# Project Overview

For this project, I created a SCRUM tool which allows developers using AGILE development to track their product. To start, users add work items by filling out the work item form where the title, author, sprint, priority, and user story can be set. The tool contains a SCRUM board where work items can be moved from statuses "Not Started" to "In Progress" to "Completed". It also has a backlog view where work items are sorted by desired sprint completed and which displays the user stories related to the items. Lastly, the tool has a burndown chart which shows the number of items assigned to what sprint.

# Meet John...
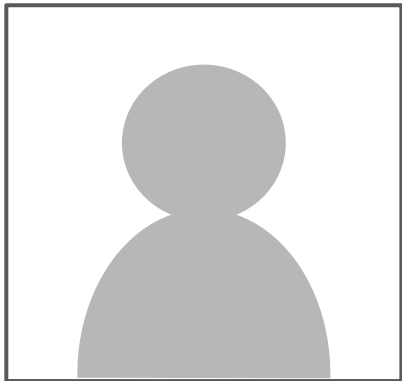
John
Age: 25, Software Engineer

SCRUM board
User labels
Priority labels
Sprint labels
Status labels

John is a software engineer at a startup who wants to track his and his team's work items throughout their agile development plan for their product.

## User Stories:

1. I need to be able to add items to the list of work items.
2. I need to be able to tell what items are assigned to which team member.
3. I need to be able to set a sprint and priority to items.
4. I need to be able to move items from "Not Started" to "In Progress" to "Completed".
5. I need to be able to view my team's product burndown.

# Meet Mary...
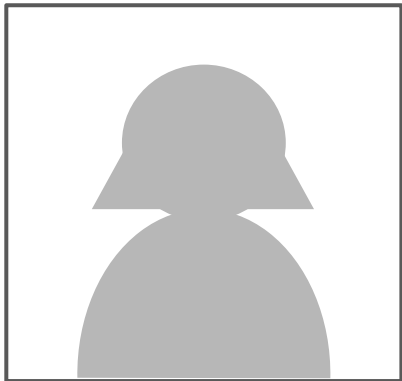
Mary
Age: 45, Program Manager

SCRUM board
Backlog view
Sprint view
Burndown chart
Priority labels
Sprint labels
Status labels
User stories

Mary is a program manager at a large tech company who wants to track the schedule for their product.

<u>User Stories:</u>

1. I need to be able to view a board that shows what tasks are not started, in progress, and completed.
2. I need to be able to sort the work items by sprint in a backlog.
3. I need to be able to see what user story each item is satisfying.
4. I need to be able to view the product's burndown.

