Software Requirements Specification

For

Dragonfly

Version 1.0

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Table of Contents

Revision History

Name	Date	Reason for Revision	Version
Chance Gurley	11/9/2019	Initial Propose	0.01

1-Introduction

1.1 Purpose

This S.R.S. describes the software requirements for Dragonfly. Dragonfly will track bugs in development environments and assign a ticket number to effectively track bugs within the product life cycle.

1.2 Document Conventions

Bold all sections, and subsections. Use a legible font, and font size.

1.3 Intended Audience & Reading Suggestions

This document is intended for use by the project team, and customer to verify all features are correctly documented, implemented, and working as the customer intends.

1.4 Project Scope

Dragonfly is a web-based program that will effectively track known bugs, or issues. It will be a responsive, mobile-first, fast, and easy-to-use application. It will also generate key KPI reports such as the average time to fix bugs.

1.5 References

None at the moment (develop mission statement & scope)

2-Overall Description

2.1 Product Perspective

Dragonfly is an application that will manage bugs during development. It will let a team see existing bugs with detailed descriptions, the date found, the date squashed, and the username of who found the bug. It will be available on a public website and teams will have to create an account and add team members from the main account.

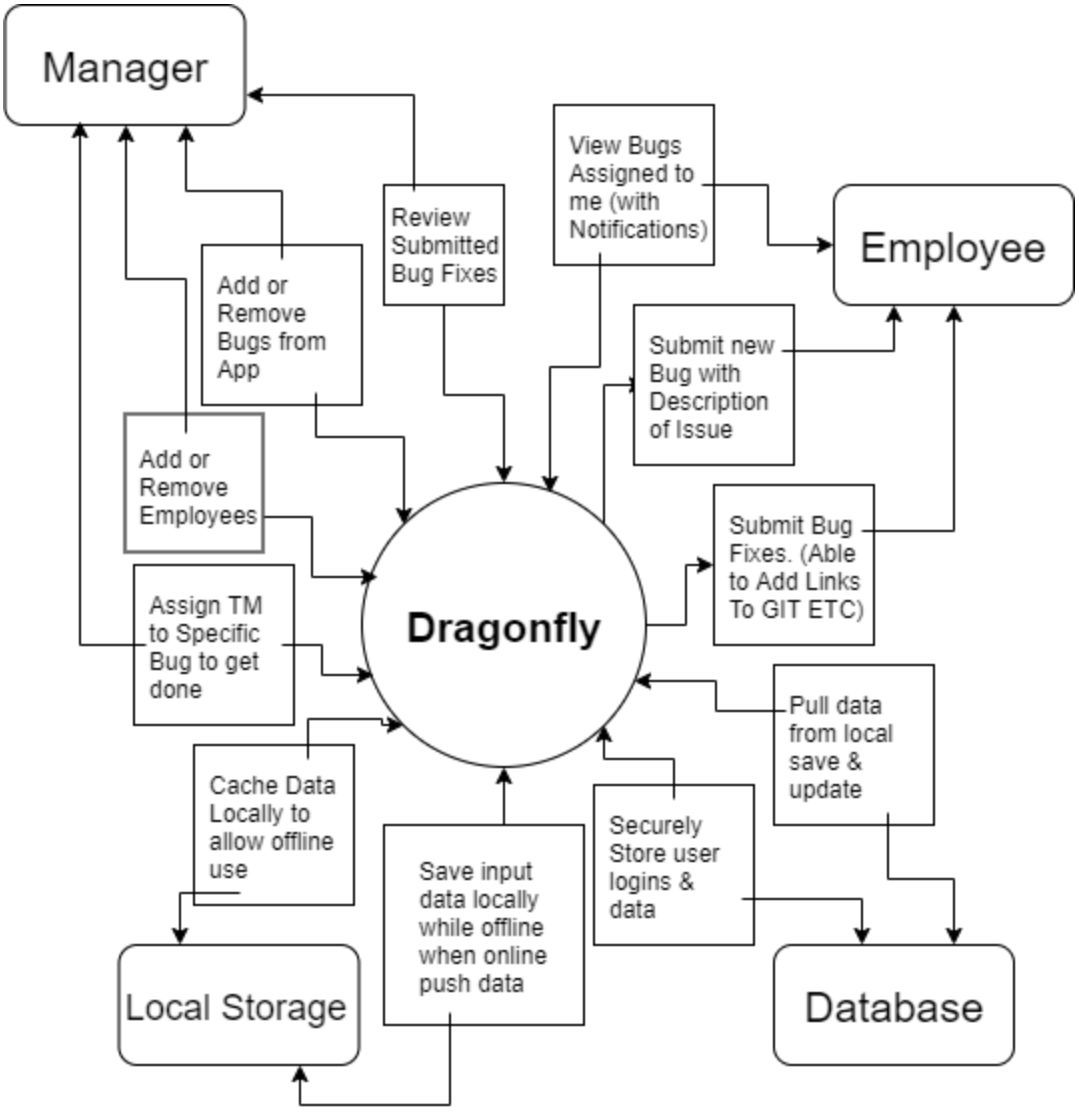

Figure 1: Project Map For Dragonfly

Note: Managers have all employee actions plus manager special permissions.

