**CSC 648/848**

**Section 04 Team 01**

**Milestone 1 Document**

**1.Executive summary:**

One major but common problem induced by the fast moving lifestyle is stress and as a result, forgetfulness. We have too many things to be done in our professional, personal and social lives parallelly everyday that it is hard to rely solely on ones memory to keep a track of things. Our application, “**KeepUp –** Keep up with your daily tasks, finances and stress”, provides a solution to this by keeping track of all your to do items for the day and also allows you to add and track your income and expenses instead of using two separate applications.

There is also a 3rd feature on our app, which adds a unique touch that makes it different from other similar applications – the “relaxer”. People often tend to neglect the importance of relaxing for both mental peace and health in midst of everything. Our app not only helps to keep up with daily activities but also helps to keep up with stress. The relaxer feature guides the users on how various muscle relaxation exercises and meditation could be done anytime, anywhere to maintain calmness and be more efficient during stressful times.

Overall, the KeepUp application is a one stop solution to three different but commonly encountered problems. This is useful to almost all people irrespective of age, profession and gender. The added advantage is that it is easy to use by those who aren’t tech savvy as everything could be accessed with just one click/tap.

Our team has surveyed on some common problems imposed by modern world and collective came up with the idea to develop this application. We are individually focussing on developing required technical as well as non-technical skills to work on this while helping one another to broaden our knowledge. We also have strong front end and back end leads who have adequate knowledge on what needs to be done. This gave us the confidence to progress efficiently through the project life cycle.

**2. Personas and User stories**

1.(Parent Persona, User ID: - 01) Name: Sarah



Personality

* She/Her, 36 years old, Single parent of 3 kids and a full-time healthcare worker.
* Has trouble balancing both her work and personal life. Her hobbies are yoga and going jogging early in the morning before dropping off her kids to school and heading to work.

Pain points

* Does not want to rely on a babysitter all the time to make a list of what school supplies her kids need.
* Wants to avoid using multiple apps as she is not very tech-savvy and gets impatient when trying to find accessible tools online so one app with all her needs is ideal

User Story

* I need to keep track of many things such as my work meetings and patient duties, shopping lists for my kids’ school supplies and also managing money. A noter to make a note of all activities, any tool to keep a track of finances and a way for me to relieve my stress at the end of the day would help.

2.(Student Persona, User ID: - 02) Ellie 15 y/o



Personality

* She is in her first year in high school. Currently, she is taking many classes for her first year to ensure that she can either graduate early or just graduate without any problems. Also does an on campus part time job.
* Playing the piano and drawing are some of her interests and she is decently skilled in these interests. In the future, she eventually wants to take courses relating to these interests when she has the chance

Pain points

* Because she is a student, there are a lot of things to keep track of such as notes for different classes, assignment due dates, and study sessions. Since she is taking seven classes per semester on top of extracurricular activities, she has trouble organizing the things she needs to do for each class alongside other activities.
* Amidst all these, it is hard for her to keep a track of the money she is earning from her part times and how she is spending them.

User Story

* I need a place where I can keep track of all my classes, assignments due dates and study sessions. I just need a place where I can keep track of all this stuff and organize it properly.
* Any tool that helps me keep a track of my spendings so that I know when I am spending too much.

3.(Party planner, User ID: -03) Ronak 24 years



Personality

* Ronak works a 9 to 5 job on weekdays and socialize with friends on weekends.
* Ronak regularly hosts house parties and needs a to-do list to help organize the events.
* Ronak coordinates with invited people to match their schedules and any special requests they may need and also prepares food for his guests.
* The days before the party, Ronak grocery shops for ingredients to cook with as well as snacks and schedules party activities and appropriate equipment depending on the party.

Pain Points

* A simple notepad alone is not sufficiently convenient to organize all the details of the tasks Ronak needs to do to prepare for their events.
* Since Ronak organizes various kinds of parties for different friend groups, they want to be able to differentiate the tasks for different parties.
* A calendar/scheduler-like feature would help with scheduling the event within the schedules of multiple different people.
* As hectic as party planning can be, a relaxation feature can help to manage stress.

User Story

* I must organize a lot of parties, so a simple notepad is not enough for me.
* I need a place where I can relax after the stressful parties that I organize.
* It would be great if it had an additional income vs expenditure tracking and comparison feature so it would help me plan my finances and make my job less stressful.

