Revolutionizing Developer Task Management

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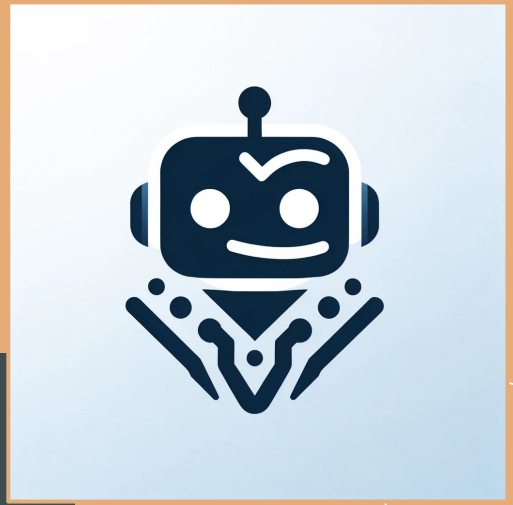
Introduction



Evolving landscape of software development.
Importance of efficient task management.
Introducing TODO Bot: A next-gen AI-driven task assistant.

Problem Statement

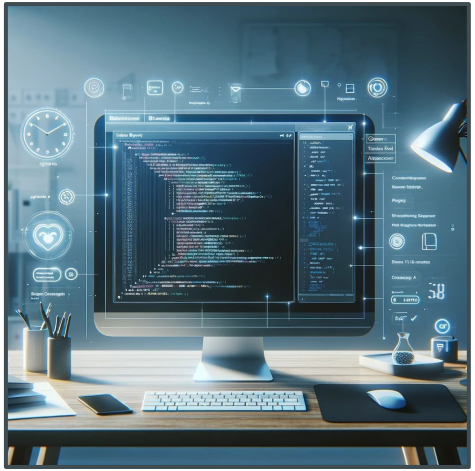
Challenges in current task management tools.

Developer pain points: Manual entry, disrupted workflow.

Consequences: Reduced productivity, potential for missed tasks.

Proposed Solution

- AI-driven task assistant tailored for developers.
- Key Features: Efficient task management, real-time notifications.
- Seamless integration into coding workflows.

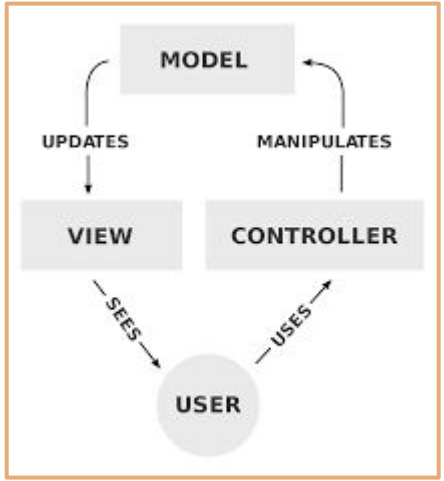


Architectural Pattern (PM3)

Chosen Pattern:
Model-View-Controller (MVC).

Separation of Concerns:
Model, View, Controller explained.

Benefits:
Organized codebase, ease of maintenance, future scalability.

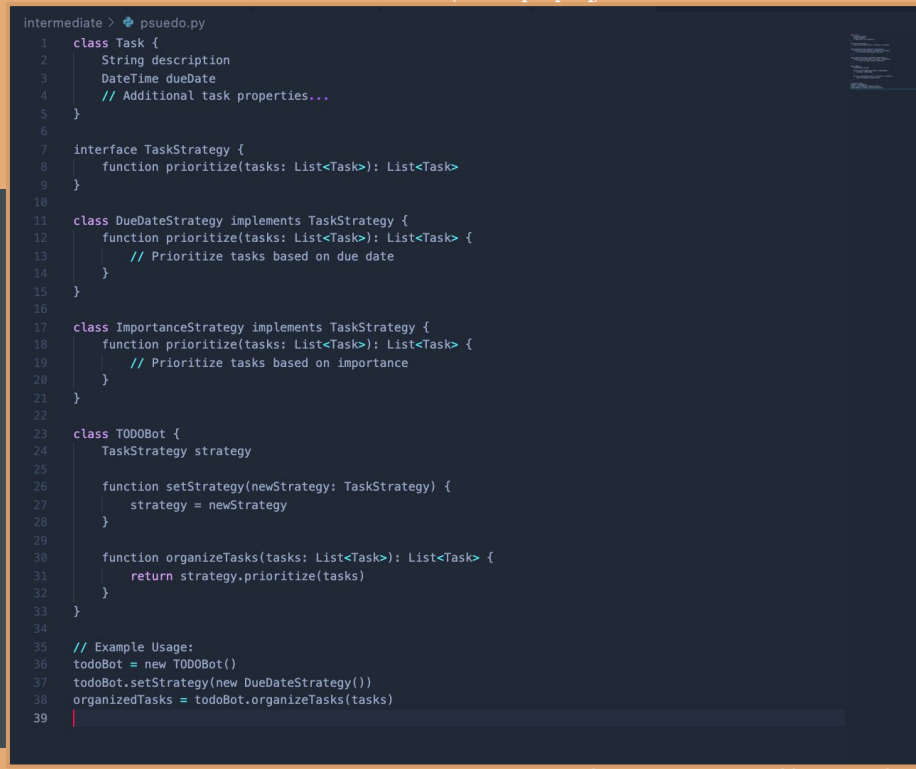


Design Pattern (PM3)

Selected Pattern Family:
Behavioral Design Patterns.

