

A decorative graphic on the left side of the slide consisting of two overlapping parallelograms. The front one is blue and the back one is a light green. They are positioned diagonally, with the blue one partially covering the green one.

# T1A3 CLI Application

Dean Raguso



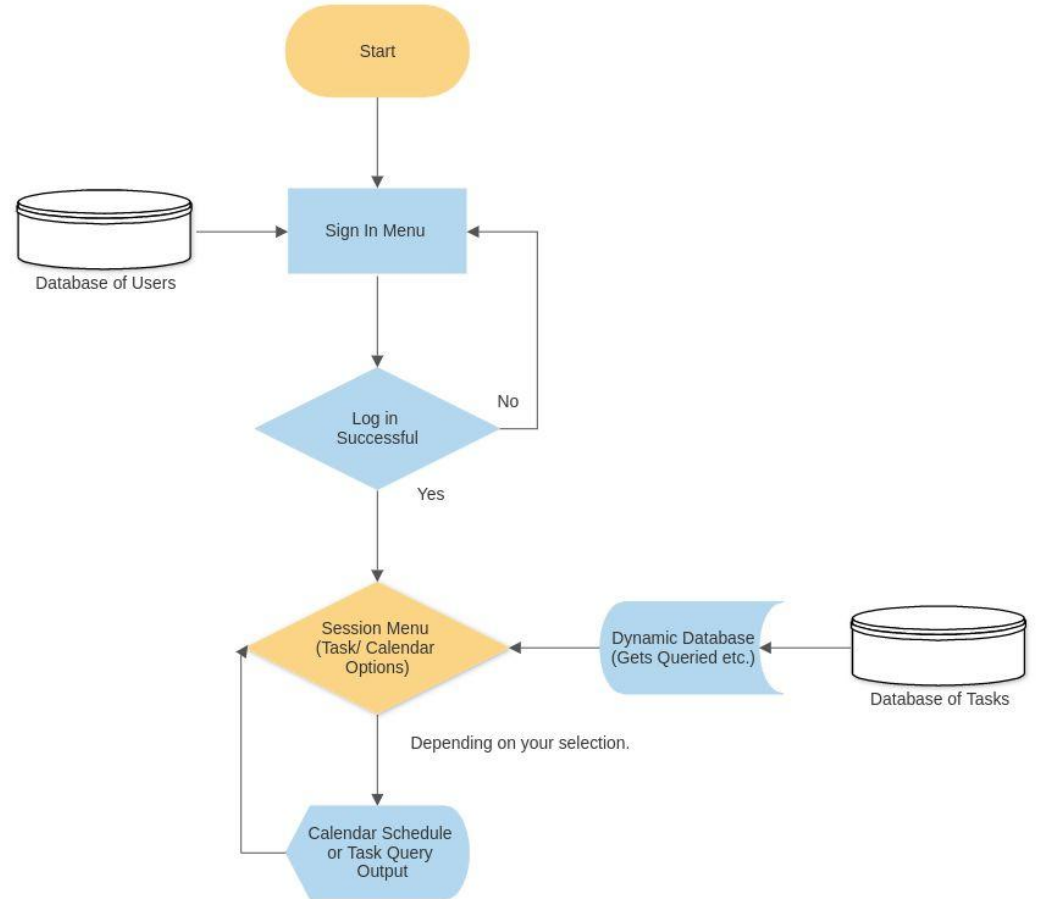
# Concept: Calendar Task Tracker

Productivity scheduling application:

- Create and Store tasks in persistent memory.
- Optimises the Order of task completion for Efficiency.
- Prints basic Calendar Schedule Plan.
- Has user login and basic protection.

# Plan

- Login Menu (Sign In, Create Account, exit)
  - Proceed
- Session Menu (Create/Delete/Edit/View Task, or Optimise/Print Calendar)
  - Proceed
- Output Based on selection, then return to menu.



