



# Design Document

## Introduction:

This document outlines the information that is required to start the development phase of the Scrummy 1.0 project, this document includes the information regarding the selected technologies, architecture, domain model, and software design.

## 1. Selected Technologies

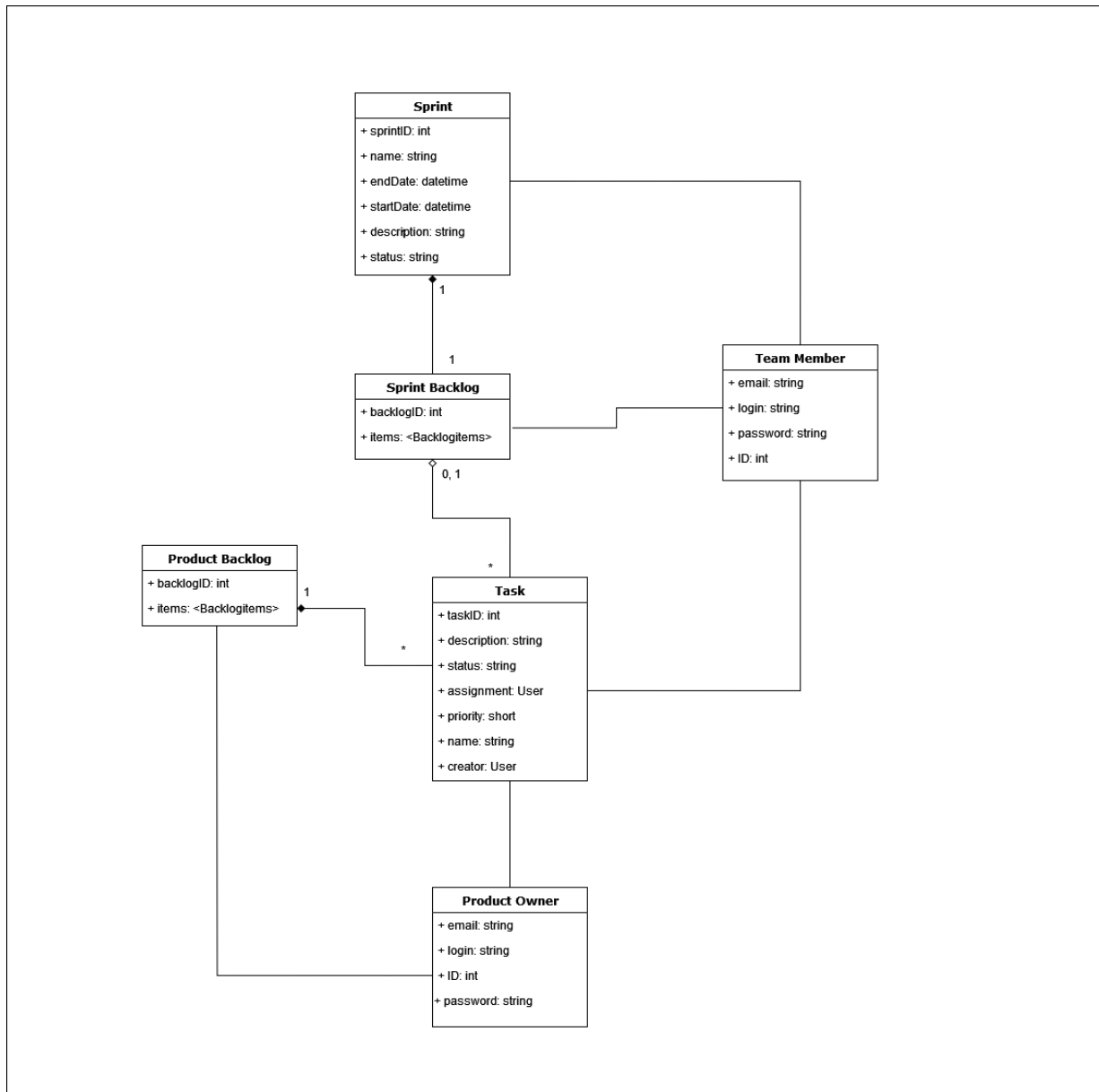
Throughout the project, the following tools were used to help us create Scrummy 1.0.

