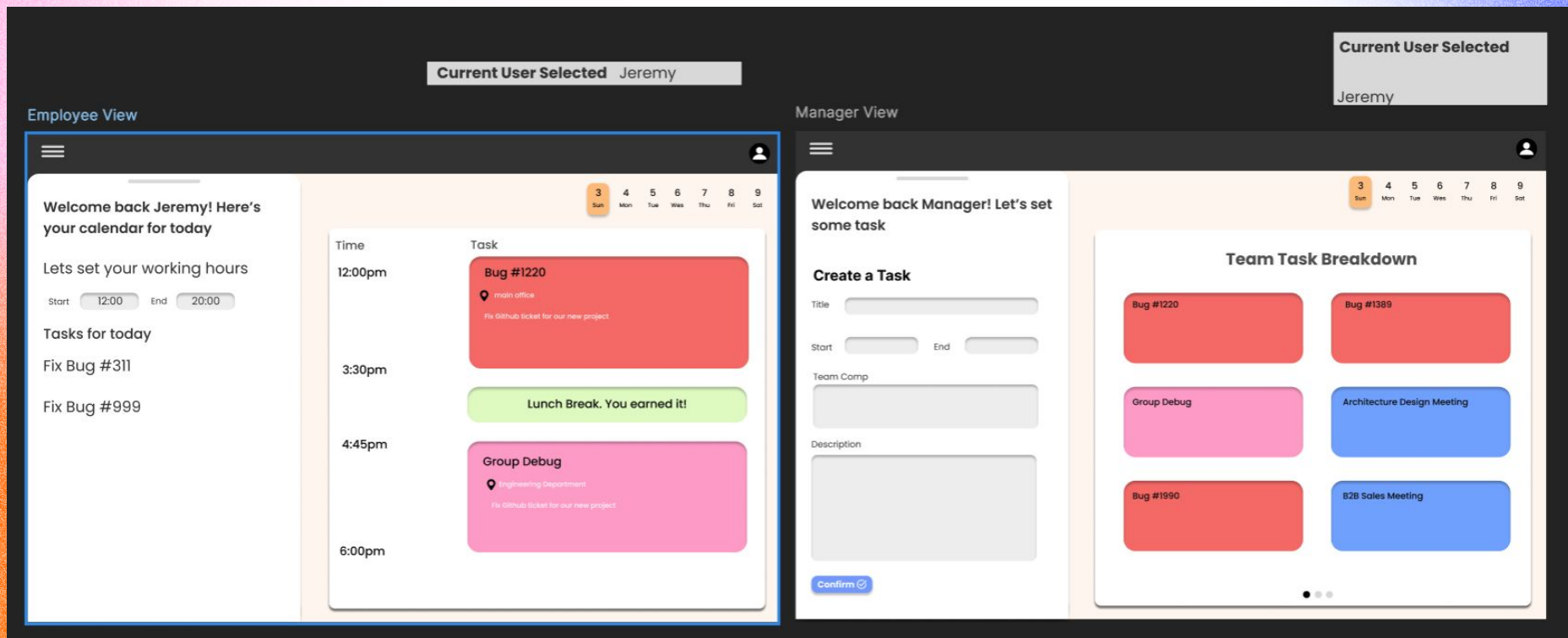
Task Description

Project Start From Date Time

Deadline Goal: To Date Time

Estimated Hours Task Should TAke 24h

Initial Design: iteration 2



Initial Design : iteration 3

Employee Dashboard

Schedule Optimizer

Select Employee

Comments

Earliest Start Latest End

Optimize Schedule

Optimized Schedule View

	Today	Back	Next	November 03 - 09			Month	Week	Day
	03 Sun	04 Mon	05 Tue	06 Wed	07 Thu	08 Fri	09 Sat		
12:00 AM									
1:00 AM									
2:00 AM									
3:00 AM									
4:00 AM									
5:00 AM									
6:00 AM									
7:00 AM									
8:00 AM									
9:00 AM									
10:00 AM									
11:00 AM									
12:00 PM									
1:00 PM									
2:00 PM									