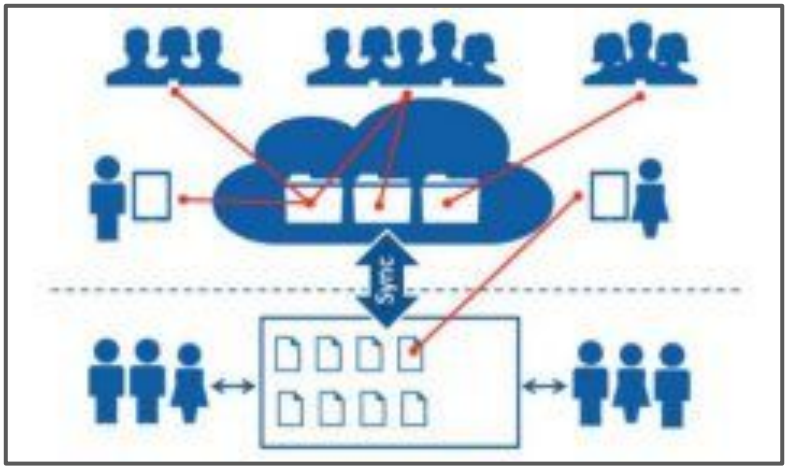
Strategy Pattern:
Flexibility in task management at runtime.

Pseudocode Representation:
Showcasing the system's structure.



Non-Functional Requirements (PM2)

- Usability: Text legibility and user-friendly design.
- Reliability: Consistent performance with minimal failures.
- Performance: Handling high user volume efficiently.
- Supportability & Implementation: Easy configuration and Linux compatibility.



Functional Requirements (PM2)

- Task Creation: Users and Project Managers can create and assign tasks.
- Real-Time Updates: Notifications on task changes and status updates.
- Reporting: Generate progress and task completion reports.
- Support Ticket Management: Handle user inquiries and issues.

User Interface Design (PM3)

- Focus on Simple, User-Friendly Design.
- Consistent Side Navigation Bar for Easy Task Switching.
- Grid-Based Layout for Organized Presentation.

Risk Management (PM2)

- AI Implementation Challenges: Mitigation through thorough planning.
- Budget Overruns: Risk management strategies for financial control.

Requirements Elicitation Process (PM2)

Focus Group Development:
Involving developers, product managers, scrum masters.

Feedback Surveys:
Embedded in the application for continuous user feedback.

User Stories and Use Cases:
Ensuring intuitive and user-friendly features.

Software Engineering Process (PM1)

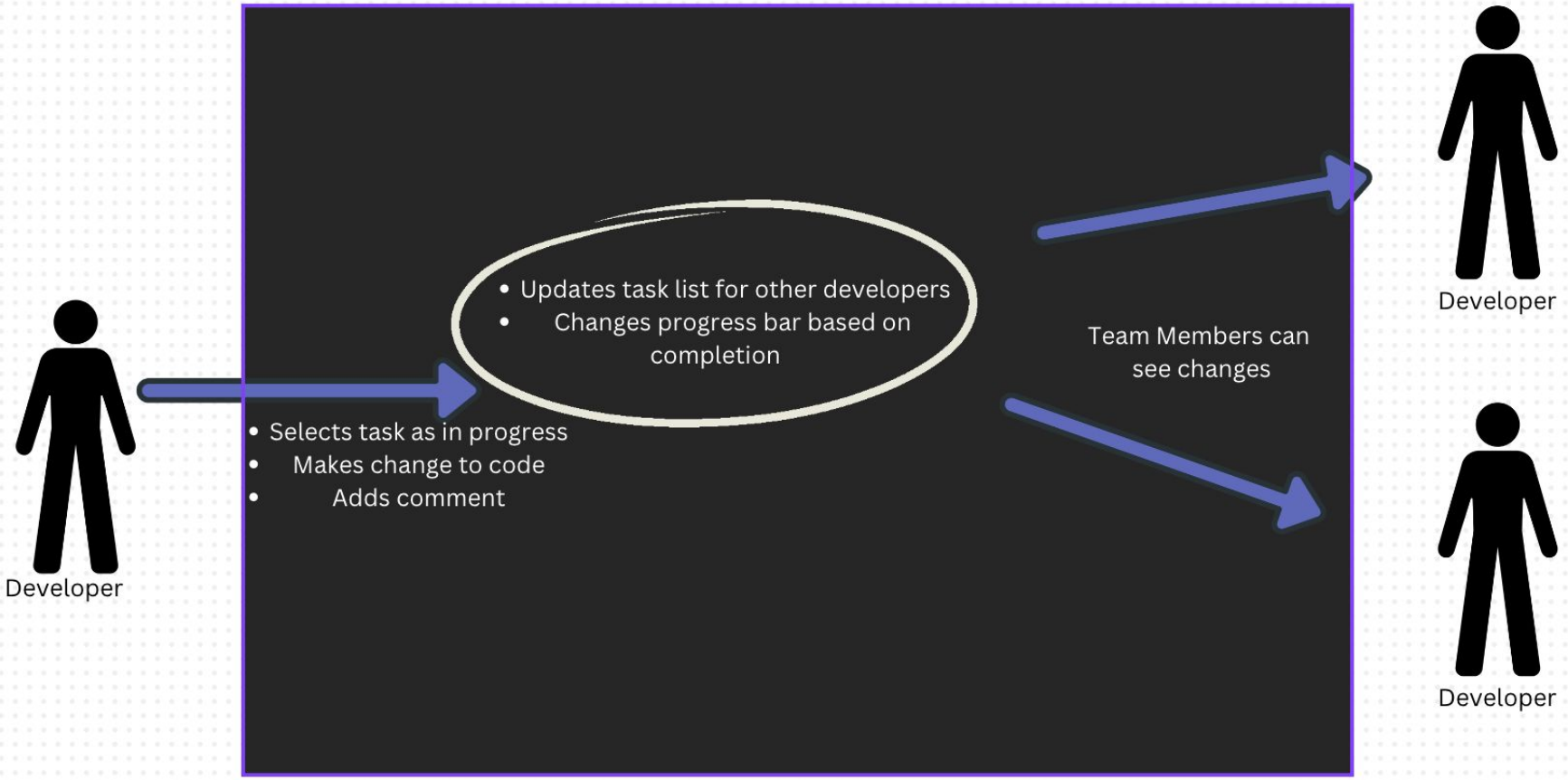
- Agile Methodology: Emphasis on adaptability and iterative development.
- Scrum Approach: Sprint planning, daily stand-ups, sprint reviews, retrospectives.

