Nodebucket

TECHNICAL DESIGN DOCUMENT

|  |  |
| --- | --- |
| **Author** | *Brett Grashorn* |
| **Last Updated** | 8/12/2023 10:32 PM |
| **Version Number** | *1.0.0* |

**Version History**

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Date | Reason for Change | Version |
| *Brett Grashorn* | *08/09/2023* | *New document format* | *1.0.0* |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Table of Contents

[SECTION 1: INTRODUCTION 3](#_Toc142489796)

[1.1. Purpose 3](#_Toc142489797)

[1.2. Terminology 3](#_Toc142489798)

[1.3. User Personas 3](#_Toc142489799)

[1.4. User Stories 3](#_Toc142489800)

[1.5. Work Estimations 3](#_Toc142489801)

[SECTION 2: PROCESS DESIGN 3](#_Toc142489802)

[2.1. Sitemap 3](#_Toc142489803)

[2.2. Prototypes 3](#_Toc142489804)

[2.3. ORD (Object Relational Diagram(s) 3](#_Toc142489805)

[2.4. NoSQL Data Structure 3](#_Toc142489806)

[SECTION 3: FUNCTIONAL DESIGN 4](#_Toc142489807)

[3.1. Overview of the Design 4](#_Toc142489808)

[3.2. Functional Design 4](#_Toc142489809)

[3.3. Feedback/Comments 4](#_Toc142489810)

[SECTION 4: QA TESTING 4](#_Toc142489811)

[4.1. QA Test Plan 4](#_Toc142489812)

[4.2. Unit Tests 5](#_Toc142489813)

[SECTION 4: REFERENCES 5](#_Toc142489814)

# SECTION 1: INTRODUCTION

## Purpose

This applications purpose is to provide a way to manage tasks with maximum security. The tasks in the app will have two columns, one To Do column and one Complete column with minimum 5 categories. There will be a login page, as well as a home page, about page, and contact page.

## Terminology

|  |  |
| --- | --- |
| **Name** | **Comments** |
| *MEAN Stack* | *MongoDB, Express, Angular, and Node.js* |
| *VS Code* | *Development IDE* |
| *SoapUI* | *API testing tool* |
| *MongoDB Compass* | *Database development IDE https://www.mongodb.com/* |
| *Angular Material* | [*https://material.angular.io/*](https://material.angular.io/) |
| *Flex-layout* | [*https://github.com/angular/flex-layout*](https://github.com/angular/flex-layout) |
| *Node.js* | https://nodejs.org/en/about |
| *Express* | https://expressjs.com/ |
| *Angular Material* | https://material.angular.io/ |

## User Personas

# Persona 1 - Dan Patel

## Age: 43

## Gender: M

## Job Title: Software Developer

## Marital Status: M

## Short Bio: Dan is a lifelong software developer. He works at a local company developing and maintaining applications. He has a family and made a home in the area. He loves sports, especially football when he gets to draft his fantasy football team. He is very tech savvy and always gets the newest devices.

# Persona 2 - Steven Prior

## Age: 35

## Gender: M

## Job Title: Marketing Manager

## Marital Status: Single

## Short Bio: Steven has been a Marketing Manager for the past 5 years. He has worked very hard and moved very fast up the corporate ladder. He is excellent when it comes to marketing and trends that go along with it. He does a lot of gaming in his free time as well as finding the best new restaurant around town.

# Persona 3 - Miriam Nuero

## Age: 50

## Gender: F

## Job Title: Project Manager

## Marital Status: Widow

## Short Bio: Miriam is Project Manager and has worked at a local firm for the past 10 years. She has 3 kids and 2 grandkids that she loves to spend time with any time that she can. She works remotely and has difficulty keeping track of her tasks and who is assigned to them.