Manager Dashboard

New Task Creation

Select Team

Task Name

Dependencies

Earliest Start Latest End

Optimize Schedule

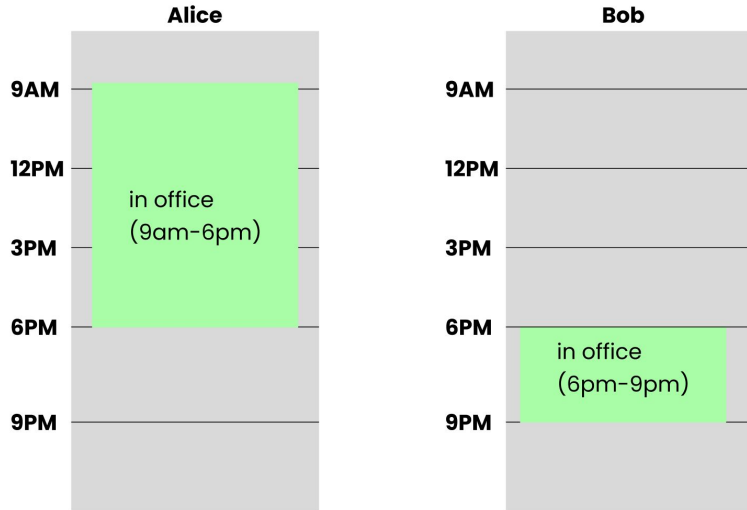
Optimized Schedule View

	Today	Back	Next	November 03 - 09			Month	Week	Day
	03 Sun	04 Mon	05 Tue	06 Wed	07 Thu	08 Fri	09 Sat		
12:00 AM									
1:00 AM									
2:00 AM									
3:00 AM									
4:00 AM									
5:00 AM									
6:00 AM									
7:00 AM									
8:00 AM									
9:00 AM									
10:00 AM									
11:00 AM									
12:00 PM									
1:00 PM									
2:00 PM									

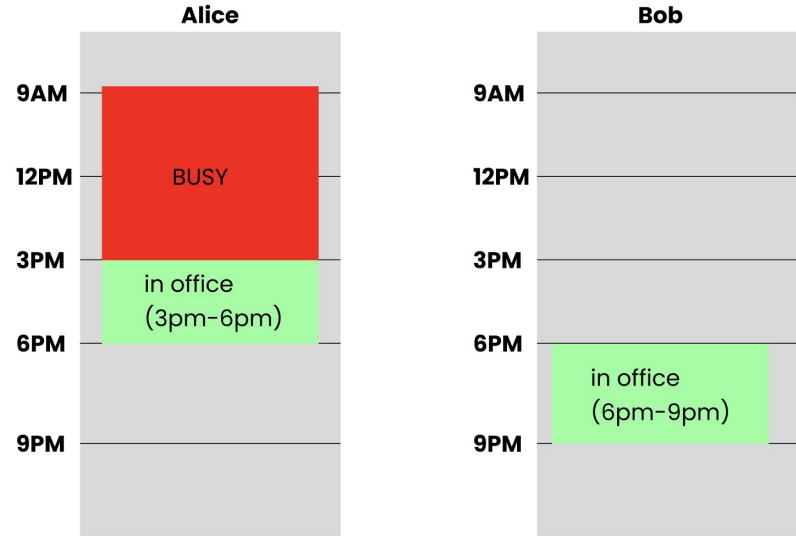
Considered Scenarios During Brainstorming

