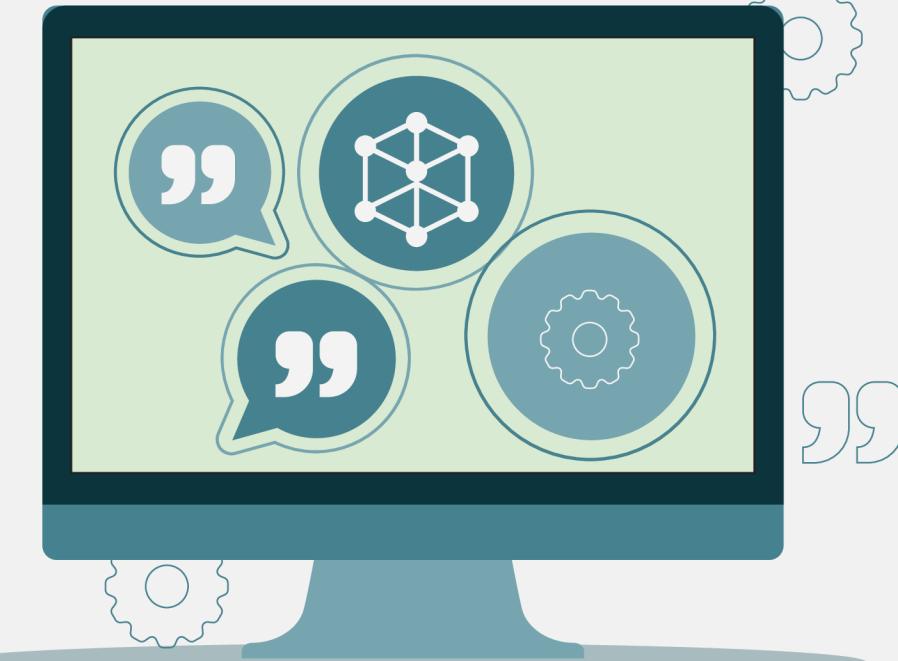


SmarTask



Bigger companies, faster scheduling



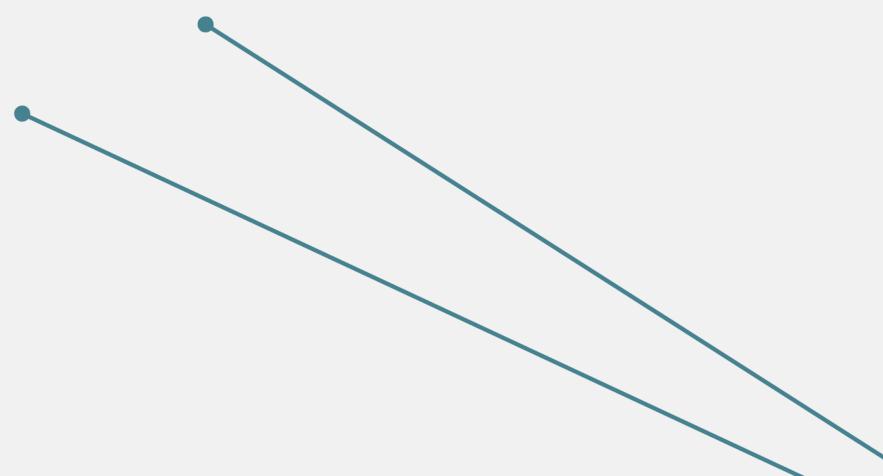
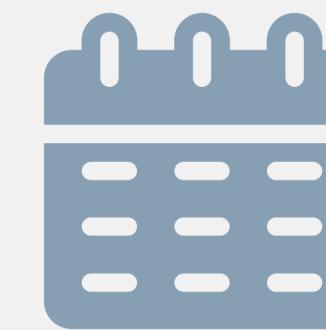
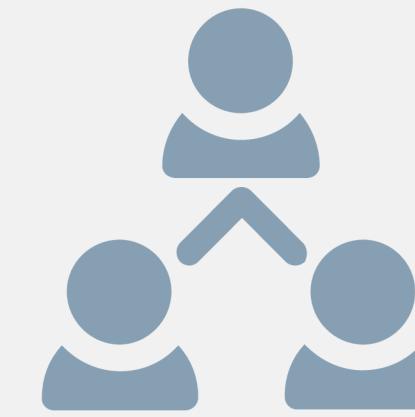
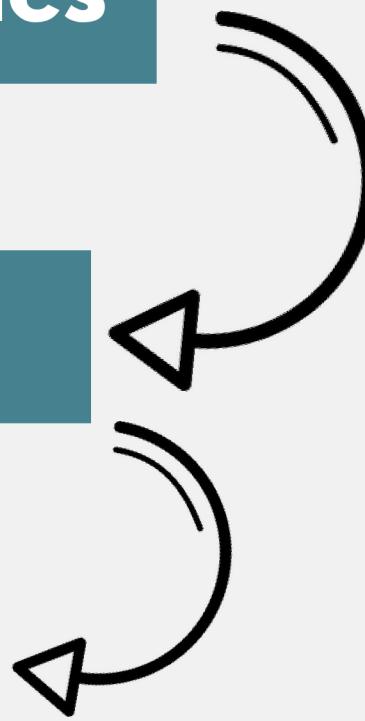
Team

