luna

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Summary

Menstruation is a normal and healthy part of life. However, a lack of information about menstruation has led to taboos and myths. This prevents young people from learning about menstruation and healthy habits. Our application, luna, hopes to increase access to helpful information, provide young people with a means of tracking period-related events, and destigmatize menstrual care by providing factual information.

Within the application users can find helpful information about experiencing a first period, the changes that come along with puberty, birth control options, and more. Further, luna will have the option to send email/text notifications to a user with a quick poll asking if the user has gotten their period in the last 24 hours or experienced any symptoms. These notifications will be customizable so that users can choose how often and when specifically they want to receive said notifications. This data will be stored and neatly displayed on the user's profile. There is an opt-in birth control/hormonal medication reminder and display as well. Users will be able to choose when they want to receive reminders and can opt-out a later date. While luna contains

information targeted to younger women, older women are encouraged to use the app as well because of its simple interface and high level of interactivity.

Overall, luna is a desktop and mobile web application to help users keep organized and educated on their menstruation cycles and bodies.

Problem Space

Society has created many taboos surrounding periods. This leads to uninformed young people who do not know the facts about their cycle and bodies, which then leads to unhealthy habits and practices. Therefore there is a need for increased accessibility of helpful information about menstruation.

People who menstruate need a way to track their cycles. Existing applications fulfill this task. However, many users forget to record daily symptoms and period check-ins. Additionally, users fail to check the application to see their expected start date. This leaves users ill-prepared when their period begins. Therefore, there is a need for period tracker applications to send more visible and convenient notifications to users.

Another issue with the majority of apps is that none of them are targeted towards the younger, usually uneducated, girls. Some girls have never been taught what their body is doing and how to take care of their symptoms. Since it is such a stigmatized topic, these girls are left in the dark to try and learn for themselves about their own body and what they should do. Likewise, there is a lack of access to this type of information and education in developing countries. Therefore, there is a need for easily accessible and accurate menstruation information.

Existing period tracker applications are very showy and non-subtle, usually with the words "Period Tracker" in the title. Many users want to keep this private, therefore, there is a

need for a period tracker that is more subtle. This ranges younger users who want to hide this information from others, to older users who do not want to be bombarded with loud colors. Further, some users might not identify as female. Existing applications are decorated with pinks, purples, flowers, and butterflies. There is a need for a period tracker application that gives users the option of a less "girly" interface.

Solution

There are a handful of features that all period trackers have that luna will also have. This includes an algorithm that uses past cycle data to predict a user's future cycles. Like other apps, luna will utilize the average length of a user's past three cycles to help better predict the start date of their next period. The application will also display a calendar of the user's past data and predicted data.

To increase access to helpful menstruation information and destigmatize menstrual care, our application, luna, will have an "Info" area. This area will house frequently asked questions (FAQs) and verified articles covering a range of topics including what to expect for a first period, birth control options, feminine hygiene products, and more. Additionally, luna will have a "Looking for Products?" area. This area will allow users to browse and find links to pads, tampons, etc. for purchase, as well as places that offer these products for free. This also provides the benefit of users not having to walk through feminine product aisles at a store, an action that often feels embarrassing.

To combat the issue of users forgetting to log their cycles in their apps, luna will offer a series of notifications that users can customize to remind them to log symptoms and their cycles.

Users will be able to add extra reminders for birth controls and medications as well, to keep all of this information localized within one app.

luna will be created with a younger audience at the forefront of the developers' minds. Included in the "Info" area will be information tailored towards younger girls. The application will be simple and intuitive, as well as encouraging and confidence boosting for younger users. For late teens and adults, luna's simplistic design and resources will prove resourceful as opposed to other competing apps.

Lastly, luna will be subtle. The name of the application is already subtle by not containing words like "period", "menstrual", or "flow". luna will give a dark-mode-like option that will switch from a light interface to a more gender neutral interface for users who prefer a more subtle theme. Overall, luna will have a simple, subtle interface and allow users to feel comfortable with menstruation, a very normal and natural cycle.