Scenario #1: establish working hours

Example

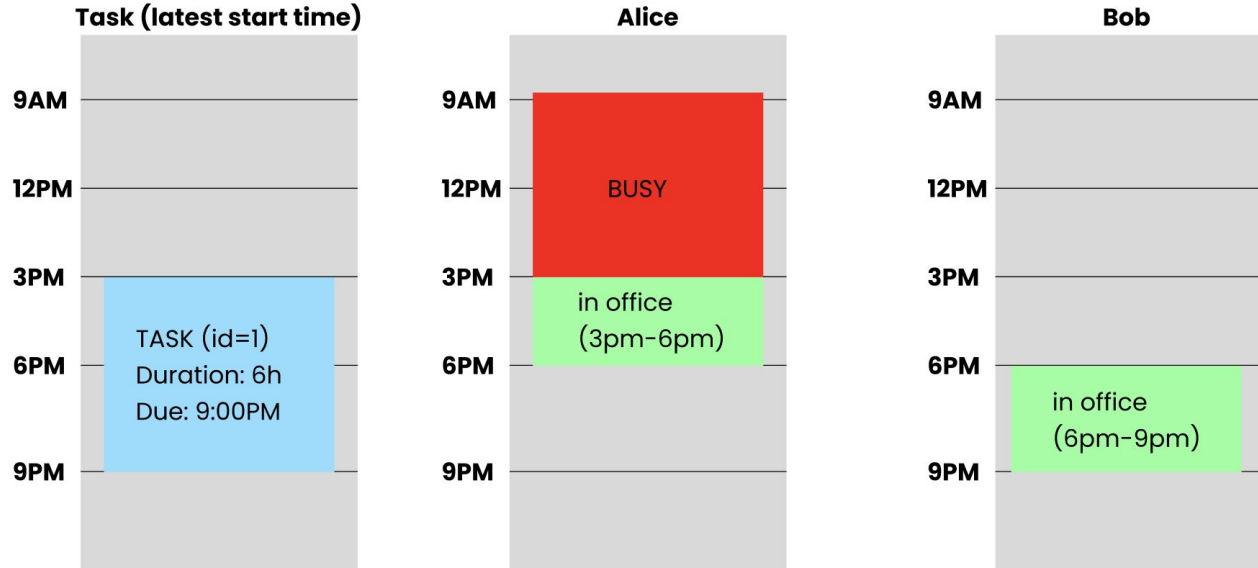


Example

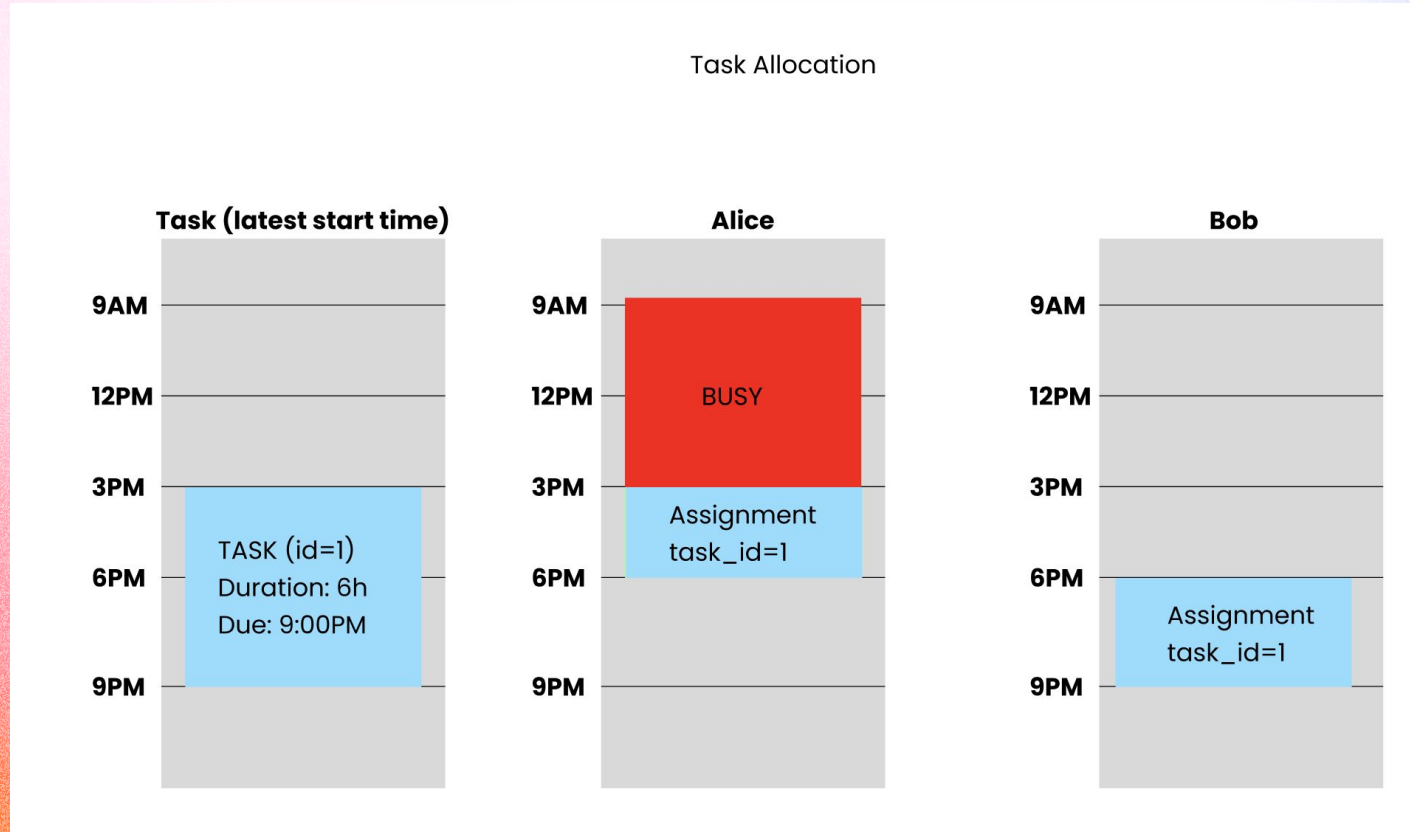


Scenario #1: task broadcasted

Example

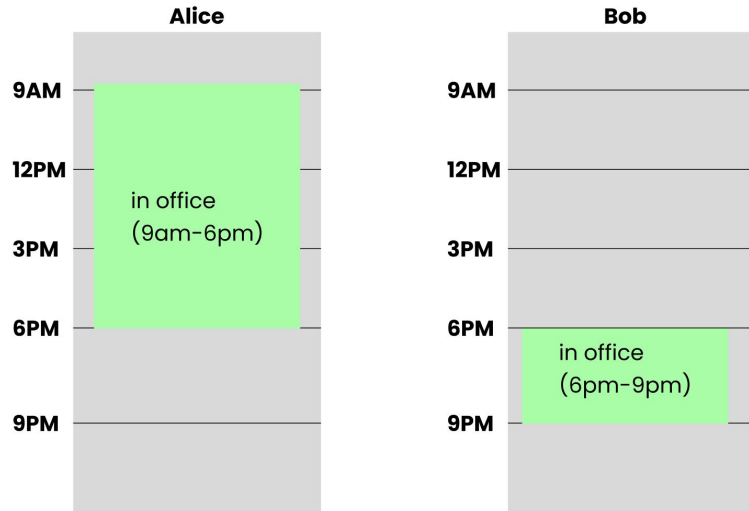


Scenario #1: tasks allocated

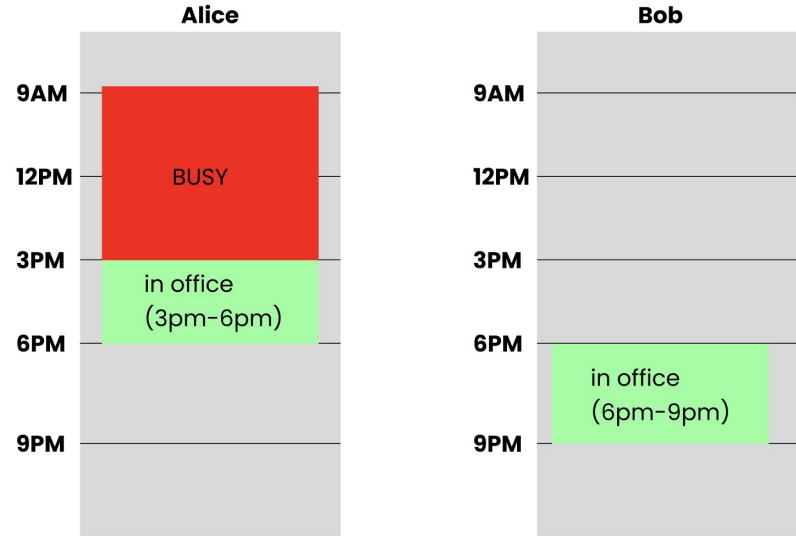


Scenario #2: establish working hours

Example

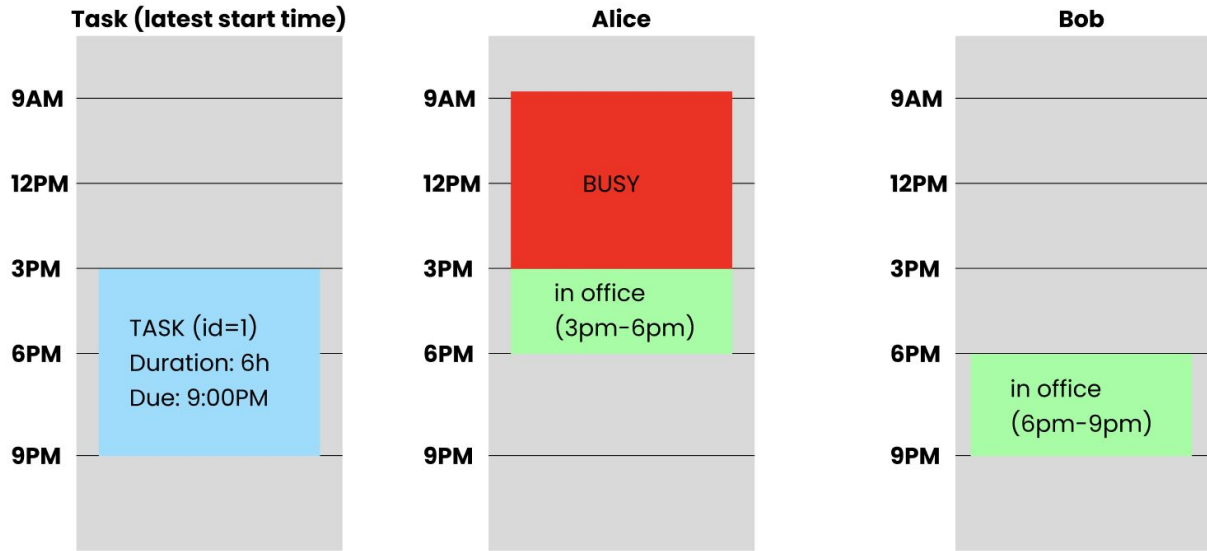


Example

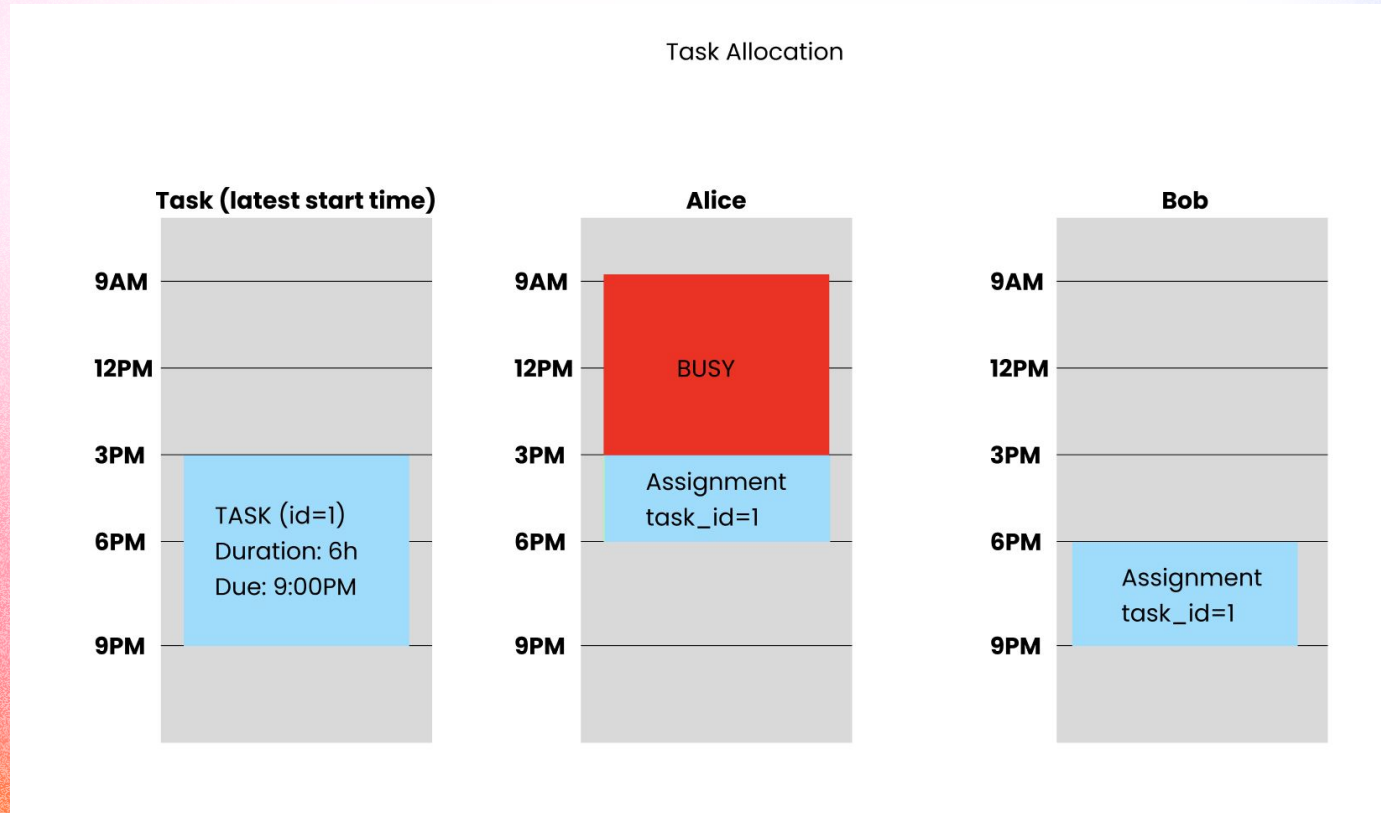