4.(Retired, User ID: -04) Manda Nguyen, 74



Personality

* Amanda is a retiree who can live comfortably off her pension. Even if she finds it cumbersome, she is trying to get more adept at the internet in lieu of keeping frequent contact with her grandchildren.
* She has always been a bit forgetful and tends to write notes down. Over the years, Amanda developed a certain methodology for taking notes; in turn, she prefers physical notes as digital note takers appear too rigid to her.
* Sticky notes denoting tips on how to navigate the web are littered across her desk. Despite the system she keeps, there are times when a certain note is lost in the pile. Recently, she has had trouble breathing as her asthma has started to flare up in her later years. Her recent routine involves meditating after taking her inhaler and other medicines.

Pain Points

* Finds using multiple applications confusing
* The typical notepad app is too ‘rigid’ for her liking
* Prolonged exposure to blue light starts hurting her eyes

User Story

* I need a place where I can keep all my notes, where I can write all my important stuff.
* I need it to be user friendly as I am not familiar with technology.

**3.Data Definitions**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Primary Data Name** | **Data Name** | **Data Definition** | **Use** | **Comments** |
| Registered User | Username | Can be email id/ profile name | needed to signup / login | has to be unique for each user |
|  | Password | A combination of letters, numbers and special characters | needed to signup / login | must be strong |
| Notepad | Notes title | The name given to the respective notes | To give your notes a title for easy readability | can be checked, updated, deleted |
|  | Notes | The content of the notes added | To store the notes taken | can be checked, updated, deleted |
| Expense Tracker | Income | The income amount and other related details | To store the income details added | can be checked, deleted |
|  | Expenses | The expense amount and other related details | To store the expense details added | can be checked, deleted |

**4.List of functional requirements**

The following functions are envisioned for our web application, sorted by feature type and numbered by priority. [relevant user personas in brackets]

1. General features:

A1. Account Creation: Users can register an account. [all users]

A2. Account Access: Users can log into and log out of their account. [all users]

A3. Account Management: Users can manage account settings. [all users]

B. Notepad features:

B1. Note Creation: Users can create and add notes. [all users]

B2. Note Editing: Users can edit existing notes. [all users]

B3. Note Deletion: Users can delete notes. [all users]

C. Expense tracker features:

C1. Add new income: Users can add income amount and other related details. [all users]

C2. Delete existing income: Users can delete existing income. [all users]

C3. Add new expense: Users can add expense amount and other related details. [all users]

C4. Delete existing expense: Users can delete existing expense. [all users]

D. Relaxation features:

D1. Breather: Users are presented with a graphical relaxation aid. [all users]

D2. Audio elements: Users have meditation instructions and various other relaxing audio clips.

D3. Relaxation exercises: User are provided with various muscle relaxation exercise graphics.

**5.List of non-functional requirements**

1) (Accessibility) The project should aim to be mobile compatible and at the very least, compatible with common browsers such as Chrome, Edge, and Firefox.

2) (Storage) Every user should be limited in their capacity to create notes, as a given user should be able to create at most 1000 notes at most, or something to that effect.

3) (Storage) Similar to the above, every user should have a ‘data capacity’ that cannot be exceeded in the creation of notes.

4) (Usability) The UI should be clean and easy to navigate and scale with screen size.

5) (Usability) As the notetaking and to-do list features are closely related, they should, to some capacity, be integrated.

6) (Scalability) The application should be able to handle multiple user requests at once. Due to the small scale, we may hypothetically expect 1000 simultaneous users.

7) (Security) As a given, every user should only have access to their own TODO and notes.

8) (Developmental) Data shall be stored in a Google Cloud database

9) (Reliability) Due to this project being presumably lightweight, all pages should load within a second or two upon request.

10) (Reliability) Presumably, the site should be always accessible.

11) (Maintainability) Code should be uniform and easily maintainable in case of failure.

12) (Developmental) Code in the master branch should be always functional, while developing features are regulated to side branches.

13) (Usability) As a relaxation app is also part of our project, the UI theme should be mellow and light.

