Assignment 2

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CSE 5382

Activities	Setup Profile	Track Daily Activities	Monitor Health Metrics	Log Nutrition	Review Progress
	Create User Account	Walking and running	Set Health Alerts	Scan food barcodes	View Historical Progress Against Goals
High-Level Tasks	Input Personal Details	View daily goals and progress	See health alerts	Input meals eaten	Receive Suggestions for Health Progression
	Set fitness goals	Sync wearable device data	View historical health data	Track daily calorie intake	Export Data for medical review
	As a user, I want to create an account so I can save my profile and track my progress	As a user, I want to log my running sessions so I can track my activity level over time.	As an elderly user, I want to monitor my heart rate to detect any irregularities and seek medical attention if needed.	As a user, I want to manually input meals so that I can track everything I eat even if it doesn't have a barcode	As an app user, I want data visualization and summarized reporting to understand the state and progress of my health metrics easily.
User Stories	As a user, I want to put in my personal health details to get the best personalized experience	As a user, I would like to sync my Fitbit data with my health app.	As a user, I want to record my overall health metrics, so I can monitor my overall health	As a health-conscious user, I want to scan food barcodes so I can quickly log my meals	As a user, I want to receive suggestions or notices about my progress to my goal whether to help me or motivate me.
	As a user, I want to set fitness goals so I can start measuring my progress towards a goal	As a user, I want to monitor my progress and adjust my routine accordingly.	As a user, I want to view my historical health data so I can track changes over time	As a user trying to lose weight ,I want to log my daily meals so I can stay within my calorie goal.	As a user I want to be able to show my data relative to my goal to my doctor easily and let them have data.

Release Plan Document

Release 1: We chose essential stories that would give the user the core functionality of the software .For the first release, the user will be able to create an account, log their running and walking sessions, Monitor heart rate and a few other health metrics, Manually input their meals to track calories and get a summarization of health and reporting. The Most Viable Product must contain the basic functionality of the application that allows them to track activity and nutrition. These features provide the foundation of the health tracking app, and the app would be unusable without them.

Release 2: For the next release, we will build on the MVP by adding features that enhance the user experience and provide more comprehensive tracking.The user will have a lot more useful tools, including personalized health recommendations, syncing data to wearables like Fitbit, recording a lot more health metrics like sleep quality, activity schedule, and much more. We will also add scanning of barcodes to log meals quickly to the app, and receiving suggestions or notices about the user's progress to motivate them. This release focuses on improving the users experience by adding more detailed tracking and personal features. The users will be able to get a deeper insight into their health and nutrition. This release strengthens the core functionalities and keeps users engaged with the app.

Release 3: For the third release, we will introduce advanced features that further improve the usability and value to the users. We will allow the user to monitor and progress the routine based off of AI integrated into the application. The user will also get to track their historical health metrics that give them insight on their health changes over time. The user will have access to log meals to stay within their calorie goal, and analyze nutrition trends and set dietary needs. The tool will provide the ability to export the user data to doctors or personal trainers so they can review their activity and diet. The final release provides users with a complete and highly personalized health-tracking experience.

Release Plan Document Pt 2.

Cohesive User Experience: Each release is designed to be cohesive, ensuring that users have a complete and functional experience at every stage. Starting with basic functionality, then enhancing tracking and personalization, and then finally Advanced features provide a deeper insight and usability. This approach ensures that with each release, the app grows in value and complexity while maintaining a smooth user experience.
Rationale for Prioritization: The prioritization is based on delivering maximum value to users as early as possible. The Most Viable Product focuses on core functionalities that are essential for the app to be useable. Later releases add features that enhance the user experience and increase the personalization. This incrementing approach aligns with the Agile principles, ensuring the app evolves based on user feedback, ensuring value to the users.