Scenario #2: a task is broadcasted

Example



Scenario #2: task half allocated to alice & bob





More Info

More information on what tech we used, how things work, and future improvements

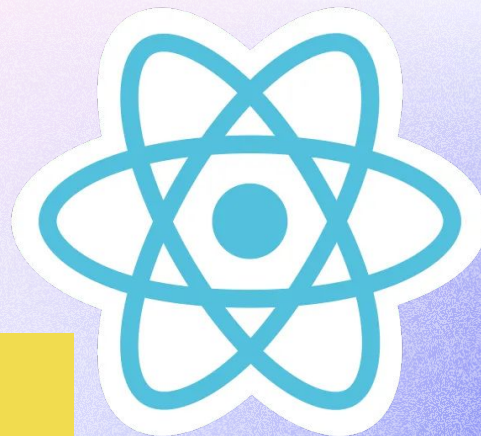
Frontend Libraries

- **Taskly utilizes several open-source libraries:**

- react
- react-datepicker
- react-big-calendar
- react-dom
- react-hook-form
- react-query
- react-router-dom

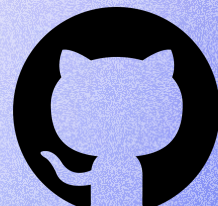
- **Key component libraries:**

- react-big-calendar
- react-datepicker
- react-hook-form
- react-query



Overall Techstack & Dev Tools

- **Taskly Developer tools:**
 - Git
 - Github
 - NPM
 - Vite
 - VScode
- **Backend Technology Stack:**
 - Flask
 - Python
- **Frontend Technology Stack:**
 - React
 - TailwindCSS
- **Prototyping & Design:**
 - Figma



Important Components

Employee Dashboard

The Employee Dashboard in Taskly features a blue header with the brand name and navigation links. It is divided into three main sections: a user selection dropdown, a task list, and a working hours form. The task list shows a task assigned to 'Alice' with details like description, due date, and allocated hours. The working hours form allows setting a range from 09:00 AM to 05:00 PM. A task calendar on the right shows a weekly view for November 3-9, with the 3rd highlighted as Sunday.