# Meet Claire...
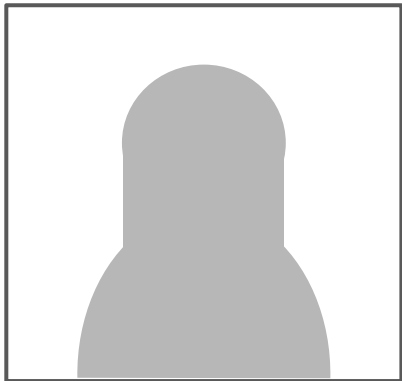


Claire
Age: 32, Quality Assurance

SCRUM board
Backlog view
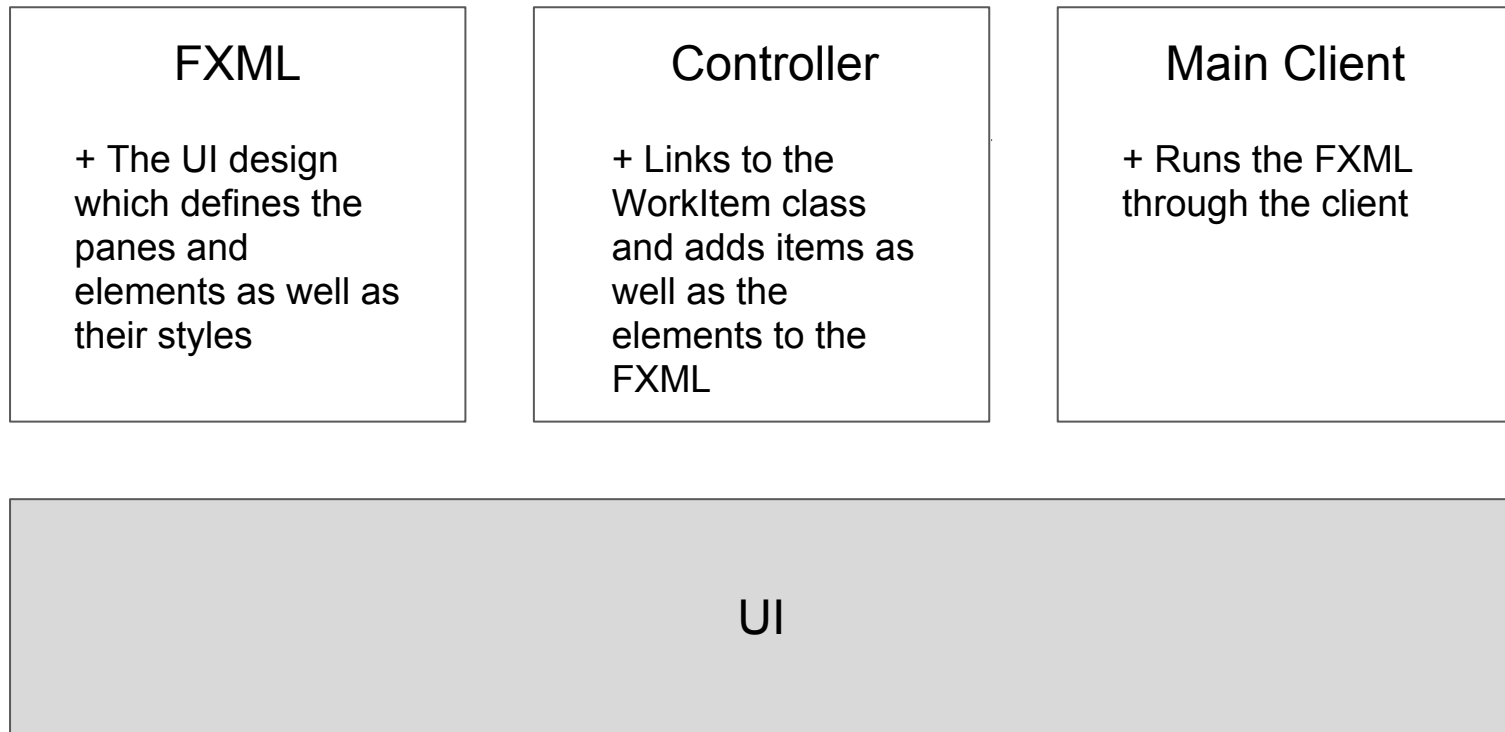Sprint labels
Status labels

Claire is in quality assurance for a software application who wants to see the status of the product as the developers work on it.

<u>User Stories:</u>

1.  I need to be able to view the work items of my product.
2.  I need to be able to know when the product's items are expected to be completed.
3.  I need to be able to see when the developers have completed an item.

# Architectural Diagram

| FXML | Controller | Main Client |
|------|------------|-------------|
| + The UI design which defines the panes and elements as well as their styles | + Links to the WorkItem class and adds items as well as the elements to the FXML | + Runs the FXML through the client |

UI

# Class Diagrams

**WorkItem**

+ Class that defines a work item, has an id, title, assigned user, priority, sprint, and story description

**ObservableList**

+ Contains the work items which are added to the backlog table

**Server**

+ Opens a server socket which clients can connect to allowing clients to edit the same scrum board

**TitledPane**

+ The box which displays a work item in the SCRUM board display
+ Observer of the mouse, can be dragged into different SCRUM board areas

**UI**

+ Displays the four different views and allows for mouse interaction

**Client**

+ Opens the UI for any client on the server host

# Testing

- Scrum Board
  - Check that items are dynamically added with correct information
  - Check that items are draggable with the mouse
  - Check that items snap into place in a column
  - Check that items' status and color are changed when placed in a different column
- Backlog
  - Check that items are dynamically added with correct information
  - Check that items can be sorted by sprint
- Burndown
  - Check that the points on the graph are correct when items are added