Rafael Kauati
Gabriel Teixeira
João Monteiro
Vitalie Bologa

105925
107876
114547
107854

01 Context

- Manage employees schedules
- Over several workspaces
- Over several months



02 State of Art - related work



Automates compliance and optimizes labor costs

AI requires fine-tuning, and early schedules may be inaccurate

Complex setup and learning curve for managers.

Provide customized generation



Simple interface with easy-to-use templates for scheduling

AI requires fine-tuning, and early schedules may be inaccurate

Doesn't scale well for complex long-term planning

Doesn't provide comparison between generating methods



Strong labor law compliance and cost control for restaurants

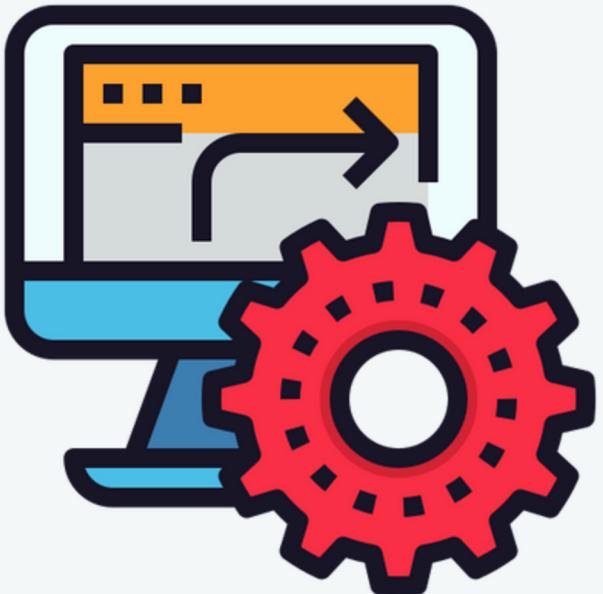
AI predicts labor needs based on sales and demand patterns

Only suited for restaurants, limiting its flexibility

Doesn't provide comparison between generating methods

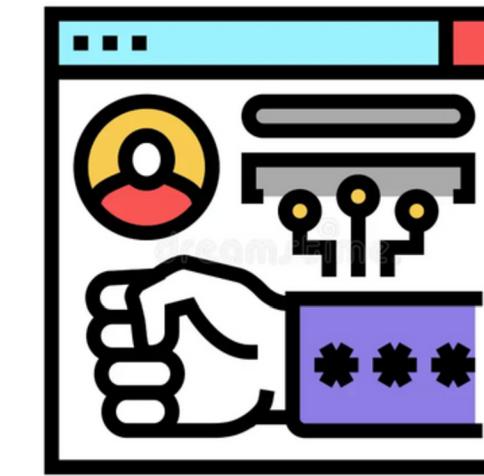
03 State of Art - company's current solution