2.2 Product Features

Manager Specific Features:

MFE-1: Add bugs with date, issue, desired fix date, and notes
MFE-2: Assign a bug to an employee
MFE-3: Add or remove employees, adjust user roles
MFE-4: Get notifications on employee submissions
MFE-5: Review bug fixes, add completion date if correct
MFE-6: Get key KPI reports - print - or view easily

All Other Features:

FE-1: Get notifications if assigned to a bug
FE-2: Submit new bug for review (can attach pictures)
FE-3: Submit bug fix (can add link)
FE-4: Offline Access
FE-5: Push offline saves when online again

2.3 User Classes and Characteristics

Manager	A manager has raised permissions to be able to manage user roles, add bugs, assign bugs to employees, complete bugs after review, remove bugs, and see all KPI reports on bugs and users.
Employee	An employee has access to view all bugs, submit a new bug, submit a bug fix, and will be notified if assigned to a specific bug.

2.4 Operating Environment

OE-1	No user-location will be needed for this application
OE-2	Target is designed for the latest web-browsers
OE-3	Data will be stored to local storage with a date-stamp. When the device is online and if a change has been made, a push to the online database will occur and reflect the changes.
OE-4	Database and local storage must be secure

OE-5	There is no time constraint to access this application

2.5 Design and Implementation Constraints

DI-1	All data stored on our secure SQL DB
DI-2	Interface uses React

2.6 User Documentation

No user documentation at this time.

2.7 Assumptions and Dependencies

AS-1	The user has an up to date web browser
AS-2	No more than 2000 requests per hour
AS-3	Javascript is enabled
AS-4	User has or can create a Github account for authentication
DE-1	O-Auth from Github
DE-2	React javascript library

3-Product Features

3.1 Track Bug Progress Throughout The Development Cycle (Divided Access)

3.1.1 Description and Priority

Users will need to be able to track and report bugs during the development lifecycle

Priority: High

3.1.2 Stimulus/Response Sequences

Stimulus:	Employee reports bug
Response:	Manager get notification of possible bug

Stimulus:	Manager verifies bug condition
Case 1 Response:	BUG: Manager marks as verified bug and enters bug information.
Case 2 Response :	NO BUG: Manager rejects bug submission and fills out why it is not a bug. Employee gets notification

Stimulus:	Manager submits bug report with details
Response:	Manager chooses priority level & employee

Stimulus:	Manager choose employee to fix bug
Response:	Employee gets notification with date needed

Stimulus:	Employee submits bug fix
Response:	Manager gets notification

Stimulus:	Manager verifies bug condition
Case 1 Response:	FIXED: Manager markes bug as fixed
Case 2 Response:	Broken: Manager sends back to employee

3.1.3 Functional Requirements

Employee Functions	
Submit Bug Found:	Employee found a new bug in the application, this asks to attach all known information and sends the details to the managers.
Submit Bug:	Employee submits bug fix
My Assignments:	An employee can see bugs the managers have assigned to them
Notifications:	View notifications that management assigned new bugs directly to the user
Report Bug Fixed:	Notify the manager that the bug has been fixed, please attach how the bug was fixed as well.
Manager Functions	
Add Bug:	Manager reviews bug requests and chooses if it is a valid bug. If it is a valid bug the manager adds all relevant information to the bug ticket.
Squashed Bugs:	Manager reviews the bug fix submitted by the employees. If it is fixed the manager marks fixed and the date is automatically added to the ticket and it is closed.

Employee Notifications:	Displays notifications created by employees. Can be a new bug found, or a bug fix.
Assign Bugs:	Assign a bug directly to an employee with a recommended completion date.

3.2 Dashboard View (All Access)

3.2.1 Description and Priority

Access to basic KPI information about the current bugs and any bugs that are assigned to the logged in user.

Priority: Medium

3.2.2 Stimulus/Response Sequences

Stimulus:	User logs into application
Response:	Take user to correct dashboard

3.2.3 Functional Requirements

Employee Functions	
Dashboard View:	Employee can view new bugs, general bug statistics, and personal bug statistics. NO ACCESS TO EDIT, CREATE, DELETE!

