# Task Management Application design document

## Design Specification

**Version 1.0**  
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# Overview

This document will summarize the high-level design for the solution to task management application requirements shared by Tavisca.

# Libraries Used

|  |  |
| --- | --- |
| **Name** | **Version** |
| **@angular/material** | 8.2.3 |
| **@angular/pwa** | 0.1000.4 |
| **@angular/service-worker** | 8.2.14 |

# Flow Diagram

## Overview

A close up of a logo

Description automatically generated

## Change theme

A screenshot of a cell phone

Description automatically generated

## Add task list

A screenshot of a cell phone

Description automatically generated

## Edit task list

A screenshot of a cell phone

Description automatically generated

## Delete task list

A screenshot of a cell phone

Description automatically generated

## Add task

A screenshot of a cell phone

Description automatically generated

## Edit task

A screenshot of a cell phone

Description automatically generated

## Delete task

A screenshot of a cell phone

Description automatically generated

## Save to storage

A screenshot of a cell phone

Description automatically generated

## Reorder the task list

A screenshot of a cell phone

Description automatically generated

## Reorder the tasks in the lists

A screenshot of a cell phone

Description automatically generated

# Services and Data Factory

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Service Name | Method Name | Input Parameters | Output Parameters | Description |
| DataService | getTaskList | - | Array<TaskListItem> | Fetches the task list from storage and returns as an array of items |
| DataService | setTaskList | taskList: Array<TaskListItem> | - | Saves the task list into the storage |
| AppService | initializeTaskList | - | - | Initializes the task list and stores in the property for communication between components |
| AppService | saveLists | - | - | Saves the task list current state to storage |

# Caching

For storage purpose currently using the session storage of window. The interface for this is in DataService which can be modified accordingly

# Components

## Component Design and Interface

Communication between the components is done via the Input and Output interfaces. Following table lists the design and respective interfaces for the components used-

|  |  |  |
| --- | --- | --- |
| No. | Component | Description |
| 1 | **AppComponent** **Selector**: app-root **Input:** NA **Output**: NA | The bootstrap component of the application |
| 2 | **TaskListItemComponent** **Selector**: app-task-list-item **Input:** taskListItem: TaskListItem, taskList: Array<TaskListItem>, literals  **Output**: NA | The individual task list item component. It handles the edit and delete of the task list item as well as the manipulation of the tasks in the task list item |
| 3 | **ConfirmationDialogComponent** **Selector**: app-confirmation-dialog **Input:** NA **Output**: NA | The dialog component that can be used for confirmation purpose. Currently used for delete confirmation in the application |
| 4 | **EditItemDialogComponent** **Selector**: app-edit-item-dialog **Input:** NA **Output**: NA | The dialog component used for editing of the task list as well task titles |

# Utilities

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Utility Name | Method Name | Input Parameters | Output Parameters | Description |
| AppUtil | validateTaskList | title, context | Validation status | Validates the task list item in the specified context and returns the validation status |
|  | validateTask | title, context | Validation status | Validates the task in the specified context and returns the validation status |
|  | validateDuplicateTaskList | title, context | Validation status | Validates the task list item in the specified context for duplicity |
|  | validateTitleMaxLength | title | Validation status | Validates the specified title for the character limit |
|  | reorderArrayItem | arr, index, insertAt | - | Inserts the item at the index position in the array to the insertAt position and reorders the list accordingly |
|  | validateDuplicateTask | title, context | Validation status | Validates the task in the specified context for duplicity |

# Business Rules