- **Frontend:**  
Qt Design Studio is a tool for designers to make apps and machines look good and work smoothly. They can import designs and add text, pictures, and animations to create the final look.
- **Backend:**  
Qt Creator is an IDE that allows developers to work with UI/UX(user interfaces and user experiences) designs created in Qt Design Studio, simplifying the integration of backend logic.
- **Database:**  
MySQL Workbench 8.0 CE is a versatile visual tool for database professionals, offering data modelling, SQL development, and a range of administrative features for server setup, user management, backups, and more.
- **Version Control:**  
GitHub is a web-based platform that leverages Git for version control, supporting software development and offering features like bug tracking, task management, and wikis for projects. It facilitates collaboration among developers for code and project management.

- **Other Tools and Libraries:**

- Jira** is a software tool used for project management and issue tracking, commonly used in software development teams to plan, track, and manage tasks and issues throughout the development process.
- Microsoft Word** is a program for making and editing written documents, like letters or essays.
- Adobe Photoshop** is a software for editing photos and designing graphic images, enabling users to create, edit, and manipulate images and digital art.
- Eclipse Modelling Tools (Papyrus)** is an open-source project that offers a seamless environment for working on UML and SysML models.

## 2. Domain Model



Class	Description	Data Type - Variable Name
Team Member	<ol style="list-style-type: none"> <li>1. Can assign tasks</li> <li>2. Can take tasks from Product Backlog to Sprint Backlog</li> </ol>	<ol style="list-style-type: none"> <li>1. String email</li> <li>2. String login</li> <li>3. String password</li> <li>4. Int ID</li> </ol>
Product Backlog	<ol style="list-style-type: none"> <li>1. <b>Class Sprint</b> has a relationship where one backlog contains any number of sprints</li> <li>2. <b>Class Task</b> has a relationship where one backlog contains any number of tasks</li> </ol>	<ol style="list-style-type: none"> <li>1. Int backlogID</li> <li>2. <b>Class Object Sprint{...}</b></li> <li>3. <b>Class Object Task{...}</b></li> </ol>
Sprint	<ol style="list-style-type: none"> <li>1. <b>Class SprintBacklog</b> is an attribute object of Sprint class</li> <li>2. When deleted, SprintBacklog is also deleted, but not the tasks</li> </ol>	<ol style="list-style-type: none"> <li>1. Int sprintID</li> <li>2. String name</li> <li>3. Datetime endDate</li> <li>4. Datetime startDate</li> <li>5. String description</li> <li>6. String status</li> </ol>
Sprint Backlog	<ol style="list-style-type: none"> <li>1. <b>Has Tasks objects</b></li> </ol>	<ol style="list-style-type: none"> <li>1. Int backlogID</li> <li>2. Task[] backlogItems</li> </ol>
Task	<ol style="list-style-type: none"> <li>1. Is directly dependent on Product Backlog object</li> <li>2. Can be assigned to a Sprint Backlog</li> <li>3. Is created by Product Owner</li> </ol>	<ol style="list-style-type: none"> <li>1. Int taskID</li> <li>2. String description</li> <li>3. String status</li> <li>4. Short priority</li> <li>5. String name</li> <li>6. TeamMember assignment</li> </ol>

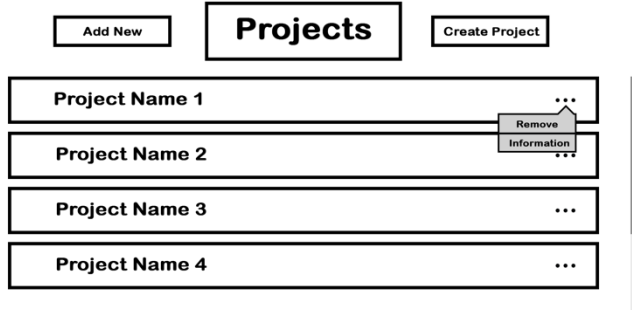
### 3. Software Design

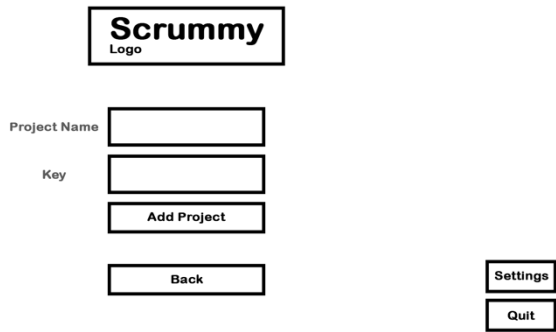
The system design outlines the structure and relationships between various classes and their attributes for a project management and collaboration tool. The purpose of this design is to facilitate project management, task tracking, and collaboration among users by providing functionalities related to user roles, sprint management, task tracking, project boards, event management, and confluence page creation and management. It organizes and stores information relevant to these aspects to support efficient project execution and communication.