## User Stories

|  |  |
| --- | --- |
| **Story** | **Points** |
| As a technical user I need API documentation for task endpoints So I can integrate task management into our custom tools | 3 |
| As a technical user I want a CLI for quick task creation To streamline adding tasks without leaving the terminal | 1 |
| As a technical user I need to categorize tasks by project So I can easily filter tasks related to specific projects | 3 |
| As a technical user I need webhook support for task updates To receive real-time notifications in our development chat | 5 |
| As a technical user I want keyboard shortcuts for task actions To navigate and manage tasks more efficiently | 1 |

|  |  |
| --- | --- |
| **Story** | **Points** |
| As a user I need task prioritization to focus on high-priority tasks and meet campaign deadlines | 1 |
| As a user, I want to be able to separate tasks by client to be able to keep them organized | 1 |
| As a working professional, I need to be able to work on mobile due to my busy schedule | 3 |
| As a marketing manager, I need to plan and execute a social media campaign to promote our upcoming product launch. | 3 |
| As a user I need a high level of security so my clients data is protected | 5 |

|  |  |
| --- | --- |
| **Story** | **Points** |
| As a user, I want access secure in order to honor NDAs I have signed with clients | 5 |
| As a project manager, I need to create tasks to lead kickoff meetings for a new client project. | 1 |
| As a pm I need a way to change project status to complete so I can keep track of what’s been complete | 1 |
| As a Project Manager, I want to efficiently assign tasks to team members and track their progress to ensure the project stays on schedule and meets its objectives. | 3 |
| As a pm I need to have a way to prioritize tasks in order so I can see which deadlines are coming up | 1 |

## Work Estimations

|  |  |  |
| --- | --- | --- |
| **Story 1** | **Points** | **Work Hours** |
| As a technical user I need API documentation for task endpoints So I can integrate task management into our custom tools   * Create a POST API **Work Hours**:1 * Create a GET API to recall the tasks **Work Hours**: 1 * Create a DELETE API to remove tasks **Work Hours**: 1 * Create a way to edit tasks **Work Hours**: 1 * API Testing Integrate communication into POST API **Work Hours: 1** * Site integration **Work Hours**: 1 | 3 | 6 |
| As a technical user I want a CLI for quick task creation To streamline adding tasks without leaving the terminal   * Integrate communication into POST API **Work Hours**: 1 * Integrate communication into GET API **Work Hours**: 1 * Integrate communication into GET edit API **Work Hours**: 1 * Integrate communication into DELETE API **Work Hours**: 1 * Create Messages for creation of tasks **Work Hours**: 1 | 1 | 5 |
| As a technical user I need to categorize tasks by project So I can easily filter tasks related to specific projects   * Create a list of categories in todo **Work Hours**: .5 * Create a way to separate Categories in todo **Work Hours**: .5 * Create way to move categories into complete **Work Hours**: 1 * Create a list of categories in Complete **Work Hours**: .5 * Create a way to separate Categories in complete **Work Hours**: .5 | 3 | 3 |
| As a technical user I need webhook support for task updates To receive real-time notifications in our development chat   * Need way to send messages to dev chat for 400 errors **Work Hours**: 3 * Need way to send messages to dev chat for 500 errors **Work Hours**: 3 * Need way to create a way for connection to APIs into teams **Work Hours**: 3 * Need way to create a task for errors **Work Hours**: 2 * Need a separate chat for notifications **Work Hours**: 1 | 5 | 12 |
| As a technical user I want keyboard shortcuts for task actions To navigate and manage tasks more efficiently | 1 | 1 |
| **Story 2** | **Points** | **Work Hours** |
| As a user I need task prioritization To focus on high-priority tasks and meet campaign deadlines   * Add categories to API creation **Work Hours**:1 * Add way to sort by date **Work Hours**: 1 * Add way to sort by category **Work Hours**: 1 * Add way to sort by priority **Work Hours**: 1 * Add way to create priority **Work Hours**: 1 | 1 | 5 |
| As a user, I want to be able to separate tasks by client to be able to keep them organized   * API for Task creation **Work Hours**:1 * API to call for tasks **Work Hours**: 1 * API to edit tasks **Work Hours**: 1 * Add clients to API Creation **Work Hours**: 1 * Add way to filter by client **Work Hours**: 1 | 5 | 5 |
| As a working professional, I need to be able to work on mobile due to my busy schedule   * Create Task page mobile friendly **Work Hours**: 2 * Create sign in page mobile friendly **Work Hours**: 2 * Create home page mobile friendly **Work Hours**: 2 * Create contact us mobile friendly **Work Hours**: 2 * Create about us mobile friendly **Work Hours**: 2 | 3 | 10 |
| As a marketing manager, I need to plan and execute a social media campaign to promote our upcoming product launch.   * Draft campaign strategy **Work Hours**: 1 * Draft campaign ads **Work Hours**: 1 * Find advertisers **Work Hours**: 1 * Appoint a someone to social media associate **Work Hours**: .5 * Launch campaign **Work Hours**: .5 | 3 | 4 |
| As a user I need a high level of security so my clients data is protected   * Encrypt passwords **Work Hours**: 5 * Hashout typed passwords **Work Hours**: 1 * Add two factor authentication **Work Hours**: 3 * Add layer of security to DB **Work Hours**: 2 * Lockout frequent invalid userid or passwords **Work Hours**: 1 | 5 | 12 |
| **Story 3** | **Points** | **Work Hours** |
| As a user, I want access secure in order to honor NDAs I have signed with clients   * Document NDA’s **Work Hours**: 1 * Separate log ins for clients **Work Hours**: 1 * Encrypt clients data **Work Hours**: 6 * Determine NDA requirements **Work Hours**: 1 * Implement requirements **Work Hours**: 6 | 5 | 15 |
| As a project manager, I need to create tasks to lead kickoff meetings for a new client project.   * API for task creation **Work Hours**: 2 * API to edit tasks **Work Hours**: 2 * API for assigning tasks **Work Hours**: 2 * API to call tasks in sort tasks **Work Hours**: 2 * Formal application to present tasks **Work Hours**: 4 | 1 | 12 |
| As a pm I need a way to change project status to complete so I can keep track of what’s been complete   * API to create projects **Work Hours**:2 * Category for project status **Work Hours**: 2 * API to fetch projects by status **Work Hours**: 2 * Filter projects for status **Work Hours**: 2 * Formal UI to view projects **Work Hours**: 4 | 1 | 12 |
| As a Project Manager, I want to efficiently assign tasks to team members and track their progress to ensure the project stays on schedule and meets its objectives.   * API for task creation **Work Hours**: 2 * API to edit tasks **Work Hours**: 2 * API to delete tasks **Work Hours**: 2 * API to assign tasks **Work Hours**: 2 * Filter by dates **Work Hours**: 1 | 3 | 9 |
| As a pm I need to have a way to prioritize tasks in order so I can see which deadlines are coming up   * API to create projects **Work Hours**:2 * Category for project priority **Work Hours**: 2 * API to fetch projects by priority **Work Hours**: 2 * Filter projects for priority **Work Hours**: 2 * API to assign tasks projects **Work Hours**: 2 | 1 | 10 |

