Software Requirements Specification

Ora

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Introduction

1.1 Purpose

Ora is a personal wellness data tracker. It tracks a woman's menstrual cycle, ovulation cycle, and fertility level. Ora's main benefit is to give the user full control of their information; we do not track or store their data. Everything is contained locally.

1.2 Document Conventions

This document uses the following conventions:

MC	Menstrual Cycle
OC	Ovulation Cycle
WF	Window of Fertility
FAM	Fertility Awareness Methods
Single track	Tracking one cycle
Multiple track	Tracking multiple cycles

1.3 Intended Audience and Reading Suggestions

The SRS will contain technical and nontechnical specifications for team members and testers to utilize. All team members will find the Introduction relevant. Refer to the table of contents for further reading.

As a reading suggestion, please refer below:

Developers may refer to chapter 2 to gain product perspective, chapter 3 to understand features, and chapter 4 for interface specifications. Chapter 5 is highly recommended for nonfunctional requirements.

Marketing team may refer to chapters 2 through 4 for relevant marketing material.

UI/UX developers may refer to chapter 4.1 for User Interface specifications.

Participants: The main demographic of people who will be using this application are women typically from ages 12-49. The application is relevant once a person starts getting their period. Alpha and beta testers will be women from this age range, of varying ethnicities and salary brackets. A list of beta testers will be provided later when the application is later in development.

1.4   Project Scope

The purpose of Ora is to facilitate clients in tracking their monthly cycles. They will be able to track their MC, OC, and WF. For more information relating to the efficacy of above tracking methods, refer to the project charter. Our aim is to provide an easy to use and enjoyable user interface the client can use to manage and better understand their monthly cycles.

1.5   References

Further reading on ISO 27001 Compliance

Will update once user interface style guide is complete

Overall Description

2.1   Product Perspective

This application is a new, self-contained product. All data is stored locally on the user's device.

- **Period Tracking**
  Includes the start and end date of clients' menstrual cycles.

- **Ovulation Tracking**
  Includes the start and end date for the ovulation cycle.

- **Fertility Window**
  Includes fertility window start date and end date. This information indicates when a person is most fertile and ready to conceive.

2.2   Product Features

Users of this application should be able to input MC and OC information, and in turn receive an accurate prediction of MC, OC, and WF. Notifications may be enabled to remind the client to capture data at specified intervals, or to remind the client when their cycles may start.

The following functions may be available:

Period Tracking
  - Input start of period date
  - Input end of period date

Ovulation Tracking
  - Prediction of ovulation cycle

Window of Fertility
  - Display calculated window of fertility

Calendar
  - Display month, week, day
  - Navigate month view by pressing left or right navigation buttons

Home Page
  - Display overall information on tracked data
  - Display when person is most fertile
  - Display when period begins or ends
  - Display when ovulation is likely to happen

2.3   User Classes and Characteristics

Users will be differentiated based on subset of functions used, listed below:

Menstrual Cycle
  - These users may use this function to track and or predict their menstrual cycle.
  - Users will be inputting the start and end date of their menstrual cycles.
  - Ease of use is rated easy. Data input is only necessary when the menstrual cycle has begun or has ended.

Ovulation Cycle
- ○ These users may be planning for pregnancy, or using this tracker as a contraceptive.
- ○ Low user engagement is required. The application automatically calculator the ovulation cycle once menstrual tracking has begun.
- ○ Ease of use is rated simple.
- ○

Window of Fertility
- ○ These users may use this function in order to plan for or avoid pregnancy.
- ○ Low user engagement is required. The application automatically calculates the window of fertility once menstrual tracking has begun.
- ○ Ease of use is rated very simple.

2.4 Operating Environment

Operating environment for the Ora application is listed below.

- Local device storage
- Operating system IOS

2.5 Design and Implementation Constraints

- Iterations are limited to development time of 13 weeks
- User interface may be ineffective in relaying complex information
- Development team is restricted to 1 developer

2.6 User Documentation

- Online help via in-application chat (non-essential feature), release after initial version.
- Tutorial upon first start of application (non-essential feature), release after initial version.
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2.7 Assumptions and Dependencies

Dependencies

- The goal is to eventually get this application in ISO 27001 compliance, the internationally recognized standard for information security management.
- Insight from beta testers for user interface and potential application bugs

- Committee approval of application features

Assumptions
- Clients may not consistently use application
- Application will have essential features upon launch

System Features

For an example of how features interact with each other, refer to Diagram 2 in Appendix B.

