Scenario

Meet Niyla, a 19-year-old university student who was diagnosed with diabetes during her early teens. Niyla has a small business selling CGM (Continuous Glucose Monitors) patches to those with diabetes like herself. As she is in her first year of university studying Mathematics, managing her diabetes has become a crucial part of her daily routine. Niyla enjoys documenting vital information in her notebook, but over the months with her busy schedule Niyla finds it difficult to remember to carry her notebook everywhere she goes, as a result, she sometimes forgets to make the important points recorded in her notebook (like assignments due, lab work, medication taking). One day Niyla was getting ready to leave home for university when she realized that she had left it, so she quickly ran back to collect it, as she was running to get the bus with her notebook in one hand she tripped and the notebook fell in a puddle near a construction site that builders were working on. She was unable to get it back and lost all the information that she so desperately needed. As a result, Niyla decided to use our mobile app to track her academic information and everyday life. This app is more convenient and efficient, she relies on this mobile app designed for using and keeping (academic) notes for studying, research. Our app includes features for diabetes management, making it a comprehensive solution for both aspects of her life. Niyla sees the mobile app as a more convenient and efficient alternative to her traditional note-taking methods, offering the flexibility and accessibility she needs to stay organized.

Persona of the most typical user of the mobile app

BACKGROUND

- Diagnosed with diabetes during early teens.
- Currently a 19-year-old university student studying Mathematics.
- Entrepreneurial spirit, running a small business selling CGM (Continuous Glucose Monitors) patches for individuals with diabetes.

FUSTRATIONS

- Carrying a physical notebook everywhere becomes cumbersome resulting in back and shoulder pain.
- Physical notebook is not accessible from multiple devices, restricting ability to review or update information whenever or wherever needed.
- Physical notebooks do not have built-in reminder features, struggle to keep track of deadlines, and medication timings, leading to missed tasks.

- Rain, spills, or other environmental factors can easily damage or ruin the contents of the notebook, causing significant distress.

MOTIVATIONS

- Personal connection to diabetes fuels her passion for creating and selling CGM patches.
- Strives for independence and resilience in managing her university, health, and business.
- Motivated by the chance to learn and grow both academically and practically.

BIOGRAPHY

Niyla, a vibrant 19-year-old university student with a passion for mathematics. Diagnosed with diabetes during her early teens, she has learned to navigate the challenges of managing her health alongside her academic pursuits.
Niyla's enthusiasm for mathematics extends beyond lecture rooms. She enjoys tackling complex problems, delving into mathematical theories, and finding elegant solutions. Her goal is to not only excel in her studies but also to contribute to the field with innovative ideas and approaches.

Outside the academic realm, Niyla enjoys painting, she values the opportunity to channel her creativity. This creative outlet gives her a refreshing break from the pressures of university life and diabetes management.

Niyla is a social individual who appreciates meaningful connections. She is a passionate advocate for diabetes awareness and empowerment. Engaging in discussions, collaborating on projects, and being part of a supportive community are important aspects of her university experience. She aspires to build a network of like-minded individuals who share her academic curiosity and passion for making a positive impact on the world.

Supporting Research for UI/UX Design

Impact of Physical Notebooks

- **Effect of Notebook Weight:** [Why School Bags Are Weighing Down Students](#)
- **Educational Research:** [Pakistan Journal of Educational Research (PDF)](#)
- **Notebook Comparison:** [Physical vs. Digital Notebooks - University of Lincoln](#)
Paper vs. Digital Journaling:
- **Productivity Analysis:** [Paper vs Digital Journaling: Pros, Cons & The Right Choice](#)
- **Digital vs. Paper Notes:** [Digital vs. Paper Notes: Which Should You Use? (makeuseof.com)](#)
Diabetes Management in College
- **Student Health:** [Dealing with Diabetes in College > News > Yale Medicine](#)
- **Resources & Scholarships:** [College Students with Chronic Health Conditions: Rights, Resources & Scholarships (edumed.org)](#)
Diabetes Technology
- **CGM Technology:** [Diabetic patches: What are they and how do they work? | Dexcom](#)
- **Flash Glucose Monitors:** [Flash glucose monitors (Freestyle Libre) and continuous glucose monitors (CGM) | Diabetes UK](#)
- **Future of CGM:** [The Future of Diabetes Management: Exploring the Benefits of a CGM Patch | Healthcare Business Club](#)
Mental Health & Art
- **Stress Relief:** [How Art and Painting Can Help Relieve Stress | Psychreg](#)
- **Mental Health Benefits:** [How Art Can Improve Your Mental Health | USU](#)
- **Art for Mental Health:** [How Painting Benefits Mental Health (mind.help)](#)
- **Community Support in Diabetes**
- **Managing Diabetes Risk:** [Role of Community Environment (NIDDK)](#)
- **Community-Based Organizations:** [Diabetes Management (CDC)](#)