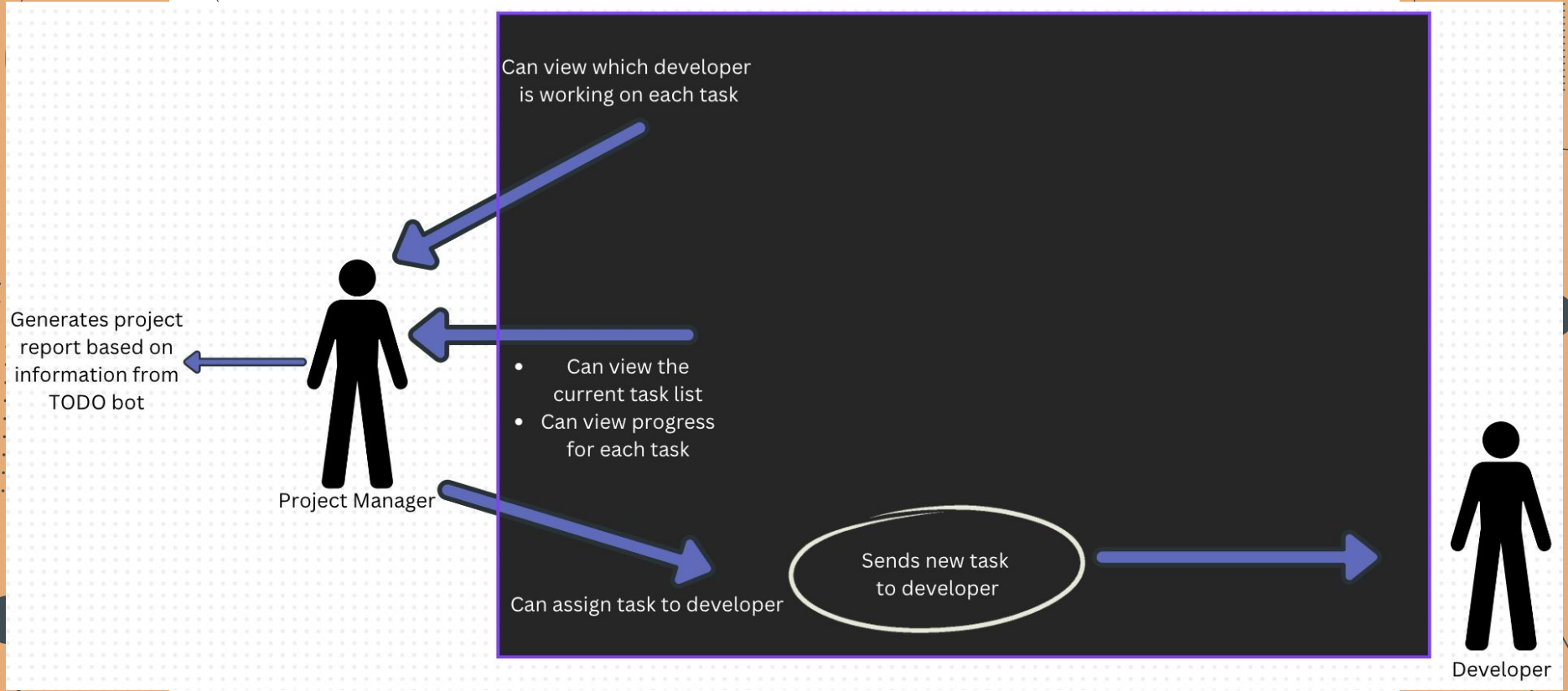
Overall Project Goal and Target Audience (PM1)