Manager Functions	
Dashboard View:	Manager can view everything the employee can. Additionally, the manager can view the whole teams' statistics by user, and can delete statistics.

3.3 Manage Employees (Manager)

3.3.1 Description and Priority

The manager will be able to create new employees, edit employee information, see employee K.P.I.s, and delete employees

Priority: High

3.3.2 Stimulus/Response Sequences

Stimulus:	Add new employee
Response:	A new employee is added, and an invite code / link is generated

Stimulus:	Delete employee
Response:	Deletes an employee

Stimulus:	View detailed KPI reports for employee
Response:	Shows user all KPI reports available

Stimulus:	Edit employee
Response:	Edit any information about employee

3.3.3 Functional Requirements

Add Employee:	Allow manager to add an employee, create an invite code and link.
Edit Employee:	Edit any employee information
KPI Report:	Show individual KPI reports

Remove Employee:	Delete employee from the system, does not affect KPI.

3.4 View KPI Reports (Manager)

3.4.1 Description and Priority

View all KPI reports including average time to fix bugs, how many bugs are in the project, what employee fixes the most bugs, and what type of bugs are in the project.

Priority: Medium

3.4.2 Stimulus/Response Sequences

Stimulus:	View KPI reports
Response:	Show user all KPI reports

Stimulus:	Filter KPI reports
Response:	Filter reports by employee, date, project, or bug type

Stimulus:	Show report by metric
Response:	Avg time to fix, Total bugs in projects, Employee fixes, Type of bugs

3.4.3 Functional Requirements

View All KPI:	Show all KPI reports
Filter KPIs:	Filter KPI reports
View KPI by metric:	Show KPI based on metric

3.5 Add/Manage Bugs (Manager)

3.5.1 Description and Priority

Manager is able to edit/add bugs to the tracker.

Priority: High

3.5.2 Stimulus/Response Sequences

Stimulus:	Manager Reviews bug
Case 1 Response:	Add bug with info to active bug list
Case 2 Response:	Bug is not added and employee is notified with reason.

Stimulus:	Manager edits bug
Response:	Bug is edited

3.5.3 Functional Requirements

Add Bug:	Allows manager to add a new bug
Edit Bug:	Manager can edit bug entry
Delete Bug:	Manager can delete bug

3.6 Sync With Calendar (All Access)

3.6.1 Description and Priority

Users will be able to sync any notifications with a date straight to the calendar for easy alerts and convenience.

Priority: Low

3.6.2 Stimulus/Response Sequences

Stimulus:	Notification with date incoming for user
Response:	If calendar is synced add event to calendar

3.6.3 Functional Requirements

User turns on calendar sync:	Incoming notifications will be synced with calendar. (Would be awesome to do this through API dynamically)

3.7 Login Using OAuth

3.7.1 Description and Priority

Implement Oauth to get a secure, convenient way to login to the application. Users will be able to use the account they already have to login.

Priority: High

3.7.2 Stimulus/Response Sequences

Stimulus:	User wants to login/create account
Response:	Direct to OAuth login

3.7.3 Functional Requirements

login:	User is directed to login with existing OAuth account.
Create Account:	User is directed to create account using

	other OAuth credentials

5-External Interface Requirements

5.1 User Interfaces

UI-1: The web application will allow for the user to use the application with the keyboard alone, as well as mouse and keyboard, and touchscreen.

UI-2: The web application must be very responsive and fast in design, the user experience must be great on mobile, or pc. The network must not cause a significant impact to user experience if it can be helped.

5.2 Hardware Interfaces

No hardware interface has been identified.

5.3 Software Interfaces

SI-1: Database - Communicate with DB to save all changes.
- SL-1.1: Manage Users
- SL-1.2: Manage Bugs
- SL-1.3: Calculate KPI

SL-2: OAuth
- SL-2.1: Communicate with OAuth server to get login credentials

5.4 Communication Interfaces

CI-1: System will notify user of any notification
CI-2: System can email user if user wants the system to
CI-3: System can integrate with calendar to provide notifications

6-Other Nonfunctional Requirements

6.1 Performance Requirements

Web application must be able to load in under 1s when downloaded/cached. Must initially be under a 10s load time with a bad network.

6.2 Safety Requirements

No safety requirements

6.3 Security Requirements

SR-1: User must log on to access application
SR-2: Only managers can add/edit bugs and employees
SR-3: Employees will only be able to see their own KPI reports not the team

6.4 Software Quality Attributes

No software quality attributes have been established.

Appendix A: Issues List

None at this time