**FLOW TRACKER**

**1. Introduction**

**1.1 Purpose**

The goal of this project is to incorporate a lot of what I have learned over the last 1.5 years of programming into a software that can be presented to potential employers and that can be used by anyone to solve issues related to tracking bugs, tickets, projects, anything that requires organised tracking.

**1.2 Intended Audience and intended use**

**The main audience will be recruiters, hiring managers and developers looking at my work to make a judgment on my capacity to fill a developer position. It is also, potentially, a person or even a business looking to use and benefit from the software to optimise their workflow.**

**1.3 Scope**

**The software is used to create Projects, assign users to Projects, and enable users to assign requests (Tickets) to these Projects. Users are given Roles, and different types of Roles can perform different tasks (submitting, editing, assigning, etc).**

**2. Overall Description**

**2.1 Product Features**

* Users should be able to register or use a demo account.
* The software should include Authentication and Authorisation of users.
* There should be a Dashboard page that includes dynamic Charts overview of tickets by priority, type, status, project.
* The software should include a User management system.
* The software should include a Project management system - overview of all projects, and specific project details & ticket details.
* Each user should be able to see, track and organise all the tickets he/she created or has been assigned to (Admin users can see all of the company’s tickets present in the database).
* Tickets should include attachments and comments, and should be able to be edited individually.
* The system should include a User Profile, defined by each user upon registering and editable at any given point by the User or the Admin.
* The colour scheme of the User Interface needs to be modifiable by each user based on their preferences.
* The application should include a Notification system.

**2.2 Users Classes and Characteristics**

The system features different user Roles, defining what each user can perform while using the application.

* Admin

Can do everything

* Project Manager

Can assign users and Developers to projects

* Developer

Can change a ticket status.

* Submitter

Can create new tickets on a project he/she is assigned to.

**2.3 Operating Environment**

The software will be a Web-based application, accessible from any computer or mobile device.

**2.4 Development Responsibility**

I, Guillaume Croizon, will be developing the software, the server and the database on my own.

**3. System Features**

**3.1 Dashboard (Admin only)**

**The Dashboard is an Admin feature. It is an overview of the current state of the database of tickets. It includes four charts:**

* **Tickets by Priority**
* **Tickets by Types**
* **Tickets by Status**
* **Tickets by Project**

**3.2 Role Assignment (Admin only)**

**Component 1**

**User selection (dropdown or scrollable window)**

**Component 2**

**Role selection – which role the user should be assigned to.**

**Includes a submit button**

**Component 3**

List of all current personnel assigned to Projects.

* Searchable
* Select how many entries per page
* Each user includes a User Name, Email and Role

**3.3 User Management (Admin & PM only)**

**3.4 Project Management**

**List of all projects in the database.**

**Component 1**

**Button to create a new project**

**Component 2**

**Main window**

* **Searchable**
* **Select how many entries per page**
* Each project includes a Project Name and Description
* Each project includes a link to
  + Manage Users
  + Project Details

**Component 3**

**Project Detail**

* **Banner with link to Main List and project Edit window**
* **Shows project name and description**
* **Assigned Personnel** 
  + **Searchable & Entry selection**
  + **Shows User Name, Email, Role**
* **Tickets for this Project**
  + **Searchable & Entry selection**
  + **Shows Title, Submitter, Developer, Status and Creation date**
  + **Link to Ticket Detail (see section 3.5)**

**3.5 Ticket Management**

***Page 1***

**List of all tickets**

* **Searchable & Entry selection**
* **Title**
* **Project Name**
* **Developer Assigned**
* **Ticket Priority**
* **Ticket Status**
* **Ticket Type**
* **Creation Date**
* **Link to**
  + **Edit Ticket**
  + **Ticket Details**

***Page 2***

**Component 1**

**Details of ticket**

* **Banner with link to Main List and ticket Edit window**
* **Ticket Title**
* **Ticket Description**
* **Assigned Developer**
* **Submitter**
* **Project Name**
* **Ticket Priority**
* **Ticket Status**
* **Ticket Type**
* **Creation Date**
* **Updated Date**

**Component 2**

**Ticket History**

* **Searchable & Entry selection**
* **Includes Property type, Old Value, New Value, Date Changed**

**Component 3**

**Ticket Comments**

* **Searchable & Entry selection**
* **User can add comments to the ticket**
* **Includes Commenter name, Message and Creation Date**

**Component 4**

**Attachments**

* **Searchable & Entry selection**
* **User can add a file, picture, screenshot etc**
* **Includes File, Uploader, Notes and Creation Date**

***Page 3***

Component 1

**Edit Ticket**

* **Title**
* **Description**
* **Project (dropdown)**
* **Assigned Developer (dropdown)**
* **Ticket Priority**
* **Ticket Status**
* **Update Button**
* **Link to main Ticket List**

**4. Sprint scheduling and estimates**

**This is an ambitious but achievable project for my current level. I just cannot ascertain the level of difficulty I will face. Nonetheless I will be working on a 2 or 1 week sprint basis. This will be adjusted based on my progress speed.**

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| **SPRINT MILESTONE** | **DESCRIPTION** | **RELEASE DATE** |
| M1 | User Interface Design | March 14th 2021 |
| M2 | Basic Redux implementation and Back-end development | March 28th 2021 |
| M3 | Full functionality (front & back) | April 4th 2021 |
| M4 | Authentication and Authorization | April 11th 2021 |
| M5 | Testing | April 18th 2021 |
| M6 | Initial Deployment | April 18th – 22nd 2021 |

**5. Technical Process**

Here is the list of the technologies used for the development of the application.

Front-End: React, Redux, SASS

Back-End: Node, Express, PostgreSQL