Currently available mobile apps in this sector

Note-Taking Apps:

1. Notion: Notion is a freemium productivity and note-taking web application. It offers organizational tools including task management, project tracking, to-do lists, and bookmarking.
2. Goodnotes 6**:** It allows users to create digital notes using a variety of tools, including pens, highlighters, and shapes. GoodNotes 6 supports handwriting recognition, making it easy to convert handwritten notes into text.
3. Microsoft OneNote**:** OneNote is a digital note-taking app that provides a single place for keeping all your notes, research, plans, and information.

Diabetes Management Apps:

1. DiabetesConnect : DiabetesConnect lets you quickly and easily document your complete diabetes data and create your diabetes documentation in just a few clicks.
2. Glucose Buddy: Glucose Buddy is a freely available diabetes self-management application that allows users to manually enter blood glucose levels, insulin dosages, other medications, diet (food item in grams), and physical activities.
3. MySugr: The diabetes management app made for people with diabetes by people with diabetes. Offers comprehensive diabetes management, including blood glucose tracking and carb logging.

Notion

Key Features:
- Rich text editing and media embedding.
- Save visual links to pages and organize them in your own time using the Notion Web Clipper extension
- Task management with to-do lists and project boards.
- Seamless collaboration, with the ability to share work, make comments, and mention colleagues.

I see this app as beneficial because it is timesaving. It helps teams be more productive. It allows team members to collaborate on projects in real-time, reducing the need for lengthy email chains or meetings. This is essential for university students. It is also cost efficient. Notion is a cost-efficient tool that provides much value for its price. It offers a free version that comes with basic features that are perfect for individual use.

But this app can be overwhelming to use there are so many distinct types of blocks and templates available that it can be hard to know where to start.

GoodNotes 6

Key Features:
- Combine handwritten and typed text on one page
- PDF annotation and markup.
- Organization with folders and notebooks.
- Flexibility to write without constraints
- Import and export options for documents.

Goodnotes 6 has excellent handwriting and sketching capabilities, focus on simplicity for notetaking. It is limited collaboration features, may not be as suitable for text-heavy notes.

Microsoft OneNote

Key Features:

- Share web content, articles, images, videos, and files with OneNote.
- Add your favourite page, section, or notebook to the home screen for quick access.
- Record and insert audio notes.
- Bold, italicize, underline, highlight, increase indent, decrease indent format your notes like you do on your desktop.

I like the way this app has essential features that allow you to access revisions & track changes.

Securely store information this is vital especially for a user like Niyla she can store medical/emergency information. Scan handwritten notes & convert to text. Some have found this app to be overwhelming as they are inexperienced users also it has synchronising Issues resulting in slow usage.

DiabetesConnect

Key Features:

- Quickly and easily document your complete diabetes date.
- Create diabetes documentation in a few clicks
- Unused functions can be easily hidden, keeping everything neat and orderly.

The apps values are synchronized across all devices (if using more than one). I like the fact that one can access values via the web browser. This is good for a user like Niyla who uses both phone and laptop as she is a university student. Users may experience issues with reliability or outdated features this is a disadvantage of the app.

Glucose Buddy

Key Features:

- Blood glucose diary.
- Medication tracking
- Food log.
- Blood pressure log.

In this app it is easy to view trends because the period for the graphs is flexible. It is also available on iOS and Android. The app's shortcoming is that it takes a while to

include nutritional information. There are multiple pop-up ads that are distracting. Many additional functions and features are only available with a paid upgrade. This does not assist those like Niyla who has already a lot on her plate with money spending on Uni and medications.

MySgur

Key Features:

- Stores all important diabetes data from connected devices in one convenient place.
- Intuitive logging with a colourful, user-friendly interface
- Pairing feature: connect blood glucose meter and Google Fit

The benefit of this app is it allows, aautomatic data importing, gives user option to customize each entry to suit their unique management needs. I loved the idea of the bolus Calculator which calculates the right amount of insulin for corrections and mealtimes.

The app's fault is that it can be time-consuming which does not benefit a user like Niyla who already has a lot to do.