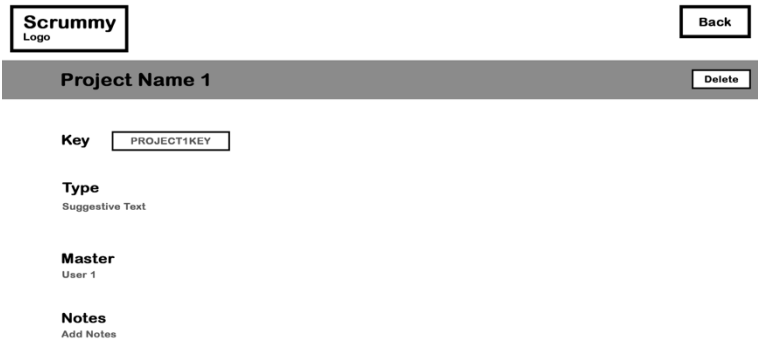
#### Software Design – High-fidelity Wireframes


Sign In Wireframe	
<p><u>Purpose:</u> Account Authorization</p> <p><u>Content/ Buttons:</u> Username field – space for input Password field – space for input Sign In button – existing account and correct input → Projects Overview Wireframe Register button → Register Wireframe Settings button → Settings Wireframe Quit button – exit application</p>	<p><u>How to get here:</u> User opens application</p> <div><div><b>Scrummy</b> Logo</div><div>Username <input type="text"/></div><div>Password <input type="password"/></div><div>Sign In</div><div>Register</div><div>Settings</div><div>Quit</div></div>

Register Wireframe	
<p><u>Purpose:</u> Account Registration</p> <p><u>Content/ Buttons:</u> Username field – space for input Password field – space for input Sign In button → Sign In Wireframe Register button – creates user account Settings button → Settings Wireframe Quit button – exit application</p>	<p><u>How to get here:</u> User clicks Register button</p> <div><div><b>Scrummy</b> Logo</div><div>Username <input type="text"/></div><div>Password <input type="password"/></div><div>Register</div><div>Sign In</div><div>Settings</div><div>Quit</div></div>

Projects Overview Wireframe	
<p><u>Purpose:</u> Manage Projects</p> <p><u>Content/ Buttons:</u> Projects List vertically scrollable – each element contains a dropdown menu</p> <ul style="list-style-type: none"> <li>Remove button – removes project from view (not visible to Owner)</li> <li>Information button → Create Project Wireframe</li> </ul> <p>Project Name interactive → Task Board Wireframe</p> <p>Add New button → Add Project Wireframe</p> <p>Create Project button → Create Project/Project Information Wireframe</p>	<p><u>How to get here:</u> User is authorized/signs in</p>  <p>The wireframe shows a header with three buttons: 'Add New', 'Projects' (highlighted), and 'Create Project'. Below the header is a list of four project entries. Each entry consists of a text box containing 'Project Name 1' through 'Project Name 4' and a dropdown menu to its right. The dropdown for 'Project Name 1' is open, showing two options: 'Remove' and 'Information', each with a three-dot icon. A vertical scrollbar is visible on the right side of the project list.</p>

Add Project Wireframe	
<p><u>Purpose:</u> Add an existing project using the name and the key</p> <p><u>Content/ Buttons:</u> Project Name field – space for input Key field – space for input Add Project button – existing project and correct input → Projects Overview Wireframe Back button → Projects Overview Wireframe Settings button → Settings Wireframe Quit button – exit application</p>	<p><u>How to get here:</u> User clicks Add New button</p>  <p>The wireframe shows a form for adding a project. At the top is a logo box containing the word 'Scrummy' and 'Logo' below it. Below the logo are two input fields: 'Project Name' and 'Key'. Under the 'Key' field is an 'Add Project' button. At the bottom of the form is a 'Back' button. On the right side of the form are two buttons: 'Settings' and 'Quit'.</p>