Risk and Dependency Analysis

Technical Risks

- Syncing wearable devices can be problematic with 3rd party APIs
- Inputting personal details under set up profile may require additional data security measures
- Viewing all data visualization progress comes with challenges of knowing what the user wants to see, and what is useful (UX trials)
- Barcode scanning for Log Nutrition may be difficult to implement if 3rd party database access is required
- What should suggestions/advice be for users if they are falling behind on their goals? Experts may be required for credible/accurate information

Dependencies

- All the features depend on the Create User Account under Setup Profile
- Review Progress feature depends on Monitor Health Metrics Log Nutrition, and Track Daily Activities
- Monitor Health Metrics depends on syncing wearable device under Track Daily Activities

Risk and Dependency Analysis Pt2

Impact

- 3rd Party APIs could require additional time in learning various kind of APIs, for example Garnier, Apple, Samsung, Google, etc. That feature could be worked incrementally to provide the MVP for that section sooner
- Depending on type of personal health data the app collects, it may fall under certain laws which require hardened data storage or procedures - hence increasing time to development and test
- Data visualization and suggestions for users need trials and experts to determine what is useful to users and what is helpful, hiring experts increases the time for these features
- Barcode scanning support will require access to 3rd party database to registered products under a certain standard, this adds additional complexity to API considerations and time
- Since Create User Account impacts all features, it should be prioritized first
- Review Progress feature depends on all data collection features, so it’s important for the MVP to have all data collection features working at least in a small way to provide this feature
- Certain health monitoring features depend on 3rd party device support, so in scheduling we should take into consideration that some of these features can’t be expected in the first release if time doesn’t permit

Reflection

Benefits and Challenges of User Mapping

- **Benefits:** User mapping can be beneficial to not only to the software development team but to stakeholders and other teams. User mapping gives a non-technical overview of a product and highlights the needs and goals of the end-user. This can help the development team get better insights from other teams who may not have technical experience (systems design, algorithms, etc.) and identify issues that might cause disruptions during the development process. User Mapping can be a great way of communicating with your stakeholders. With user mapping, teams are able to justify certain design decisions and bring up potential roadblocks to their stakeholders. Another benefit of user mapping is identifying gaps in the user experience. There may be needs that have not been met according to the features, user activities, and user stories a team has laid out. With user mapping, teams can better visualize what features or stories to add and how to align them with the development timeline for the end product. Overall, user mapping is an estimation technique that focuses on the end user and using this method can help improve the quality of the end product.
- **Challenges:** Even though user mapping has many benefits, there are challenges that can come with using this technique. A downside of user mapping is that there were no summarized time or effort of user stories or features, so being able to create a schedule just with user mapping isn’t optimal. An easy thing to do with user story maps is that sometimes the blocks or stories could be too generic, especially if you don't have a customer with you, or worse, don't know who the customers are. Having stories that might not drill deep enough for implementation details to be fleshed out in manageable pieces could be challenge when scheduling. A glaring challenge in using user mapping is that if your software or product is vastly complex and does many things, user mapping is probably going to be unscalable in terms of tracking smaller user stories and the implementation tasks that might go under it.

Reflection Pt2

SPPP - Story Point Estimation with Planning Poker
TPE - Three Point Estimation
VSM - Value Stream Map
USM - User Story Map

Application in Conjunction with Real World Projects

- USM works very well with SPPP, since SPPP provides weights with stories, weights conjunction with visual story blocks is a powerful way to share common knowledge among team members. Powerful visual tool. This is great for real software projects since it can be difficult to see the various software parts involved.
- USM and VSM can work well together in manufacturing since VSM is quite high level and doesn't break down into lower level stories or tasks. VSM can show a car manufacturer what schedules can look like high above, and if any issues happen, USM can be used to dive deeper to understand lower level issues and features that are impacting car manufacturing schedule.
- USM does work very well with agile in general, it allows people to come together and quickly move and add blocks that compose features. It's a great technique to enable iterative change - it's easy enough to do in a conference room with sticky notes or in an online call with a virtual drawing board.

Reflection Pt3

Application in Conjunction with Real World Projects Pt2

- User Story Mapping (USM) helps in identifying the most important features for each spring, ensuring meaningful progress toward the Most Viable Product or future releases. This can help align the team in understanding what needs to be accomplished.
- As you receive feedback, USM can be adjusted and reprioritized ensuring product evolution based on user needs. Having the stories mapped out can help visualize and incorporate feedback, making quick changes to the overall plan.
- USM Helps structure the stories in a way that it makes it easier to prioritize based on the impact of the user experience.
- USM ensures that each release is coherent and adds value to the user, which is essential for maintaining engagement and delivering a successful product