Taskly Dashboard Employee Dashboard Manager Dashboard

Select User

Alice

Tasks Assigned to Alice

my new task
Description: 3
Due Date: 2024-11-03T23:00:00
Hours Allocated: 4
Start Time: 11/3/2024, 1:00:00 PM

Employee Working Hours

Working Hours: 09:00 - 17:00

Employee Form

Start Hour
09:00 AM

End Hour
05:00 PM

Submit

Task Calendar

Today Back Next November 03 - 09 Month Week Day

	03 Sun	04 Mon	05 Tue	06 Wed	07 Thu	08 Fri	09 Sat
12:00 AM							
1:00 AM							
2:00 AM							
3:00 AM							
4:00 AM							
5:00 AM							
6:00 AM							
7:00 AM							
8:00 AM							
9:00 AM							

- Define Working Hours
- View tasks
- View tasks on calendar

Manager Dashboard

The Manager Dashboard in Taskly features a blue header with the brand name and navigation links. It includes a 'New Task Creation' form with fields for task name, description, start date, deadline, and estimated hours. The form is set against a light blue background with a subtle grid pattern.

Taskly Dashboard Employee Dashboard Manager Dashboard

Manager Dashboard
Create and manage your team's tasks efficiently

New Task Creation

Task Name
Enter a descriptive task name

Task Description
Provide detailed task description and requirements

Start Date & Time
November 3, 2024 1:08 PM

Deadline
November 3, 2024 1:08 PM

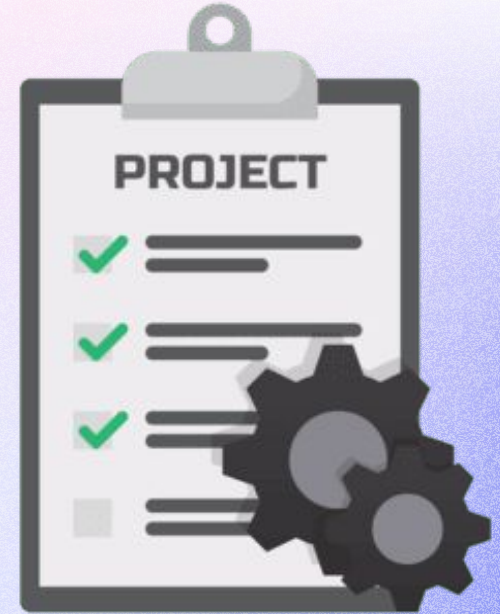
Estimated Hours
Enter estimated hours (e.g., 5.5)

Create New Task

- Define and Broadcast Tasks

Core Functions

- The algorithm receives the task and generates assignments.
- Assignments are distributed to each individual employee.
- Managers only need to define and broadcast a task for streamlining.
- The algorithm compares employee schedules to assign tasks efficiently.
- Tasks are assigned to one or more employees to ensure timely completion.
- Initially, the task object does not consider employees' schedules or working hours.



Future Improvements

General Quality

- Quality may not meet industry standards due to time constraints.
- Future improvements: enhance functionality, appearance, and overall quality of Taskly.

Features

- Limited functionality achieved due to tight timeline.
- Future focus: achieve full component functionality and add quality-of-life features.
- Individual Time Zones
- Additional features to incorporate:
 - Different types of hours/days (Sick Days, Injuries, Vacation, Lunch Hours).

Algorithm

- Task optimization algorithm faced challenges with prioritization.
- Future goal: improve algorithm to effectively balance multiple scheduling factors.



Some Issues We Realized

- Tasks should be finished early, not later
 - Assignments are made right up against the deadline. It is better that the employee gets things done as early as possible in the event of mishaps.
- Assignment priorities is unpredictable
 - Assignment will be created to the next available person who has time to complete the task
 - Employee priorities are by alphabetical order (how an assignment will be assigned to employee). Ideally employees are assigned numbered priority (like an integer)
- No lunch breaks
 - Working hours is from one hour to another.
- Employees define work hours for EVERY day.
 - New improvement could be to allow employees to define work hours from day-to-day.