3.1. Menstrual Tracking

3.1.1   Description and Priority
<high priority> Enter start and end date of period, choosing dates from calendar

3.1.2   Stimulus / Response Sequences

Stimulus: Calendar icon
Response: Press on calendar icon, calendar appears

Stimulus: Button for logging period
Response: Press on button to start logging period

Stimulus: Highlighted dates appear on calendar to show duration of period
Response: User can end log

Stimulus: Menstrual flow appears in bottom bar
Response: Choose level of menstrual flow

3.1.3   Functional Requirements
A calendar page to display previous and current menstrual logs
A feature to allow users to add/edit/delete menstrual cycles
A feature to allow users to navigate between logging state and viewing state

REQ-1.1: User needs to select start and or end date to complete action.
REQ-1.2: If user entered log state by accident, they can exit the logging screen by pressing back

3.3   Ovulation Display

3.3.1 Description and Priority

<high priority> User inputs data in the form of basal body temperature or mucous level

3.3.2 Stimulus/Response Sequences

Stimulus: Button for logging period

Response: Press button to initiate tracking

Stimulus: Homepage circle displays when to be ovulating

Response: User is now informed of prediction

3.3.3 Functional Requirements
- A page that displays window of fertility
- Features that allow the user to input tracking data

REQ-3.1: User needs to track menstrual cycle in order to receive ovulation prediction

REQ-3.2: In order to track BBT, a number must be input between 97F/36.1C to

3.4   Fertility Window Display

3.4.1 Description and Priority

<high priority> Displays when the user is fertile

3.4.2 Stimulus/Response Sequences

Stimulus: Calendar that displays fertility window, highlighted dates are in orange

Response: User understands the current date and corresponding level of fertility

3.4.3 Functional Requirements
- A calendar page to view when window of fertility is available
- An information page to display information on fertility and family planning/contraception

REQ-4.1 Display warning that this is an estimation, and is only as accurate as user input is, and also may be inaccurate do to individual's physiology

3.5   Calendar

3.5.1 Description and priority

<high priority> Displays calendar with tracking data

3.5.2 Stimulus/Response sequences
Stimulus: Calendar icon on home page
Response: Press calendar icon
Stimulus: Left and right icon next to month
Response: tap to move to previous month or next month

Stimulus: Date in calendar
Response: Press on date to initiate logging state

3.5.3 Functional requirements
- A page to display dates
- A navigation feature to move forward and back in time

REQ-5.1 Notifying user to press back to homepage and enter calendar again to add new data

External Interface Requirements

4.1 User Interface

For a use case example, refer to diagram 1 in Appendix B.

4.2 Hardware Interfaces

Supported device types as of the first iteration will be iPhones.

4.3 Software Interfaces

The software this application will be running on is iOS 16, backwards compatibility is up to iOS 14.

4.4 Communication Interfaces

Images will be used within the app.

Other Nonfunctional Requirements

5.1 Performance Requirements

No servers will be used, everything is stored locally.

5.2 Safety Requirements

This application will have a disclaimer stating that it is not a medical device and is not guaranteed to prevent pregnancy or guarantee family planning.

The application will not harm clients through the spread of misinformation and incorrect algorithms for the trackers.

5.3 Security Requirements

- This application should not be vulnerable to users forcing the application to manipulate database tables through unintended ways.

- GDPR compliant

5.4 Software Quality Attributes

Usability: the software should be simple enough for any person to use. A consideration is to design for the sight-impaired in mind; using large fonts and high-contrast font

colors. Only necessary text and information are displayed, and inputs are clearly defined and easy to select.

Reliability: The system can function without constant input from the developer, unless there is a bug to be fixed.

Scalability: The application can scale in users, not freeze when an influx of users are active at once.

Reusability: The application can be reused for as long as the client wants to track data.

Other Requirements

Appendix A: Glossary

Menstrual Cycle: Generally a monthly cycle when a woman releases the lining in their ovaries, seen as bleeding

Fertility Awareness Method: A method of contraception where a woman monitors and records different fertility signals throughout their menstrual cycle to work out when they're most likely to become pregnant.

Ovulation Cycle: When the egg is released from the ovaries, 12 to 14 days before the menstrual cycle starts. When a woman is most fertile