Create Project/Project Information Wireframe	
<p><u>Purpose:</u> Create a New Project/Project Information</p> <p><u>Content/ Buttons:</u> (interactives only work for Project Owner) Top Bar [grey space] Project Name field – space for input Key field – space for input Type field – space for input Master – shows username of Project Owner Notes field – space for input Delete button – deletes the project (only visible for Project Owner) → Projects Overview Wireframe Back button → Projects Overview Wireframe</p>	<p><u>How to get here:</u> User clicks Create Project button/Project Name</p> 

Settings Wireframe	
<p><u>Purpose:</u> Adjust application settings</p> <p><u>Content/ Buttons:</u> Dark Mode switch – switches between light-mode and dark-mode Back button → Previous Wireframe</p>	<p><u>How to get here:</u> User clicks Settings button</p> 

## Task Page Wireframe

### Purpose:

Edit/Create new task

### Content/ Buttons:

Back button → Task Board

Wireframe

Top Bar space

- Task Name field – space for input
- Status Dropdown menu
- Label list – can be edited (up to 3)
- Add Label button
- Delete button – deletes task → Task Board Wireframe

Information Card

- Priority Dropdown menu [High, Medium Low]
- Sprint Dropdown menu
- Reviewer Add button – can add one user
- Assignee(s) Add button – can add users

Description text field

Attach button – can attach files and images

Comments text field and list

### How to get here:

User clicks Task Card interactive/New Task button in Task Board Wireframe

The wireframe illustrates the layout of a task page. At the top, there is a header bar containing the 'Scrummy' logo on the left and a 'Back' button on the right. Below the logo, the task name 'Task Name 1' is displayed, followed by a status dropdown menu set to 'To Do', a label 'Label 1', and an '+ Add Label' button. A 'Delete' button is positioned at the far right of this bar. The main content area is divided into two columns. The left column contains an 'Information Card' with four sections: 'Priority' (High with a dropdown arrow), 'Sprint' (Sprint Name 1 with a dropdown arrow), 'Reviewer' (+ Add button), and 'Assignee(s)' (+ Add button). The right column features a 'Description' field with the placeholder text 'Add a description...', an 'Attachments' section with a '+ Attach' button, and a 'Comments' section with the placeholder text 'Add a comment'.

## Issue Page Wireframe

### Purpose:

Edit/Create new issue

### Content/ Buttons:

Back button → Backlog/Product Backlog Wireframe

Top Bar space

- Issue Name field – space for input
- Status Dropdown menu
- Label list – can be edited (up to 3)
- Add Label button
- Delete button – deletes task → Backlog/Product Backlog Wireframe

Information Card

- Priority Dropdown menu [High, Medium Low]
- Sprint Dropdown menu
- Reviewer Add button – can add one user
- Assignee(s) Add button – can add users

Description text field

Attach button – can attach files and images

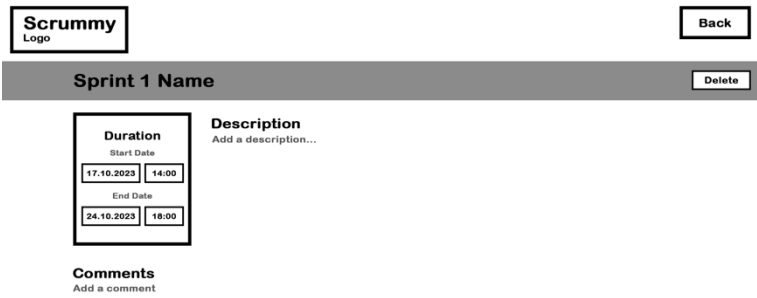
Comments text field and list

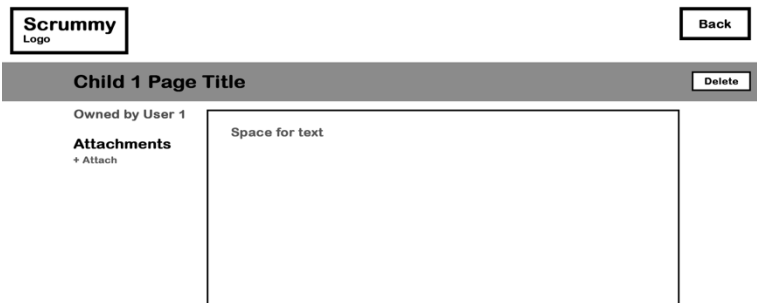
### How to get here:

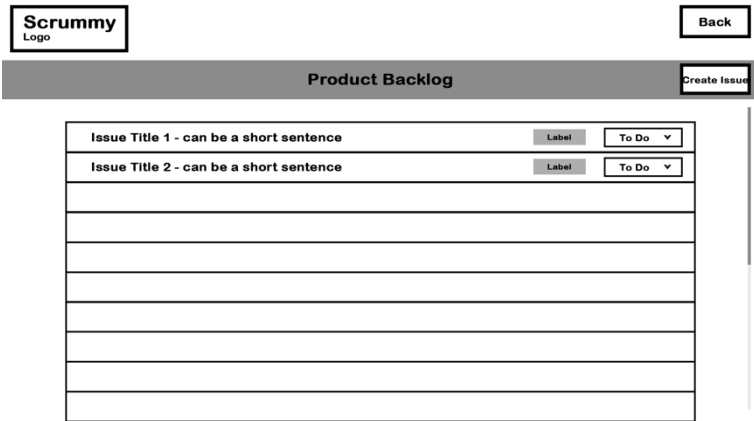
User clicks Create Issue/Issue Title in Backlog Wireframe/Product Backlog Wireframe

The wireframe illustrates the layout of an issue page. At the top, there is a header bar containing the 'Scrummy Logo' on the left and a 'Back' button on the right. Below the header, the main content area is divided into two columns. The left column contains an 'Issue Name 1' field, a status dropdown menu set to 'To Do', a 'Label' list, and an '+ Add Label' button. A 'Delete' button is located at the top right of this column. The right column features an 'Information Card' with four sections: 'Priority' (High), 'Sprint' (Sprint Name 1), 'Reviewer' (+ Add), and 'Assignee(s)' (+ Add). To the right of the information card is a 'Description' field with the placeholder text 'Add a description...'. Below the description is an 'Attachments' section with an '+ Attach' button. At the bottom of the page is a 'Comments' section with the text 'Add a comment'.



Sprint Page Wireframe	
<p><u>Purpose:</u> Edit/Create new sprint</p> <p><u>Content/ Buttons:</u> Back button → Sprints Wireframe Top Bar space</p> <ul style="list-style-type: none"> <li>Sprint Name field – space for input</li> <li>Delete button – deletes task → Sprints Wireframe</li> </ul> <p>Information Card</p> <ul style="list-style-type: none"> <li>Duration Start Date fields – two spaces for input [DD.MM.YYYY, HH:MM]</li> <li>Duration End Date fields – two spaces for input [DD.MM.YYYY, HH:MM]</li> </ul> <p>Description text field Comments text field and list</p>	<p><u>How to get here:</u> User clicks Create Sprint/Sprint Title in Sprints Wireframe</p>  <p>The wireframe shows a top bar with a 'Scrummy Logo' on the left and a 'Back' button on the right. Below the bar is a header 'Sprint 1 Name' with a 'Delete' button. The main content area is divided into two columns. The left column is titled 'Duration' and contains two input fields: 'Start Date' with the value '17.10.2023' and '14:00', and 'End Date' with the value '24.10.2023' and '18:00'. The right column is titled 'Description' and contains the text 'Add a description...'. Below these columns is a 'Comments' section with the text 'Add a comment'.</p>

Confluence Page Wireframe	
<p><u>Purpose:</u> Edit/Create new confluence page</p> <p><u>Content/ Buttons:</u> Back button → Sprints Wireframe Top Bar space</p> <ul style="list-style-type: none"> <li>Page Title field – space for input</li> <li>Delete button – deletes task → Confluence Wireframe</li> </ul> <p>Owned by User Attach button – can attach files and images Text field Comments text field and list</p>	<p><u>How to get here:</u> User clicks Add Child button/Edit button in Confluence Wireframe</p>  <p>The wireframe shows a top bar with a 'Scrummy Logo' on the left and a 'Back' button on the right. Below the bar is a header 'Child 1 Page Title' with a 'Delete' button. The main content area is divided into two columns. The left column is titled 'Owned by User 1' and contains an 'Attachments' section with a '+ Attach' button. The right column is titled 'Space for text' and contains a large text input field. Below these columns is a 'Comments' section with the text 'Add a comment'.</p>