30%

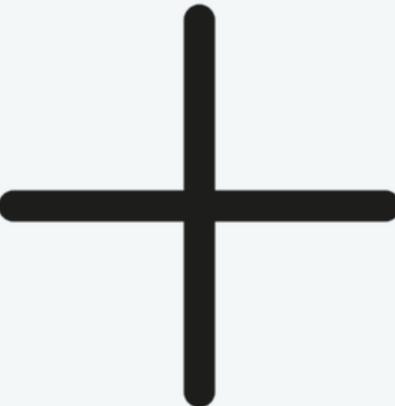


Partially automated

70%



Brute force

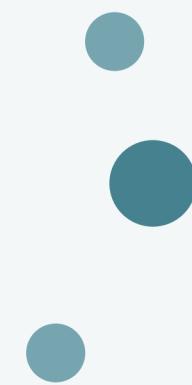
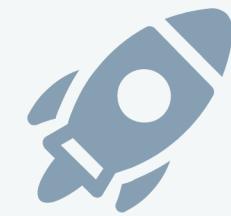
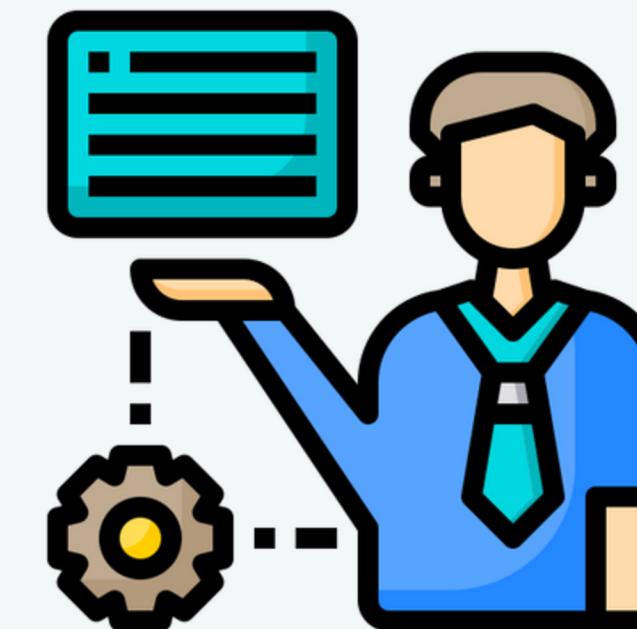