**6.Competitive Analysis**

|  |  |
| --- | --- |
| Competitors | Features |
| * **Notepad** | * Create any type of list (todo list, shopping list, etc.) * Freely write anything * Save/edit notes |
| * **Expense Tracker** | * Helps users to track their finances |
| * **Relaxation App** | * Contain specific ways to achieve relaxation (breathing, stories, podcasts, meditation, etc.) * Many of them are paid/need to pay to get all features |
| * **Keep Up App (our current project)** | * All above mentioned features in 1 app * Built in notepad for notetaking * Sign up/Log in system * Visual, Audio and Exercises for relaxation (guided graphically or audibly) * Will either be at very low cost compared to other relaxation apps or potentially be free to users |

Compared to what is available out there, LineUp’s main advantage over the other apps is that many of its features are integrated into one place. There are many similar features that are planned to be implemented such as a built-in notepad, expense tracker and relaxation app which would then be combined to form a hub of distinct yet coherent apps to promote the user’s productivity. Having a log in system is also an advantage for users because their notes and events can be saved across multiple devices and can be accessed by either desktop or mobile. The integrated relaxation app itself is also an advantage since it will contain various exercises to fit their relaxation needs and improve their mental condition. Looking at other relaxation apps, they all seem to focus on one area such as an entire app dedicated for breathing techniques which itself could be an advantage, but for the way KeepUp plans to go, it would be better to include as much different techniques as possible to ensure the user finds the right exercise for them.

**7.High-level system requirements**

* + **Sever Host:** Google Compute Engine (E2 instance)
  + **Operating System**: Ubuntu (1.14.0)
  + **Database:** MongoDB (Atlas)
  + **Web Server**: Nginx
  + **Frontend Framework**: HTML, JavaScript, React JS
  + **Backend Framework**: Express JS

**8.Team**

|  |  |
| --- | --- |
| **Name** | **Role** |
| Hruthika | Team Lead |
| Hansley | Backend Lead |
| Carlos | Frontend Lead, GIT master |
| Iza | Scrum Master |
| Malavya | Member |
| Christian | Member |
| Tay | Member |

**Detailed study plan:**

Members expertise in various technologies on a scale of 1 to 5, with 5 being very familiar and 1 being never used it is as follows:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **HTML** | **JavaScript** | **React JS** | **Express JS** | **Mongo DB** | **GCP** | **Nginx** | **Git** |
| **Hruthika** | 4 | 3 | 3 | 2 | 3 | 1 | 1 | 3 |
| **Hansley** | 4 | 4 | 2 | 3 | 1 | 1 | 1 | 4 |
| **Carlos** | 5 | 4 | 3 | 3 | 2 | 1 | 1 | 4 |
| **Malavya** | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 2 |
| **Christian** | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 3 |
| **Tay** | 4 | 3 | 2 | 1 | 2 | 1 | 1 | 3 |
| **Iza** | 3 | 2 | 3 | 2 | 1 | 1 | 1 | 3 |

We split up the team as shown below, based on individuals expertise and interests:

* **HTML, JS and React**: Hruthika ; Hansley ; Iza ; Carlos ; Tay
* **Express JS:** Hansley ; Carlos ; Hruthika ; Malavya ; Iza
* **MongoDB:** Hruthika ; Christian ; Tay
* **Nginx and Google Compute Engine**: Malavya ; Christian

Each team member will be mainly focussing on learning the technologies assigned to them and apply that knowledge to build our app.

Interesting and knowledgeable topics can be shared in the form of documentation / links in the teams discord group for everyone to go through and a discussion will be run on them in the following team meeting.

We will then organize seminars in which each team member shares what they learnt by practically showing the functionality (of our app) they developed.

A rough seminar schedule is given below. The list shall be updated as more sessions are planned while we progress.

|  |  |  |  |
| --- | --- | --- | --- |
| **Topic** | **By** | **Date** | **Format** |
| Software installation steps | Carlos | Feb-20 | Youtube |
| How to build an app using MERN stack | Hruthika | Feb-14 | Youtube |
| How to setup a VM in GCP and Host an app using Nginx | Christian | Feb-27 | Seminar |
| How to set up Mongo DB cluster and link app data | Hruthika | Mar-01 | Seminar |
| Styling using CSS, Bootstrap basics | Carlos, Iza | Mar-29 | Seminar |
| Basics of Express js with work done on LineUp app demo | Hansley | Apr-06 | Seminar |
| Challenges and Bug fix for app deployment | Christian | Apr-17 | Seminar |
| Seminars on main functionalities of app | respective member | Apr 10 – Apr 19 | Seminar |

**9.Checklist**

|  |  |
| --- | --- |
| **Tasks** | **Status** |
| Team found a time slot to meet outside of the class | DONE |
| Scrum Master shares meeting minutes with everyone after each meeting | DONE |
| Github master chosen | DONE |
| Everyone sets up their local development environment from the team’s git repo | DONE |
| Team decided and agreed together on using the listed SW tools and deployment server | DONE |
| Team ready and able to use the chosen back/front-end frameworks | DONE |
| Team lead ensured that all team members read the final M1 and agree/understand it before submission | DONE |