The George Washington University – School of Business

PRICEBITE

A Smart Budgeting and Price Forecasting Tool for Students

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Executive Summary

PriceBite is a budgeting and price forecasting tool developed to help students make smarter purchasing decisions by combining real-time pricing data with historical trends. Designed with the financial constraints of students in mind, the system supports academic success by enabling cost-effective planning for essential electronics such as laptops, headphones, and tablets.

The project was conceptualized, designed, and implemented by Samuel Akuffo as part of his graduate studies in Information Systems Technology and Management at The George Washington University. Adopting the Software Development Life Cycle (SDLC), the project followed a structured approach—beginning with problem identification and requirements elicitation, and advancing through system modeling, design documentation, and testing strategies.

User requirements were gathered through both questionnaires and document analysis. These findings informed the development of a minimum viable product (MVP) featuring four core capabilities: personalized budget input and shopping wish lists, real-time price comparisons from major online retailers, price forecasting based on seasonal and historical trends, and threshold-based notifications to help users time their purchases effectively.

System modeling included detailed use case, activity, class, sequence, and state diagrams to ensure alignment between user needs and technical implementation. PriceBite's data infrastructure leverages automated web scraping and scalable API integrations for continuous price monitoring. Planned enhancements include personalized product recommendations based on a student's field of study, allowing for tailored purchasing support.

As the system evolves, PriceBite is designed to adapt based on user interaction data and behavioral patterns. Over time, the platform will become more intelligent, offering students highly relevant suggestions by understanding preferences tied to their academic discipline or past activity. The system architecture is cloud-ready and scalable, supporting the integration of more advanced predictive models and vendor collaboration tools in future releases.

By helping users avoid impulse spending and make informed, timely purchases, PriceBite demonstrates the value of integrating data-driven insights into everyday decision-making. The project showcases Samuel's core strengths in business analysis, user-centered design, and system planning, while also contributing a meaningful solution to a real and recurring student need.

Problem Statement:

University students often face significant challenges when managing their budgets for essential electronics such as laptops, tablets, and headphones—items that are increasingly necessary for academic performance and coursework. These products tend to fluctuate in price due to seasonal promotions, market volatility, and retailer-specific pricing strategies. Without access to reliable tools that offer real-time price monitoring or historical trend analysis, students are forced to rely on manual research methods—such as checking multiple websites repeatedly or waiting unpredictably for sales—often resulting in missed opportunities or poorly timed purchases.

This lack of pricing visibility leads to inefficient decision-making and financial strain. Many students overpay for necessary equipment simply because they lack the tools to identify better deals or forecast when prices might drop. Meanwhile, conventional budgeting tools only help students allocate funds; they do not integrate external pricing dynamics or provide context for when to make a purchase. This disconnect leaves students vulnerable to market fluctuations, with limited ability to adapt or plan effectively.

For students already navigating tuition fees, housing costs, and other financial pressures, the inability to make timely, informed purchasing decisions adds unnecessary stress. The academic impact of delaying or compromising on essential technology—due to cost uncertainty—can be significant. What is missing is a responsive system that connects personal budgets with market insights, helping students track prices, anticipate trends, and make confident purchasing choices. A solution is needed that brings together financial planning and intelligent price forecasting to support better academic outcomes and financial well-being.

Solution Overview and MVP Scope

To address the budgeting challenges students face when purchasing electronics, PriceBite was developed as a responsive system that integrates real-time price comparison with predictive analytics. Unlike traditional budgeting tools that only help users allocate funds, PriceBite provides deeper insight by identifying the optimal time to buy based on both current pricing and historical trends. This dual-layered approach ensures students make better-informed purchasing decisions while minimizing unnecessary spending.

The minimum viable product (MVP) was designed around four foundational capabilities. Students can input personalized budgets and maintain shopping wish lists, allowing them to define spending limits while tracking desired products. The system continuously sources live pricing data from major online retailers through automated web scraping and, where possible, direct API integrations. This real-time feed is paired with a forecasting engine that analyzes historical pricing patterns to identify periods of expected discounts, such as seasonal sales or market cycles. To further support decision-making, a threshold-based notification system alerts students when items they are monitoring fall within their set budget or drop significantly in price.

Together, these features create a practical, student-centered tool that supports smarter purchasing decisions without requiring students to navigate multiple platforms or guess the right time to

buy. Rather than acting as a transactional service, PriceBite serves as a personal financial guide that prioritizes usability, accuracy, and relevance from the very first release.

Although the current version addresses immediate budgeting needs, the system was designed with future scalability in mind. Planned enhancements include intelligent product recommendations based on a student's field of study, expanded retailer integration, and advanced forecasting algorithms. These capabilities will continue to evolve as the system learns from user behavior and usage patterns. The MVP represents a thoughtfully scoped starting point for a larger, long-term solution that uses accessible technology to directly support student financial well-being and academic readiness.

Requirements Elicitation and Analysis

To ensure that PriceBite addressed the real needs of its intended users, a combination of primary and secondary data collection methods was used during the requirements phase. Two key elicitation techniques—questionnaires and document analysis—formed the foundation of the system's functional and non-functional design specifications.

Questionnaires were developed and distributed to two initial user groups: students at The George Washington University and potential vendors or resellers. For students, the surveys focused on core budgeting challenges, preferred shopping behaviors, sensitivity to pricing changes, and expectations around digital decision-support tools. The goal was to understand how financial constraints influenced purchase timing, and what system features could provide real value. Participants were sampled from diverse academic programs using structured statistical methods to ensure broad representation while minimizing survey fatigue through clearly organized sections.