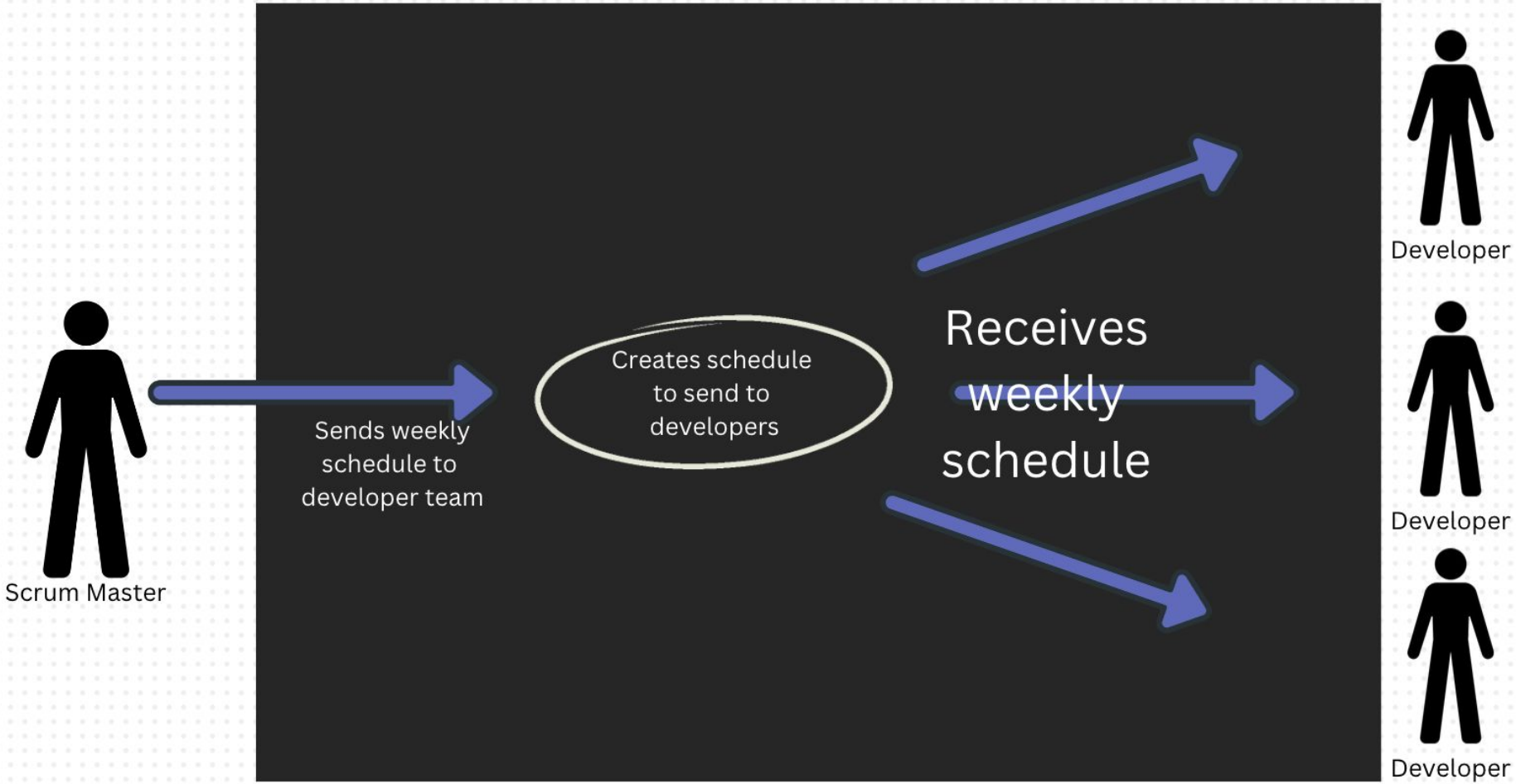
- Big Picture: Revolutionize developer task management.
- Target Audience: Solo developers, collaborative teams, open-source contributors.

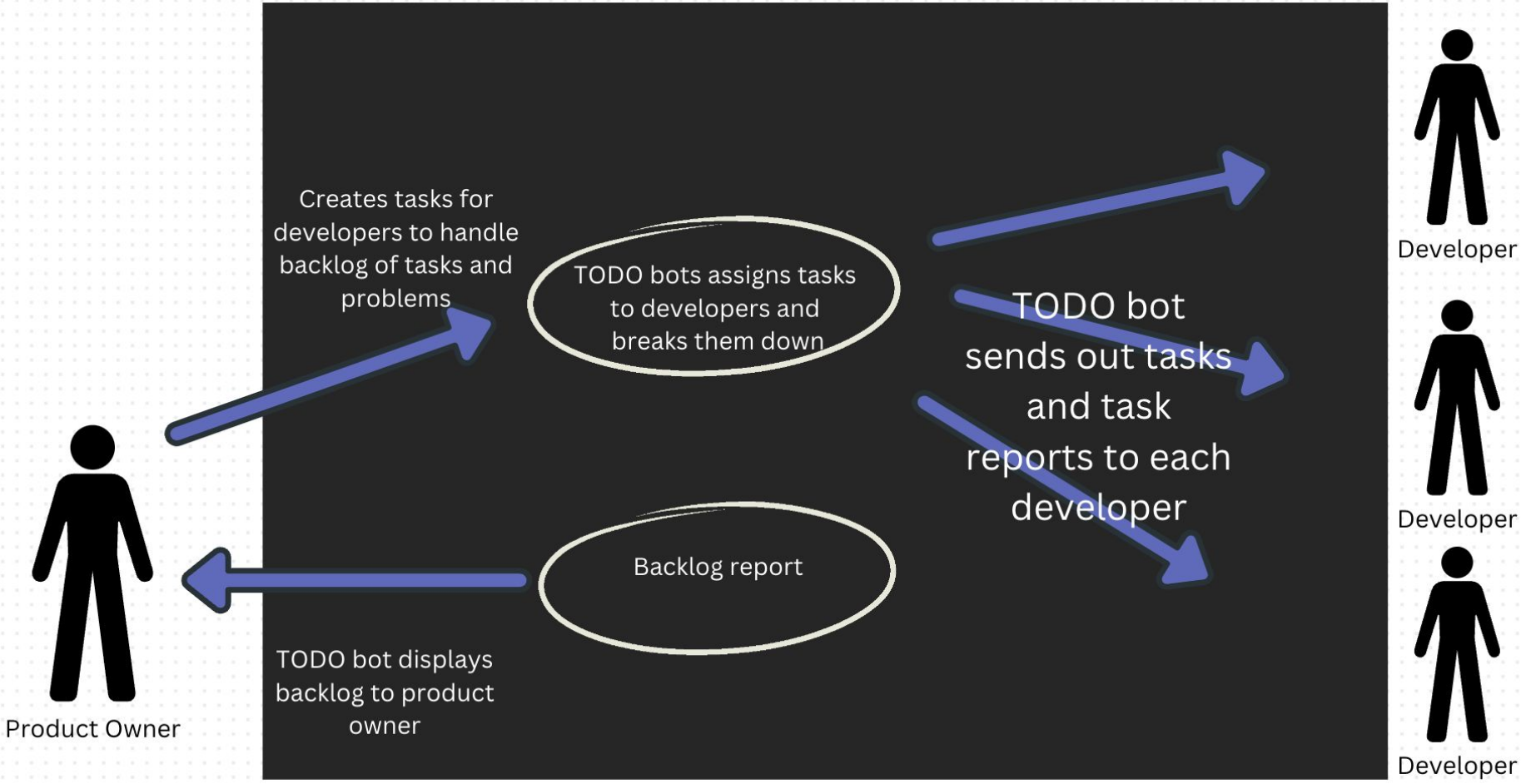
Use Cases (PM1)

- Example Use Case: Setting task reminders, querying task details, confirming notifications.
- User Interactions: Illustration of bot-user dialogues and alternative paths.