Competitors

From Fitbit to Apple to other health-centered apps, period trackers are common and widely-available. At the most basic level, all of these applications are similar in that they allow users to log their start and end dates, record symptoms and notes for reference, and predict future cycles. Due to the fact that period trackers are so readily available, many women have them downloaded onto their smartphones with the intent to log details of their period each month and to better understand what is happening with their bodies. However, despite the fact that so many have the application downloaded, not many actually remember to use it to log their cycles. According to a survey conducted by the National Center for Biotechnology Information, only 45% of participants track their menstrual cycle. When their period arrives, it appears suddenly,

often adding undue stress which could have been prevented had the user been routinely checking-in with the application.

In times like these, women are habitually occupied shuffling their work and personal lives, they may forget or not get a chance to check the app. This is where luna differentiates itself from the rest. In addition to optional birth control and period symptom reminders, luna will send text or email alerts directly to the user if it determines a period may be approaching. This will help the user be prepared for when their cycle begins. Furthermore, luna allows its user to note their specific symptoms, which is similar to other applications. However what differentiates this app is that it takes a step deeper into the data. If the user reports any symptoms that are severe or that last for a significant period of time, it will be recommended for them to tell someone like a parent/guardian or pay a visit to the doctor to discuss. For younger users of the app, luna will provide tips and strategies on how to inform a parent or guardian that they may require medical assistance. Typically, when a woman experiences any pain during a period, they may seek relief from a heating pad or ibuprofen. However, when symptoms are extremely painful and cannot be eased, it is important to visit a doctor to determine what the exact cause of the pain or discomfort is. Lastly, a young woman experiencing her period for the first time may feel scared, overwhelmed, and not know what to expect. While all of these other applications on the market are catered towards older women and include information this younger consumer group may not necessarily need to know, luna is crafted for these younger women. It is aimed to help them feel calmer and at ease with experiencing their period. It will provide necessary yet plain and simple information about a period, including good hygiene tips as well as suggest stores they can visit in their local area to purchase necessary supplies, or places where they can find these products for free.

Stakeholders

There are many potential groups that may generate value from luna.

Young girls

      luna will provide informational resources as well as helpful graphics that will help young girls understand the changes they are going to go through, or are about to go through. This can include period symptoms, the changes they will face with puberty, different types of period products, the logistics of a period, and birth control options. All these informational resources and graphics will aim to destigmatize periods and provide clarity. In turn, luna may help young girls feel empowered and ready to handle their period.

Women

      Many women use period trackers to track their periods, period symptoms, and birth control. With luna, women will be able to do so on a more intuitive interface.

Users experiencing menopause

      Many period tracker users use such apps to track their period regularity. Doing so as their periods become more irregular is useful for this group. luna will have an option where users can choose if they are going through menopause, so that their predicted period cycle can be adjusted accordingly.

Gender-noncomforming users & Trans men who have periods

      luna will have an option to switch to a more gender neutral app design. Most period apps

on the market nowadays are inundated with pink color schemes and flowers. As such, this excludes many users who may be uncomfortable with the app design. luna will be inclusive, as the team understands that some people with periods do not identify as female. In addition to the gender neutral design option, users will be prompted for their pronouns when first setting up their account, so that any email or text notifications will be correct.

Parents

luna will provide parents with tips on how to talk to their children about their first period, or periods in general. This will include both how to first approach the topic, and how to best explain how to use period products.

Medical Practitioners

Medical practitioners, specifically pediatricians and gynecologists, can download the app to show their patients its many uses. Having a professional do so will help their patients feel more informed and better prepared to use the app.

Anyone who wants to learn about menstruation

With luna's expected multitude of resources, this application will be a helpful resource for many. Whether it be boys who are interested in learning about menstruation, or young girls who want to be better prepared, luna will be a one-stop shop for all.

Technologies

luna includes the ability to send email/text notifications to users as well as the ability to predict when the user may experience their next period. We are still looking into the best API and algorithm to use for sending email and text notifications and for predicting period start dates.

Requirements

Functional Requirements:

The functional requirements dictate the end behavior and overall functionality of the project.

- Display users' data (track cycle and predict future cycles) in an aesthetically pleasing calendar

- Display helpful menstruation and general information/articles

- Provide links to purchase feminine hygiene products

- Provide options for mode (color) and notifications (email/text, birth-control/medication)

- Capture and display users' recent symptoms

- Authenticate existing users and provide registration for new users

Non-Functional Requirements:

The non-functional requirements are required to meet all listed functional requirements.