04 Requirement gathering

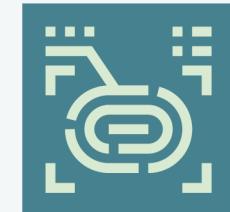


Company meeting

Discussion with the
advisors



05 Functional requirements



Generate a new
schedule



Optimize generated
schedules



Fetch all schedules



Company restrictions
management



Real-time update of
schedules generation
process



Comparison between
multiple schedules

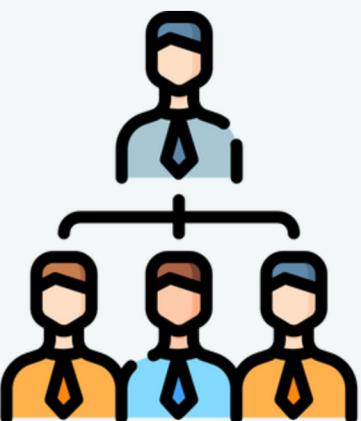


06 Actors

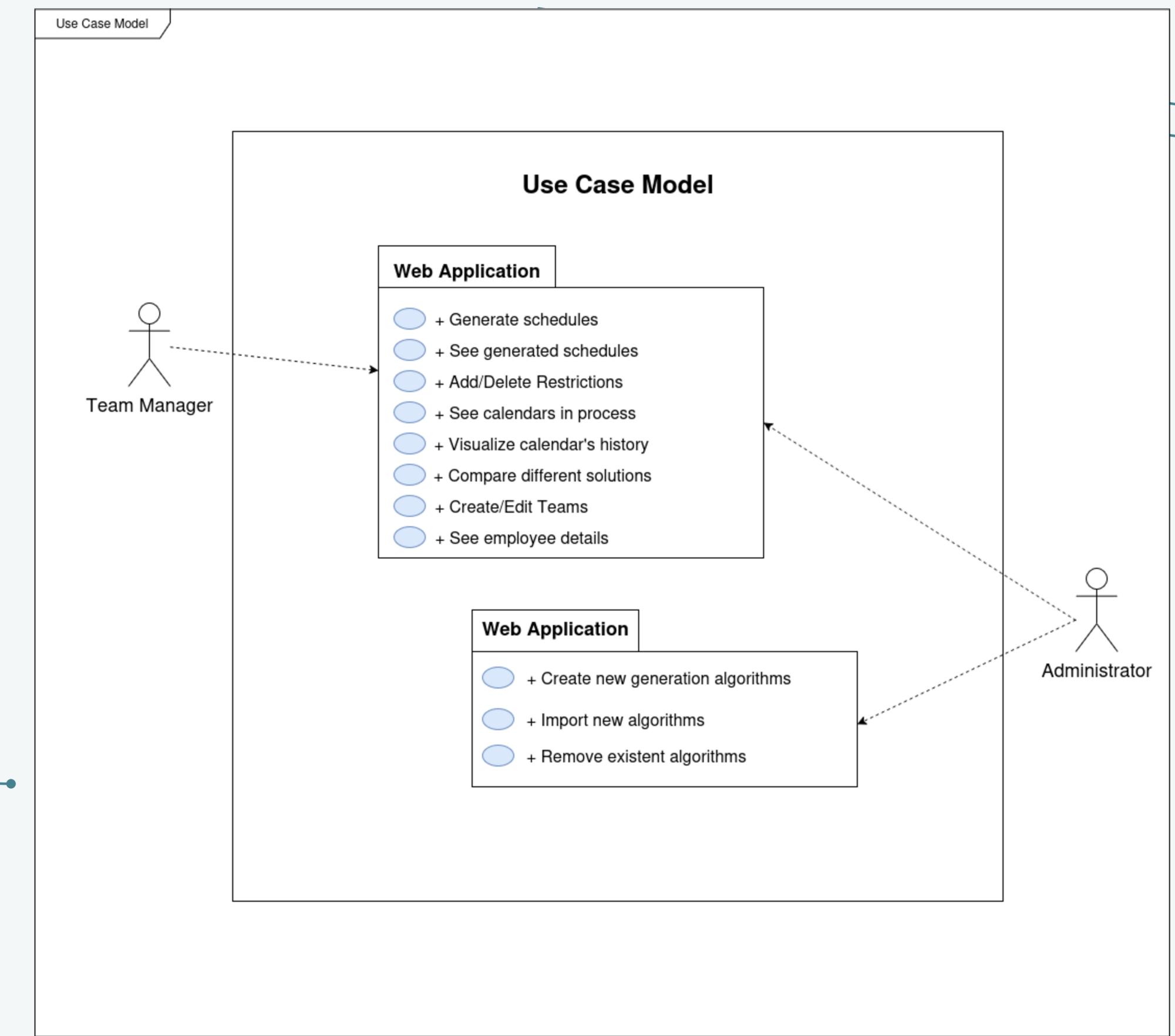


Administrators

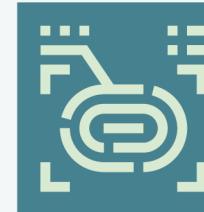
Team Managers



07 Use cases



08 Non-functional requirements



**Performance and scalability
in schedule generation**



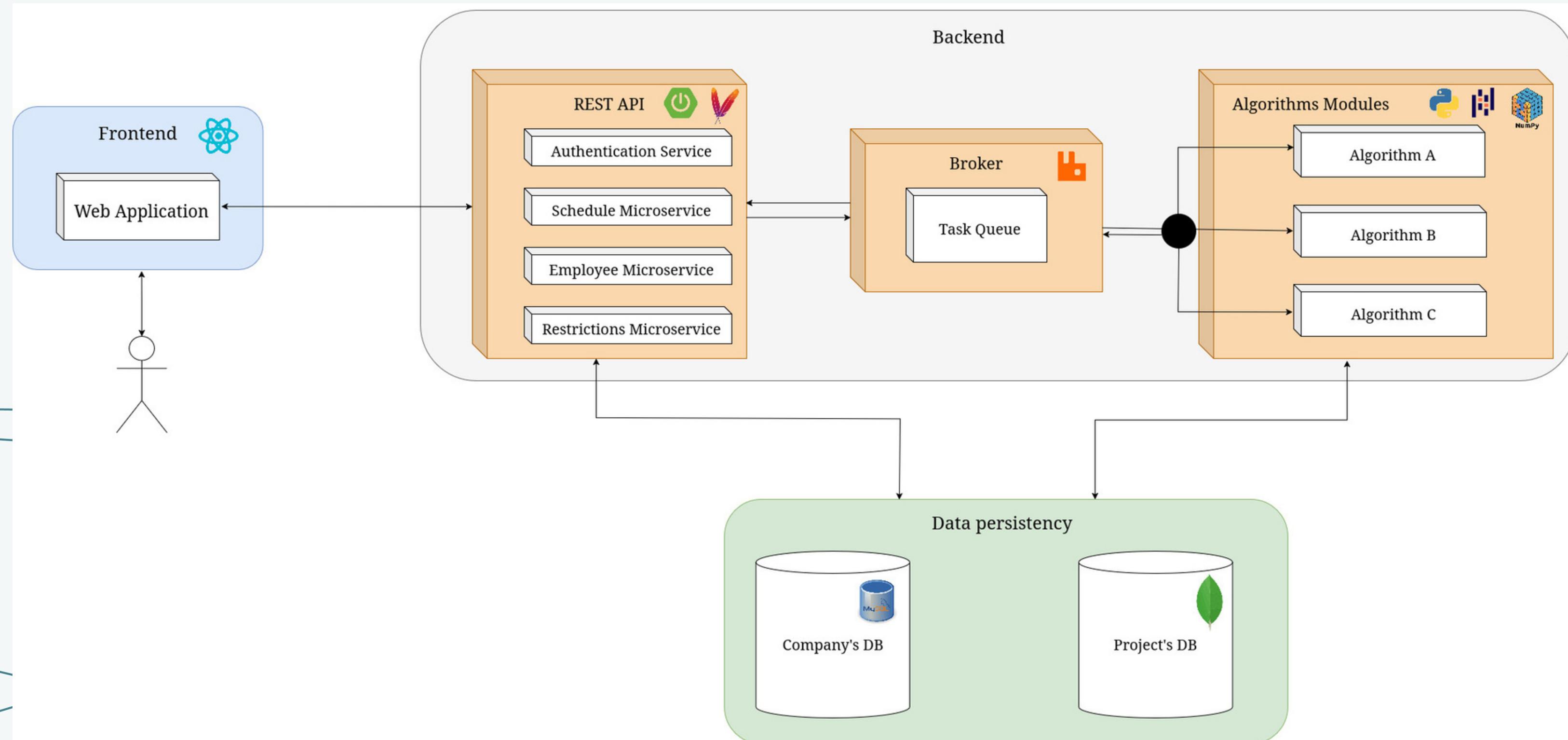
**Availability & reliability over
the schedule generation
process**



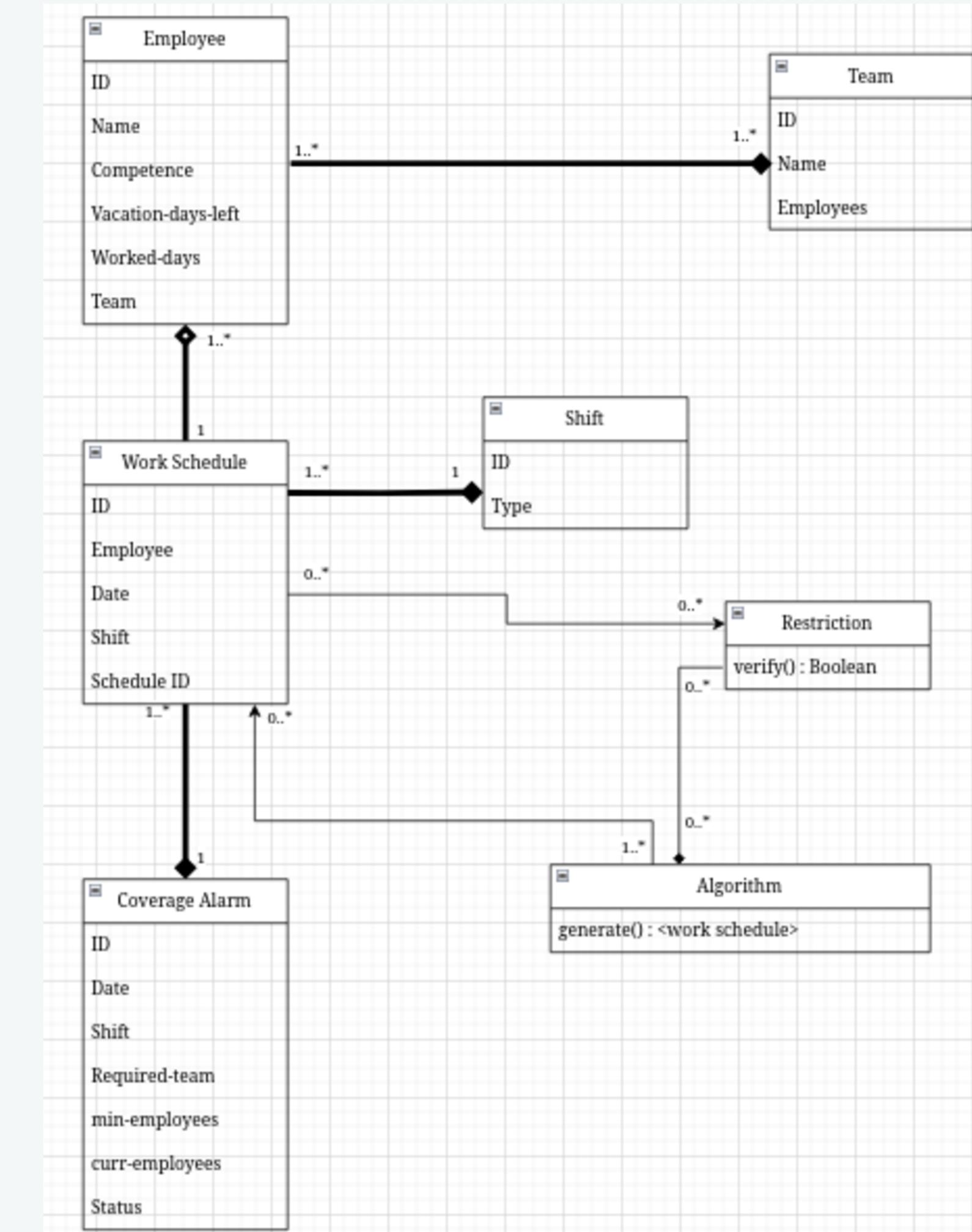
System monitoring and metrics collection