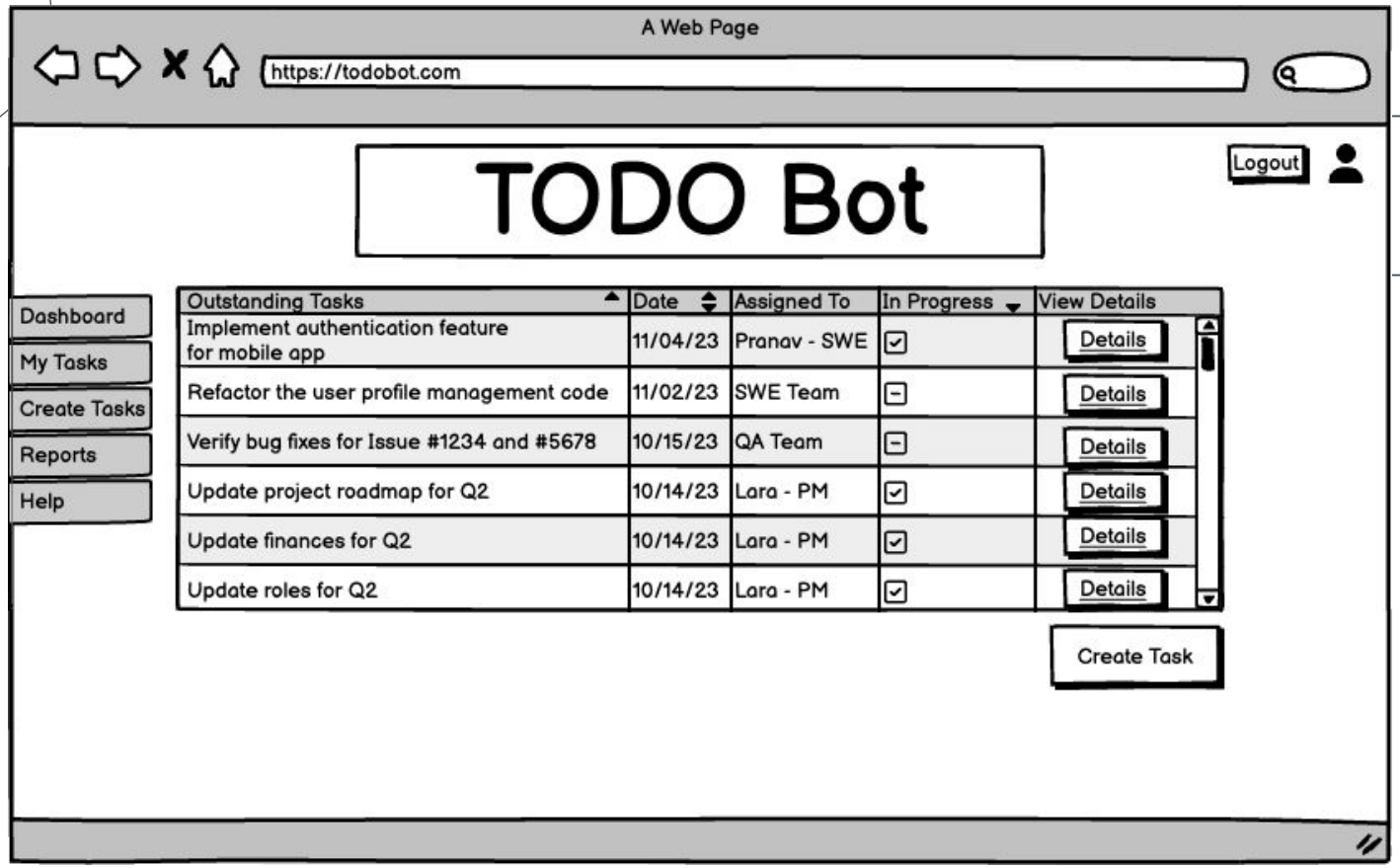

Developer
• Selects task as in progress
• Makes change to code
• Adds comment
• Updates task list for other developers
• Changes progress bar based on completion
Team Members can see changes
Developer
Developer