- Collect data from users with email/text notifications using API (TBD)

- Require strong passwords of at least 8 characters in length containing a minimum of one non-alphabet character

- Store users' authentication information and new registrations in MongoDB

- Store user preferences, data, and information in MongoDB

- Store links to feminine hygiene products in MongoDB

Project Schedule

- The Project Proposal should be finished by February 9th. This includes:

  - Figuring out the functions of the application.

  - Plan a brief project summary for a class presentation.

- A basic layout of the website will need to be finished by mid-February (Tentative: February 14th).

  - A consistent color scheme should be decided upon.

  - A suitable font group will need to be selected.

  - A breakdown of how information is presented through the application should be determined.

- The front-end aspect should be completed by March 11th.

- The presentation slides should be created and finished for the Midterm Presentation by March 11th.

  - This includes dividing the speaking roles between group members.

- Midterm Presentation March 12th.

  - After, begin working on the backend portion of the website and the mobile version of the application.

- Everything should be finished before April 18th (5 days before the deadline).

  - The desktop and mobile aspects of the program should be completed.

  - The troubleshooting and testing phase should begin.

- Finish testing and begin working on the presentation slides for the Final Presentation before April 22nd (a day before the deadline).

  - Speaking roles will also need to be determined.

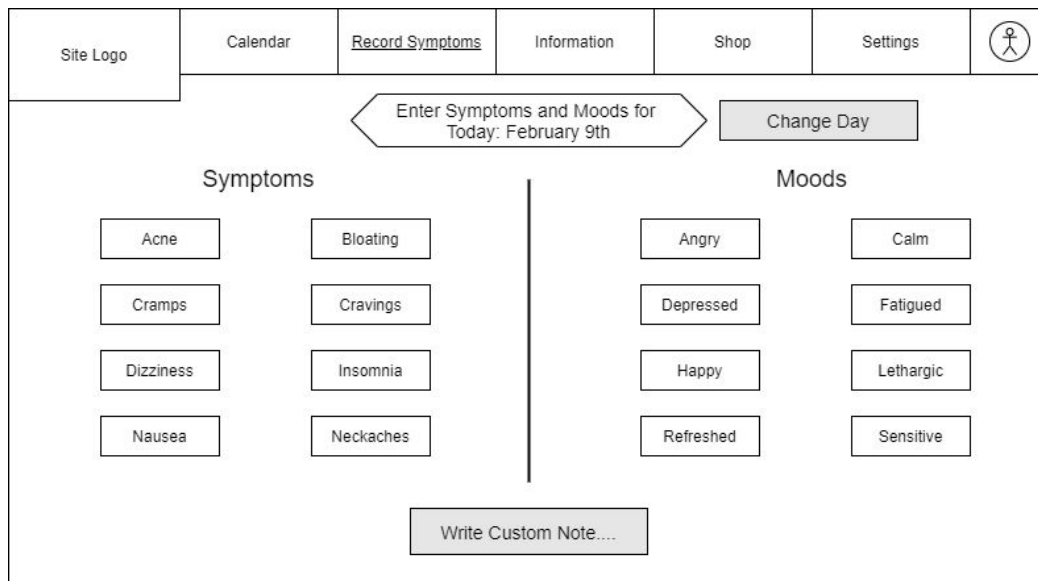● Final Presentations between April 23rd and April 30th.