09 Architecture



10 Domain model



11 Mockups

The screenshot shows a modal dialog titled "Calendar". At the top right are three tabs: "Heuristic/Metaheuristic", "Artificial Intelligence", and "Algorithm 3". Below them is a date input field "Date: MM / DD / YYYY" with a calendar icon. A month calendar for May 2023 is displayed, showing the 14th as the selected date. To the left of the calendar is a dropdown menu "Team:" with options "Heuristic/Metaheuristic", "Artificial Intelligence", and "Algorithm 3". Below the date input is a "Duration" section with radio buttons for "Month" and "Year", and dropdowns for "Duration min: 1 : 25" and "Duration max: 2 : 25". At the bottom are "Create", "Save", and "Cancel" buttons.

The screenshot shows the main SmarTask calendar interface. On the left is a sidebar with "Home", "Calendar", "Teams", and "Employees" buttons. The "Calendar" button is highlighted. Below the sidebar is a "New Calendar" button and two preview cards for "draft schedule 1" and "draft schedule 2", both labeled "há 10mint". The main area is titled "Calendars in process" and shows three items: "Test, Algorithm X", "Test, Algorithm Y", and "Test, Algorithm X", each with a circular progress bar. Below this is a "Last Seen" section with two items: "January, Algorithm X" and "September, Algorithm Z", each with a small thumbnail and an "Open" button. At the bottom are "Calendar" and "Manager" buttons.

The screenshot shows a detailed calendar view for "Store A". The top navigation bar includes "Home", "Calendar", "Teams", and "Employees", with "Calendar" highlighted. The main area is titled "Store A" and shows a grid of days from Monday to Sunday. Each day has a header row with "2", "3", "4", "5", "6", "7", "8", "9", "10", "11", "12", "13", "14", "15", "16", "17", "18", "19", "20", "21", "22", "23", "24", "25", "26", "27", "28", "29", "30", "31". The grid contains various colored blocks representing scheduled events: green for "Full Day", red for "Vacation", orange for "Annual", blue for "Hiring", and grey for "Training". On the left, a sidebar lists "Scheduler Name" with names like "Eduardo", "John", "Stephanie", "Richard", "Michael", "Melissa", "Monica", "REINFORCEMENT TEAM", and "David". At the bottom are "Information:", "Algoritmo : Artificial Intelligence", and "Team: A" sections, along with a "Download" button.