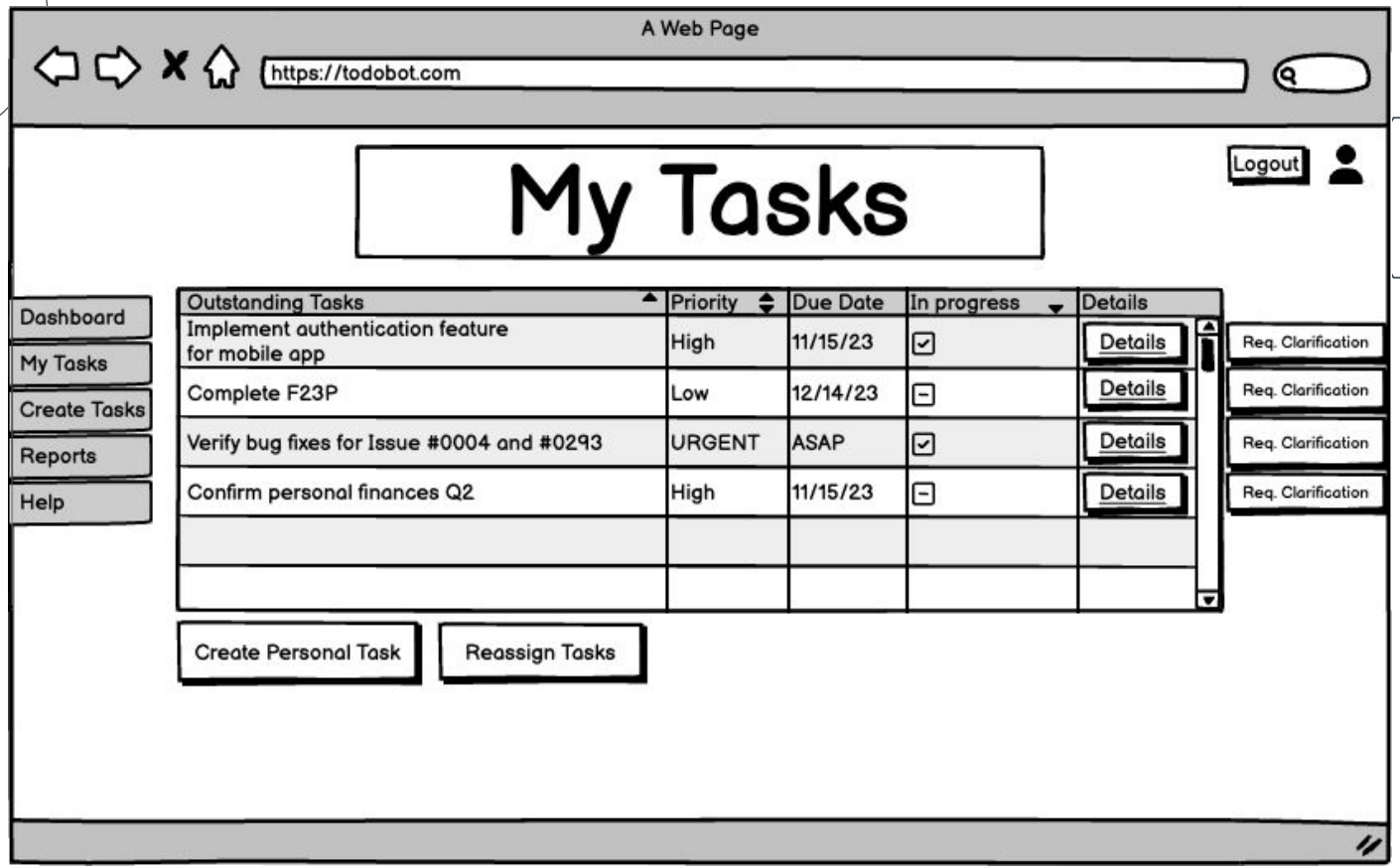

Can view which developer is working on each task
Generates project report based on information from TODO bot
Project Manager
Can view the current task list
Can view progress for each task
Can assign task to developer
Sends new task to developer
Developer