# SECTION 2: PROCESS DESIGN

## 2.1. Sitemap

## *A diagram of a website Description automatically generated*

## 2.2. Prototypes

*[Make sure the prototypes cover every page/dialog/message in the proposed solution)*

## 2.3. ORD (Object Relational Diagram(s)

*[Create an ORD based on the proposed business rules]*

## 2.4. NoSQL Data Structure

*[Covert the above NoSQL Document Diagram into a NoSQL Data Structure (JSON data)]*

# SECTION 3: FUNCTIONAL DESIGN

## 3.1. Overview of the Design

[This section will cover what you are envisioning the system will do, specifically any minimum / maximum value of a field, navigation, error handling, and logging. If there are exceptions, explain how they are handled and under what circumstances they will be generated/thrown]

## 3.2. Functional Design

[This section is a list of the design definitions for the requirements in the BRD]

|  |  |
| --- | --- |
| **Requirement #** | **Design Definition** |
| R – 5 | Sign In Page  Node.js API:   * Employees: * Function: findEmployeeById * Route: /api/employees/:empId   + Example: localhost:3000/api/employees/1007 * Swagger: localhost:3000/api-docs   SoapUI Unit Tests:   * findEmployeeById   Angular:   * signin.component.html * signin.component.css * signin.component.ts * security.service.ts * Route: localhost:4200/security/signin |

## 3.3. Feedback/Comments

[This section is for any addition comments/feedback that will help business and other team members better understand the solution you built]

# SECTION 4: QA TESTING

## 4.1. QA Test Plan

*[Weekly Test Cases]*

## 4.2. Unit Tests

*[Images of SoapUI Unit Tests]*

# SECTION 4: REFERENCES

*[APA Reference List]*