11 Mockups

SmarTask

- Home
- Calendar
- Teams
- Employers

Calendar Manager

Employee

All Customers

Customer Name	Restriction	Date	Team	Edit
Employeeer 1	Turno da Tarde	13/04	A	(Edit)
Employeeer 1	Férias	16/09	B	(Edit)
Employeeer 2	Férias	19/1 2	B	(Edit)
Employeeer 3	Turno da Tarde	19/2	A	(Edit)
Employeeer 4	Turno da Tarde	01/12	A	(Edit)
Employeeer 5	Baixa médica	20/01	A	(Edit)
Employeeer 6	Folga	03/08	A	(Edit)
Employeeer 7	Folga	08/12	B	(Edit)

Search Short by: Newest

1 2 3 4 40 x

Teams

New teams

A Team B Team

Order Filter

Calendar Manager

Schedule D

Specialist Name	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Employeeer 1	Full day															
Jeton Holloway																
Stephen Harris																
Richard Mathers																
Michael Simon																
Melissa Bradley																
Victoria Griffin																
DEPARTMENT TEAM																
Derek Larson																

Creation Time: 60 mint Requirements: 95% Ideal: Yes

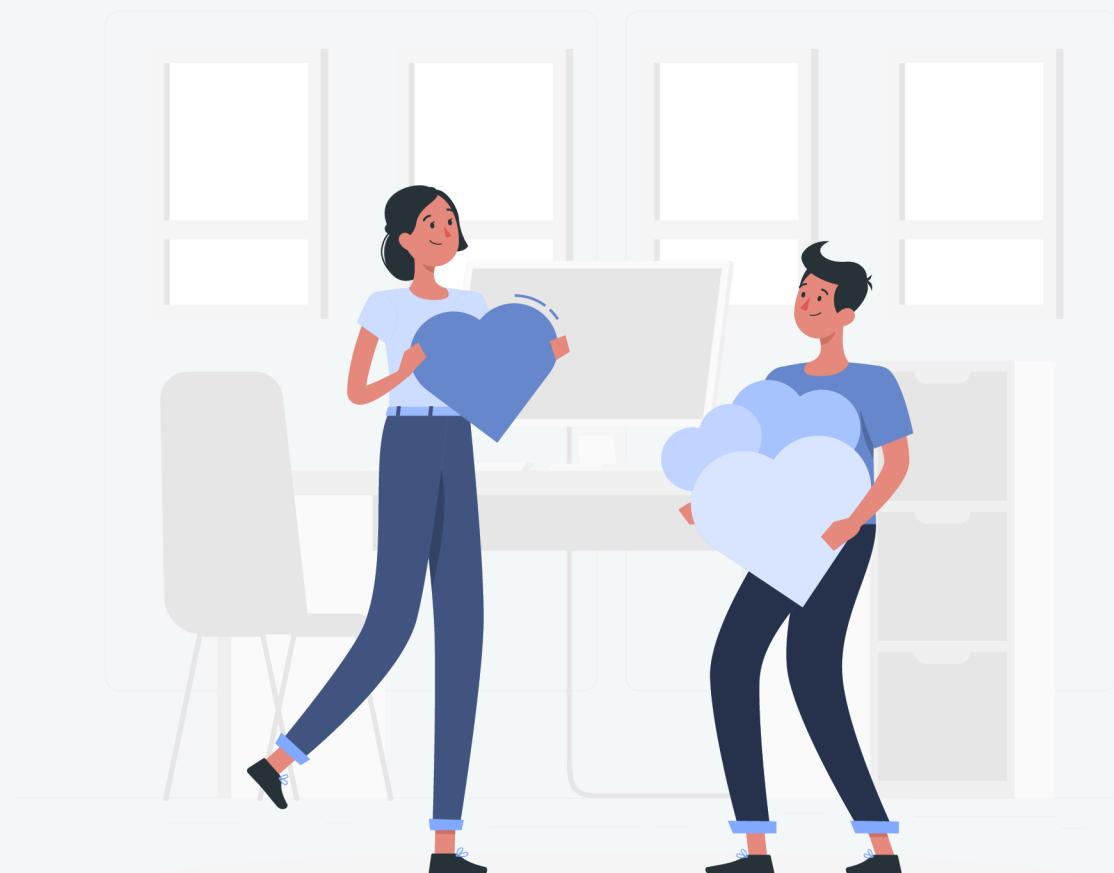
Schedule D

Specialist Name	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Employeeer 1	Full day															
Jeton Holloway																
Stephen Harris																
Richard Mathers																
Michael Simon																
Melissa Bradley																
Victoria Griffin																
DEPARTMENT TEAM																
Derek Larson																

Creation Time: 30 mint Requirements: 100% Ideal: No



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Thanks!



<https://pi-smarttask.github.io/website/>