Window of Fertility: The window of time when a woman is most fertile. For most people it is 5 days up to ovulation, the day of ovulation, and the day after ovulation.
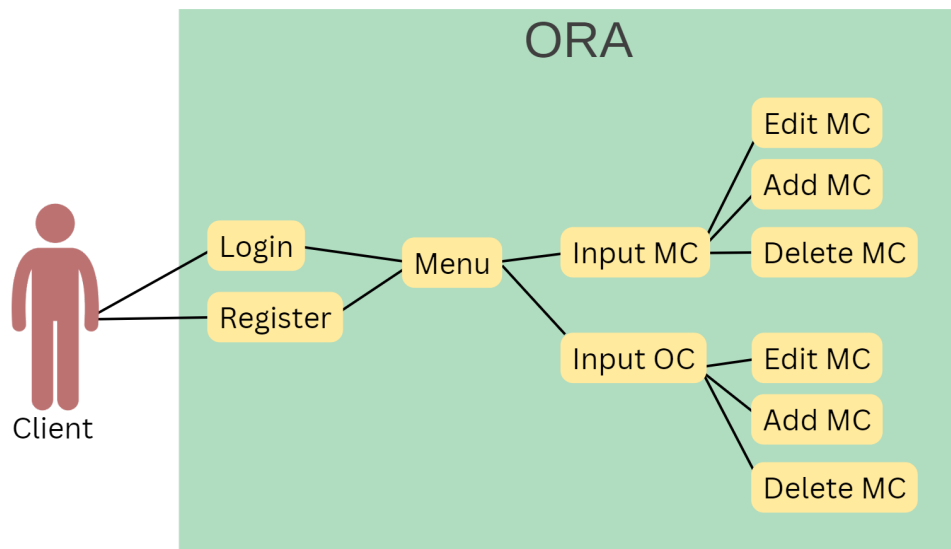
Appendix B: Analysis Models
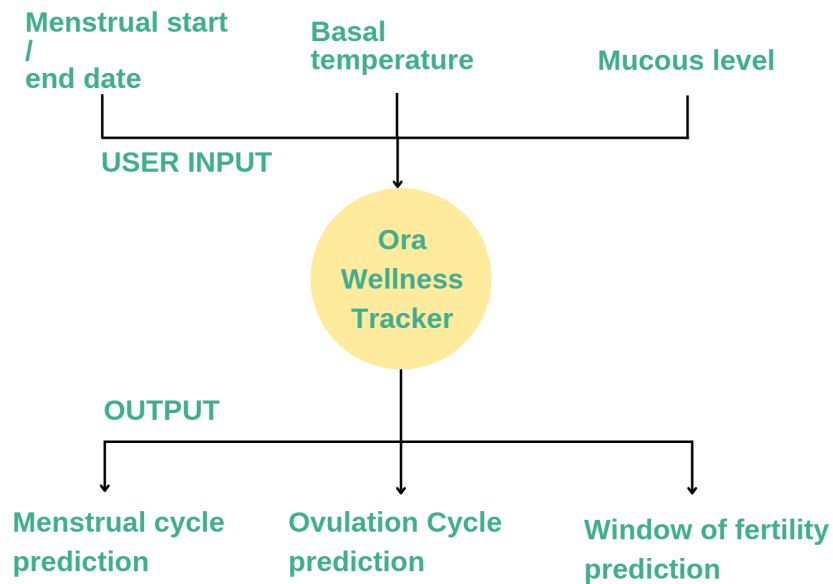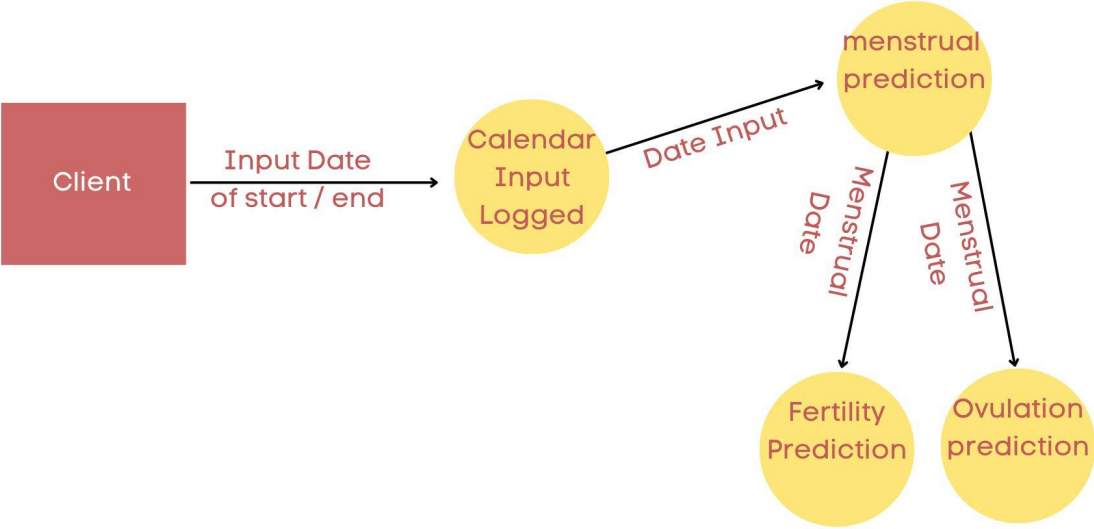

Diagram 1. Use case

Diagram 2

Diagram 3 DFD

GANTT Chart

Appendix C: Issues List

1. Discussion with experts on complexity of algorithms, if too complex one or two trackers may be taken off the SRS.
2. Research on secure data storage, on how to take in data but not identify person using application
3. Adding mood and period symptoms to input selection