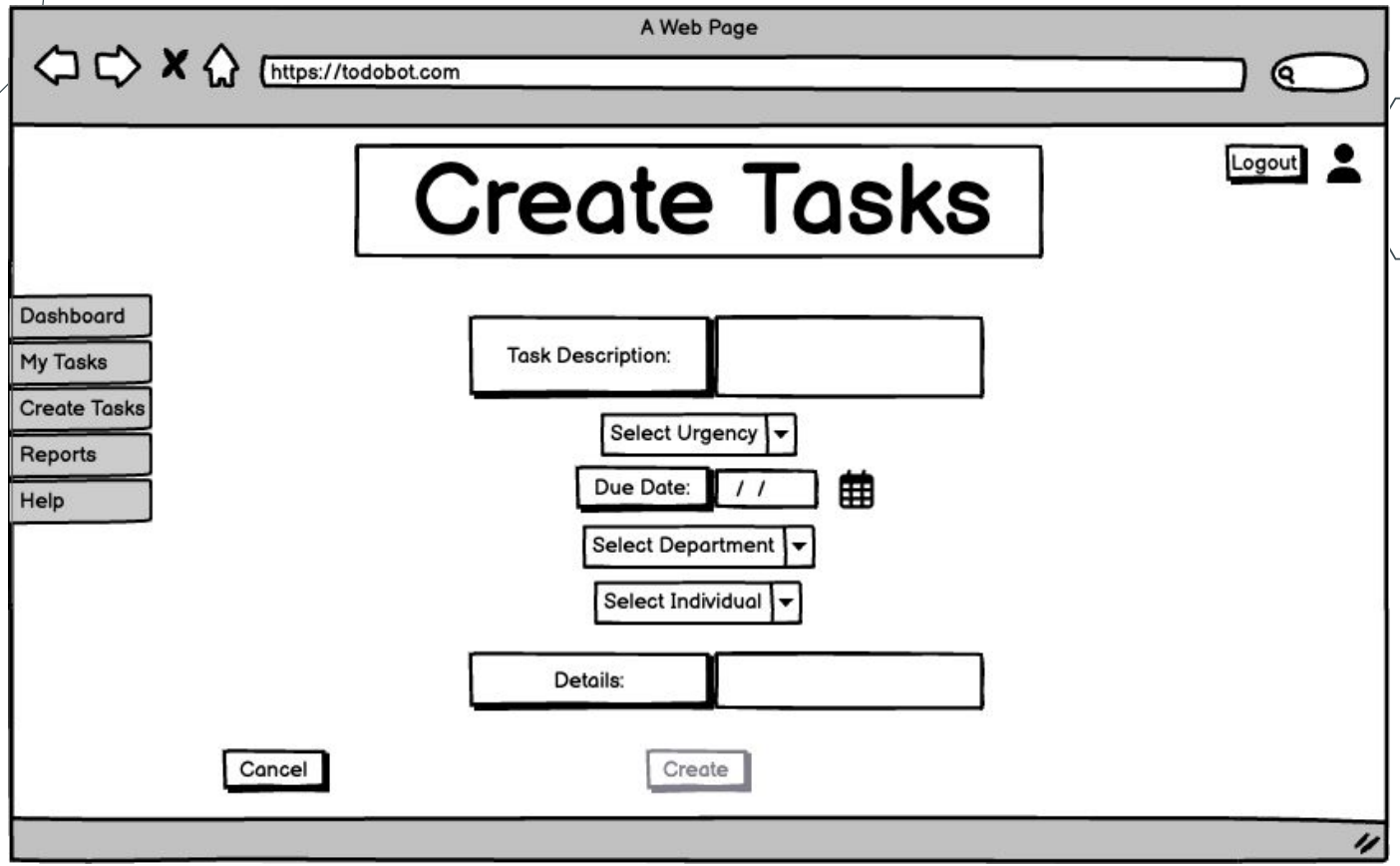

Scrum Master
Sends weekly schedule to developer team
Creates schedule to send to developers
Receives weekly schedule
Developer
Developer
Developer

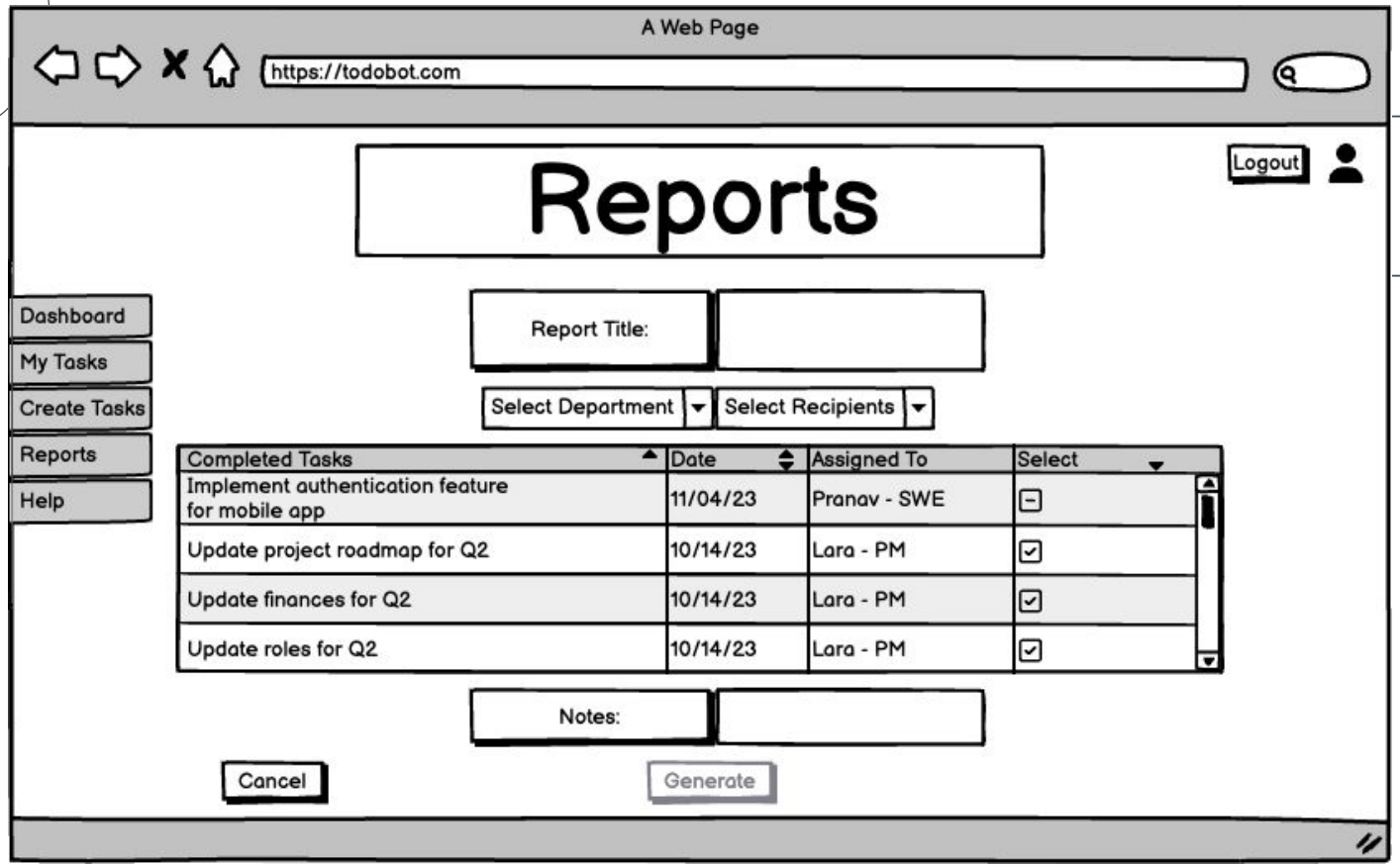

Creates tasks for developers to handle backlog of tasks and problems
TODO bots assigns tasks to developers and breaks them down
TODO bot sends out tasks and task reports to each developer
Developer
Developer
Developer
Backlog report
TODO bot displays backlog to product owner
Product Owner