AcademiaCare: Academic and Health Management App

AcademiaCare is an innovative mobile app designed to cater to the diverse needs of students like Niyla, providing a smooth blend of academic notetaking, research, and diabetes management. The app aims to offer a comprehensive solution for students juggling busy schedules and health conditions at the same time. Key features of AcademiaCare include:

- **Academic Planner:** AcademiaCare allows users to organize assignments, deadlines, and lab work efficiently. The app sends timely reminders, ensuring students never miss a deadline. This is beneficial because all info is in one place, so user is aware of what is to be done.
- **Note-Taking:** With a user-friendly interface, it enables quick notetaking for lectures and research. The app supports multimedia integration, allowing users to attach photos, voice recordings, and handwritten notes. Annotate and highlight PDFs, textbooks, and research materials. This ensures safety of notes because even if user loses the physical copy, they will still have it but online.

- **Grade Tracker:** Input and monitor grades for assignments, exams, and overall course performance. This allows users to analyse grade trends to assess academic progress.
- **Task Management:** Track and manage academic tasks, including group projects, and research tasks. Prioritize and categorize tasks to maintain focus and efficiency.
- **Diabetes Tracker:** AcademiaCare incorporates a specific section for managing diabetes. Users can log glucose levels, medication schedules, and set reminders for

insulin doses. The app also offers insights into trends and patterns in blood sugar levels, this allows user to be fully aware of their health.

- **Meal and Nutrition Logging:** Record daily meals and nutritional information. This is vital because it tracks the impact of different foods on blood sugar levels.
- **Emergency Contact and Medical Information:**
  Store emergency contacts and essential medical information.
  Accessible from the lock screen for quick reference in urgent situations. This feature is particularly important as in the case of emergency and no one is around to help this feature will contain all that is needed to assist.
- **Community Support:**
  Connect with a community of users facing similar health challenges. This allows users like Niya to share tips, experiences, and encouragement for a supportive environment.
- **Cloud Sync:**
  All data is securely stored in the cloud, ensuring that information is accessible from any device. This feature prevents loss of critical data, as experienced by Niyla with her physical notebook.

Nyila's use of our mobile app not only helps her manage her diabetes effectively but also provides her with a sense of control and empowerment in navigating her first year of university. The seamless integration of diabetes management into her daily routine ensures that she can focus on her studies and social life while maintaining her health.

Academic User

AcademiaCare is an app that academic users can use to simplify their academic life. To get started, users can input details about their assignments, deadlines, and lab work into the Academic Planner. The app will then send timely reminders to ensure that users never miss any deadlines. For note-taking, users can quickly jot down points during lectures or research and attach pictures, voice notes, and handwritten notes for a comprehensive understanding. Users can also annotate and highlight PDFs, textbooks, and research materials for easy reference. The Grade Tracker feature allows users to input and monitor grades of assignments, exams, and overall course performance to assess their academic progress. The app's Task Management feature helps users track and manage academic tasks such as group projects or

research tasks. All data is saved on secure servers in the cloud, allowing for easy access from any device.

Health User Diabetic

For a health user like her, Niyla, AcademiaCare could be utilized as an all-rounded tool for managing diabetes. In this Diabetes Tracker, one would indicate their sugar levels, and drugs and even manage their insulin rosters with reminder alerts. This app I believe can show patterns of blood sugar level trends so that a person can improve his or her diabetes management skills. The Meal and Nutrition Logging feature helps record everyday meals and nutritional data to understand how different foods affect blood glucose levels. For emergencies, the end-user would enter emergency contacts on this app and other critical medical information that is easily accessed from the home screen on your phone. With the Community Support feature, users connect with others who face similar medical challenges where they share individual experiences, motivation among others encouraging each other in a friendly manner.

Sketches

Screen 1 — Health

Health ⌄

- ✓ Diabetes Tracker
- ✓ Nutrition log
- ✓ Community Support
- ✓ CGM Business
- ✓ Medication

Emergency Info

Screen 2

- Attach PDF

Text version → Online version

✓ To do ⌄
- 2/2/24 → Lab 1 ①
- 3/3/24 → Theory Quiz ②

Cloud Sync
→ · Sync Now!!
Last updated : 12/01/2024

Screen 3 — AcademiCare

AcademiCare

Select your Choice!

Academic

Health

Emergency Info

Academic

- ✓ Assignments
- ✓ Grade Tracker
- ✓ Tasks
- ✓ Reminders

CALENDER

Screen 4

Check Glucose Levels
90 → Memoriu Score
Glucose History

12AM   6AM   12PM   7PM

Dishes - Entree
· Dietary Intake Restrictions
Nutrition info

Community
· Upcoming event!!
· View Sarah's post
· Order CGM's