# Project Management - Pivotal Tracker

**Calendar Task Tracker - Lite (Public)**

STORIES | ANALYTICS | MEMBERS | INTEGRATIONS | MORE

0 of 1 points

1 • 29 Mar - 4 Apr

**Create Application setup and plans**

ID #177619368

STORY TYPE: Feature

POINTS: 1 Point

REQUESTER: Dean Raguso

OWNERS: Dean Raguso

FOLLOW THIS STORY: (1 follower)

Updated: 27 minutes ago

**BLOCKERS**

+ Add blocker or impediment

**DESCRIPTION**

Create the underline structure to begin implementing the project.

**LABELS**

Add a label

**CODE**

Paste link to pull request or branch...

**TASKS (3/5)**

- ☒ Create the file structure for the project.
- ☒ Create the source control.
- ☒ Create and roughly populate the readme file.

**Icebox**

**Final Release and Wrap Up**

- Change database solution to PostgreSQL
- Enhanced User Experience
- Encrypted Authentication

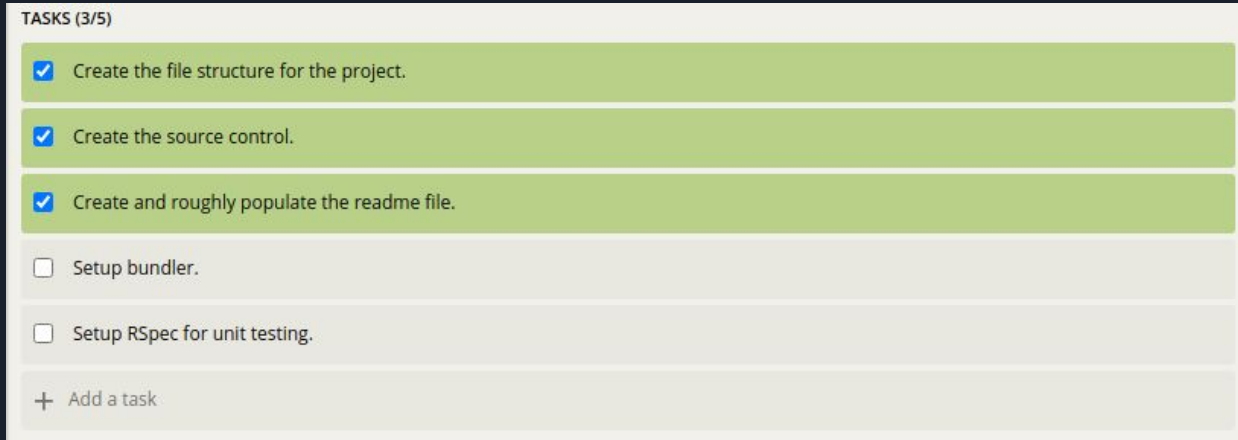
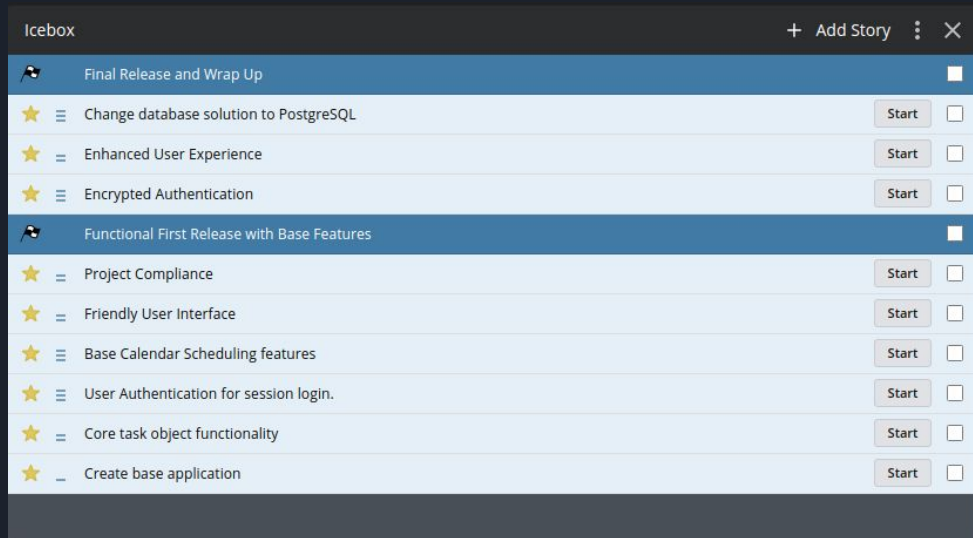
**Functional First Release with Base Features**