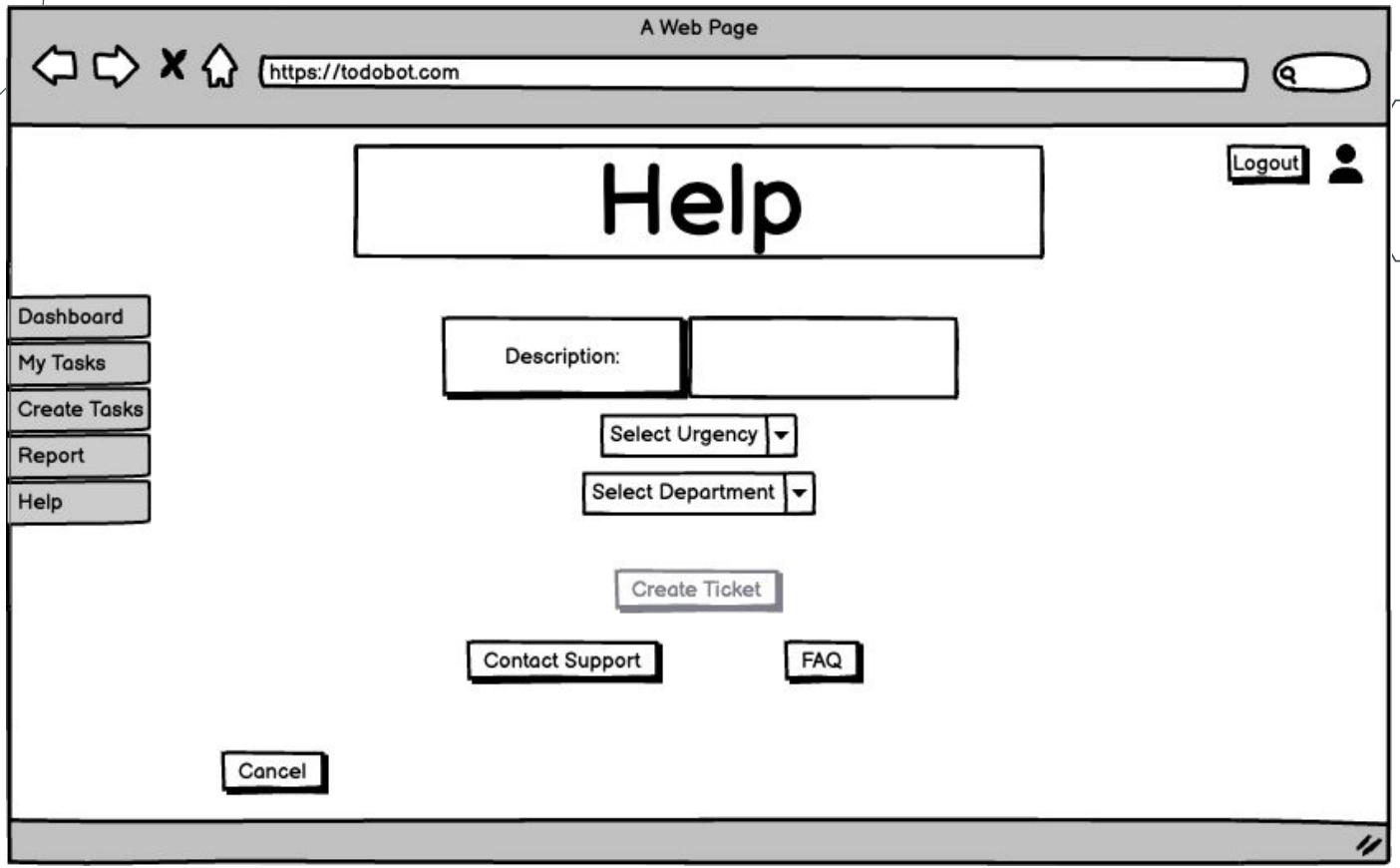
Mock UI


A Web Page
https://todobot.com
TODO Bot
Logout
Dashboard
My Tasks
Create Tasks
Reports
Help
Outstanding Tasks
Date
Assigned To
In Progress
View Details
Implement authentication feature for mobile app
11/04/23
Pranav - SWE
Details
Refactor the user profile management code
11/02/23
SWE Team
Details
Verify bug fixes for Issue #1234 and #5678
10/15/23
QA Team
Details
Update project roadmap for Q2
10/14/23
Lara - PM
Details
Update finances for Q2
10/14/23
Lara - PM
Details
Update roles for Q2
10/14/23
Lara - PM
Details
Create Task


A Web Page
https://todobot.com
My Tasks
Logout
Dashboard
My Tasks
Create Tasks
Reports
Help
Outstanding Tasks
Priority
Due Date
In progress
Details
Implement authentication feature for mobile app
High
11/15/23
Details
Req. Clarification
Complete F23P
Low
12/14/23
Details
Req. Clarification
Verify bug fixes for Issue #0004 and #0293
URGENT
ASAP
Details
Req. Clarification
Confirm personal finances Q2
High
11/15/23
Details
Req. Clarification
Create Personal Task
Reassign Tasks


A Web Page
https://todobot.com
Create Tasks
Logout
Dashboard
My Tasks
Create Tasks
Reports
Help
Task Description:
Select Urgency
Due Date:
/ /
Select Department
Select Individual
Details:
Cancel
Create


A Web Page
https://todobot.com
Reports
Logout
Dashboard
My Tasks
Create Tasks
Reports
Help
Report Title:
Select Department
Select Recipients
Completed Tasks
Date
Assigned To
Select
Implement authentication feature for mobile app
11/04/23
Pranav - SWE
Update project roadmap for Q2
10/14/23
Lara - PM
Update finances for Q2
10/14/23
Lara - PM
Update roles for Q2
10/14/23
Lara - PM
Notes:
Cancel
Generate


A Web Page
https://todobot.com
Help
Logout
Dashboard
My Tasks
Create Tasks
Report
Help
Description:
Select Urgency
Select Department
Create Ticket
Contact Support
FAQ
Cancel

Lessons Learned

- Challenges faced and overcome.

  -Integration

  -Design

- Insights gained in project development.

  -Agile methodologies

  -Proper management

- Importance of teamwork and communication.

Limitations and Future Work

Current limitations of TODO Bot.

Potential future improvements and expansions.

Vision for ongoing development and refinement.

Conclusion

- Recap of TODO Bot's key features and benefits.

  -AI Driven

  -Seamless integration

  -User Friendly design

- Reiteration of the project's impact on developer productivity.

Q&A Session

Any Questions?