Product Backlog Wireframe	
<p><u>Purpose:</u> Product Backlog overview</p> <p><u>Content/ Buttons:</u> Back button → Backlog/Product Backlog Wireframe Top Bar space</p> <ul style="list-style-type: none"> <li>• Product Backlog</li> <li>• Create Issue button → Issue Page Wireframe</li> </ul> <p>Issue List – vertically scrollable</p> <ul style="list-style-type: none"> <li>• Issue Title interactive → Issue Page Wireframe</li> <li>• Label</li> <li>• Status Dropdown menu</li> </ul>	<p><u>How to get here:</u> User clicks Product Backlog button in the Backlog Wireframe</p> 

The following wireframes feature a Top Bar Navigation design which keeps the same layout after switching between screens.

Purpose:

User-friendly layout for fast navigation between screens.

Content/ Buttons:

Scrummy Logo

Task Board button → Task Board Wireframe

Backlog button → Backlog Wireframe

Calendar button → Calendar Wireframe

Sprints button → Sprints Wireframe

Confluence button → Confluence Pages Wireframe

Settings button → Settings Wireframe

Exit button → Projects Overview Wireframe

## Task Board Wireframe [Top Bar Navigation]

### Purpose:

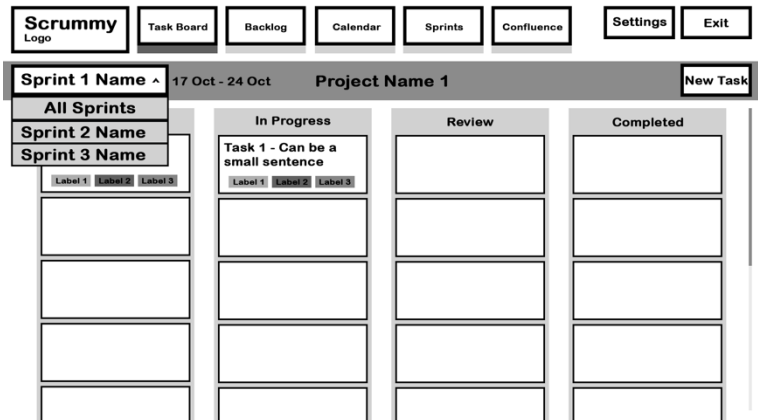
Manage and Overview for the Task Board

### Content/ Buttons: (under the Top Bar Navigation)

- Sprint Selection dropdown menu – can select individual sprints/all sprints → Content changes depending on the selected sprint
  - Sprint Date Duration
  - Project Name
  - New Task button → Task Page Wireframe
- Four Kanban-style columns - vertically scrollable list
- Status (To Do, In Progress, Review, Completed)
  - Task Card interactive → Task Page Wireframe
    - Task Title
    - Up to three labels

### How to get here:

User clicks [Top Bar Element] Task Board button



## Backlog Wireframe

### Purpose:

Manage and Overview for the Backlog

### Content/ Buttons: (under the Top Bar Navigation)

Top Bar space

- Sprint Selection dropdown menu – can select individual sprints → Content changes depending on the selected sprint
- Sprint Date Duration
- Project Name
- Complete Sprint – updates the sprint status to “Completed”
- Product Backlog button → Product Backlog Wireframe
- Create Issue button → Create Issue Wireframe

Issue List vertically scrollable – each element contains

- Issue Title interactive → Create Issue Wireframe
- Issue Label
- Dropdown menu (To Do, In Progress, Review, Completed)

### How to get here:

User clicks [Top Bar Element] Backlog button

The wireframe illustrates the Backlog interface. At the top, there is a navigation bar with buttons for 'Scrummy Logo', 'Task Board', 'Backlog' (highlighted), 'Calendar', 'Sprints', 'Confluence', 'Settings', and 'Exit'. Below this, a header section displays 'Sprint 1 Name' with a dropdown arrow, the dates '17 Oct - 24 Oct', the 'Project Name 1', and buttons for 'Complete Sprint', 'Product Backlog', and 'Create Issue'. The main area features a list of issues. Each issue row includes a label (e.g., 'Sprint 2 Name', 'Sprint 3 Name'), a text input field (e.g., '- can be a short sentence'), a 'Label' button, and a 'To Do' dropdown menu. The list is vertically scrollable, as indicated by a scrollbar on the right.