- Project Compliance
- Friendly User Interface
- Base Calendar Scheduling features
- User Authentication for session login.
- Core task object functionality
- Create base application

# Basic Idea

Sprints were planned in backlog (Icebox), containing tasks, each with a title, description, difficulty and sub-tasks to check off.

Once all tasks from a sprint are checked done, the sprint is done, and can be accepted as complete.



# Overview (Currently)

The screenshot displays the Jira Calendar Task Tracker interface. The top navigation bar includes 'STORIES', 'ANALYTICS', 'MEMBERS', 'INTEGRATIONS', and 'MORE'. The search bar contains 'mywork:"DR"'. The left sidebar shows a list of views: 'My work' (4 items), 'Current/backlog', 'Icebox', 'Done', 'Blocked' (0 items), 'Epics', 'Labels', and 'Project history'. The main content area is divided into three columns: 'Done', 'Current Iteration/Backlog', and 'Icebox'.

**Done Column:**

- 2 points, 1 - 29 Mar - 4 Apr
- Create Application setup and plans (DR)
- Create base application (DR)

**Current Iteration/Backlog Column:**

- 0 of 8 points, 2 - 5 - 11 Apr
- Core task object functionality (DR) [Finish]
- Base Calendar Scheduling features (DR) [Finish]
- User Authentication for session login. (DR) [Finish]
- 10 Apr 2021: deadline for Final Release and Wrap Up

**Icebox Column:**

- Final Release and Wrap Up
- Enhanced User Experience [Start]
- Encrypted Authentication [Start]
- Functional First Release with Base Features
- Project Compliance [Start]
- Friendly User Interface (DR) [Start]

**Done**

- CRUD User and Task stuff.
- Base Calendar stuff.

**Pending**

- Data Validation.
- Testing (Automatic).
- Optimisation.
- Cleaner User Interface.



# Interface

## Session Menu

```
You are now logged in!  
Welcome to CTT-Lite  
n: New Task  
s [task id]: Show Task  
e [task id]: Edit Task  
d [task id]: Delete Task  
c [days]: Print Calendar  
o: Optimise Schedule  
q: Sign Out  
exit: Close Application
```



## Calendar Print

```
Day 1 with 6.0 hours of work:  
    0      1  
Day 2 with 5.5 hours of work:  
    2      3  
Day 3 with 5.0 hours of work:  
    4      5  
Day 4 with 2.6 hours of work:  
   10     17
```

## New Task Interface

```
Enter task title: A Random Task  
Enter task description: Self-explanatory m8  
Enter task importance (1/10): 6  
Enter task urgency (1/10): 8  
Enter task estimate duration in hours: 4.20  
Enter task due date (dd mm yyyy): 04 05 2021
```

## Sign In Interface

```
s: Sign In  
c: Create Account  
exit: Exit Application
```





# Code Layout

- Session (Main Class, instances the UserManager and TaskManager)
  - UserManager (Loads User Database, Config and Instances Users)
    - User (Each individual User is saved as a user object)
  - TaskManager (Loads in Task Database, Config and Instances Tasks)
    - Task (Each individual task object, holds id, user\_id, and all data)
    - Calendar (Class that holds methods for creating and optimising the plan)
      - Schedule (Array-like class, holds collection of days and tasks within)





# Lessons Learned

- Agile Project Management tools are amazing for a high-level direction in your project.
- Don't reinvent the wheel. (I had no choice - or didn't know otherwise)
  - Recreating user authentication and persistent data storage was painful.
- Build Data Validation in First!
  - Many errors were simply due un-initialized variables, or strings I hadn't yet coerced to a number.