Site Map
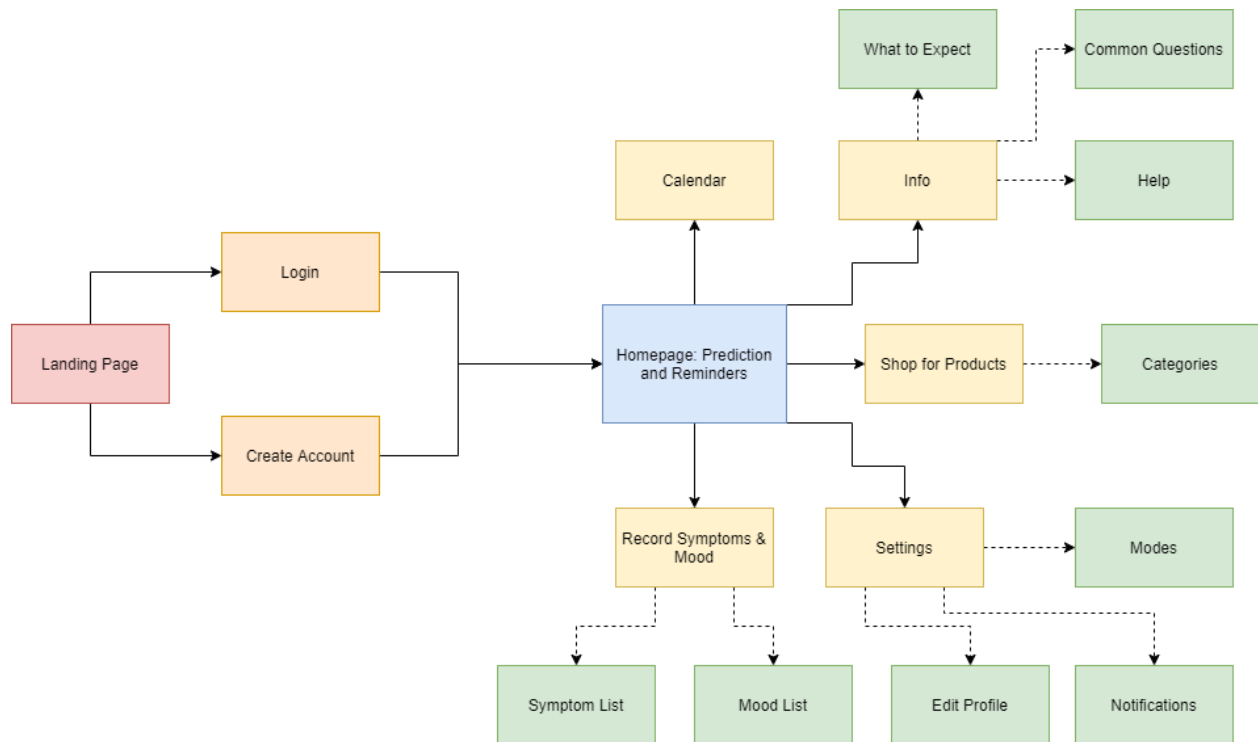
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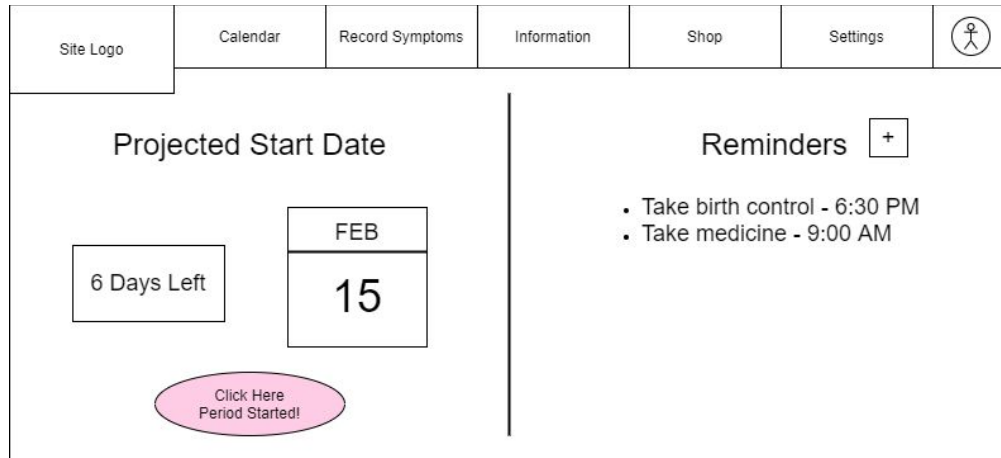
Wireframe 1: A depiction of the homepage of the application. Features a projected start date for the user's next period and a list of reminders the user set.

Wireframe 2: A depiction of the symptom and mood tracker page. Users can record their symptoms and moods for the current day or any other day from the given lists, or type in any other notes that are not part of the lists.