Vendor and reseller feedback offered additional perspectives on pricing patterns, product availability cycles, and potential opportunities for offering student-exclusive promotions. These responses informed backend requirements around data sourcing, price comparison logic, and future integration opportunities with retail platforms.

Document analysis complemented these efforts by benchmarking existing solutions within the student discount and e-commerce space. Platforms such as StudentBeans, UniDays, StudentUniverse, Rakuten, and Keepa were reviewed to extract best practices in interface design, pricing insight delivery, and discount personalization. This analysis helped identify gaps in current offerings—particularly the lack of systems that blend budgeting tools with price forecasting—positioning PriceBite as a unique solution.

Insights from both methods were synthesized into a structured list of requirements that directly informed the scope and design of the minimum viable product (MVP). Functional requirements focused on budget input, product tracking, price forecasting, and threshold-based notifications. Non-functional requirements emphasized ease of use, real-time performance, secure data handling, and system scalability. These requirements served as the foundation for subsequent modeling and technical planning activities, ensuring that each feature in the MVP addressed a verified student need or market insight.

System Modeling and Design

Following the requirements elicitation phase, a series of system models were developed to visualize how PriceBite supports user interactions, internal workflows, and data management. These models served as both planning and validation tools, ensuring that functional requirements translated effectively into a scalable and user-centered system architecture.

To begin, user interaction with the system was mapped through a use case diagram, which outlines the core actions students can perform—such as creating shopping wish lists, setting budget limits, receiving product recommendations, and responding to price alerts. Retailer websites are represented as external actors that supply real-time and historical pricing data. This diagram highlights how PriceBite functions as a non-transactional decision support system, delivering timely insights rather than completing purchases.

An activity diagram was then created to visualize the logical flow of operations from both user and system perspectives. It depicts the journey from account setup to price monitoring and alert generation. Student interactions include budget entry and product selection, while the system retrieves price data, stores historical records, and performs analyses to forecast price drops. This model emphasizes the automation behind PriceBite's user experience and its seamless integration of input, analysis, and output.

Structural and behavioral aspects of the system were modeled using class, sequence, and state diagrams. The class diagram defines the primary entities—Student, ShoppingList, ShoppingItem, Retailer, PriceData, Recommendation, and Notification—along with their relationships. It reflects how data is stored, retrieved, and linked across the platform in a modular and efficient way. The design was intentionally kept simple, avoiding unnecessary inheritance to mirror real-world functionality.

A sequence diagram captures the interaction between components during a price check and recommendation event. It begins with a student query and follows the system's internal workflow through data fetching, trend analysis, and the delivery of personalized results. This view clarifies how tasks are handled over time and how system components depend on one another.

To model dynamic system behavior, a set of state diagrams was developed. The student state diagram traces how users move through different states—idle, searching, viewing results, and responding to alerts. Complementary diagrams illustrate how the system transitions between data retrieval, analysis, and alert generation phases. A dedicated diagram for the notification subsystem details the creation, delivery, and expiration of alerts. These behavioral models provide a clear lens into system logic beyond static structure.

Together, these modeling artifacts form the technical foundation of PriceBite. They confirm that user needs have been accurately translated into functional workflows and component relationships. In addition to guiding development, they also serve as living documentation that facilitates future updates, onboarding, and stakeholder communication.

Testing and Implementation Plan

To ensure the reliability and functionality of PriceBite, a multi-layered testing strategy was developed. Each phase of testing focused on a specific aspect of the system, beginning with unit testing. White-box testing techniques were applied to individual components, allowing a detailed review of internal logic and code execution paths. This process confirmed that each functional unit operated as intended before being integrated into the full system.

Integration testing followed, combining modules to validate that data flowed correctly between classes and that functional interactions aligned with the system's requirements. Two approaches were emphasized during this phase: use case testing and interaction testing. Use case testing ensured that each user-facing interaction—such as receiving a price alert or searching for products—produced the correct output based on user input. Interaction testing validated the consistency and accuracy of data as it passed between interconnected modules, such as shopping lists, pricing engines, and notification services.

System testing focused on end-to-end validation of the complete application. Requirements testing verified that user interface elements, system workflows, and backend operations met the original specifications. Security testing assessed the system's resilience against unauthorized access and data breaches, with attention to the protection of user data and vendor information. Performance testing was conducted to evaluate the system's speed, scalability, and reliability, particularly during high-volume data analysis and continuous price monitoring. In addition, documentation testing was used to ensure that user manuals and technical guides were accurate, complete, and understandable, allowing new users to quickly learn how to navigate the platform.

Beta testing served as the final evaluation stage. A small group of students from the target user base engaged with the system in realistic usage scenarios. Their feedback was collected to identify any usability issues, technical bugs, or gaps in functionality prior to a broader release. The implementation strategy involved a direct and full system installation, as PriceBite is a new platform and does not need to replace or integrate with a legacy system. This approach allowed for faster deployment and reduced transitional overhead. A pilot installation was first conducted with a select group of students and vendors to monitor performance and gather initial feedback. Based on the insights from this controlled rollout, refinements were made before scaling the system to a wider audience. User training materials and supporting documentation were provided to ensure a smooth onboarding process and to help users fully benefit from the platform's features.

System Integration and Technical Considerations

PriceBite's functionality relies heavily on its ability to integrate with external systems and manage data efficiently. To provide accurate recommendations and price forecasts, the system pulls both real-time and historical pricing data from third-party platforms such as Amazon and Best Buy. These integrations enable PriceBite to deliver up-to-date insights that help students make well-informed purchasing decisions based on current market conditions.

At the core of PriceBite's accuracy is a data matching process that uses unique identifiers, such as model numbers or Universal Product Codes (UPCs), to ensure that comparisons are made between identical products across multiple retailers. Real-time data fetching is performed on a

scheduled basis, and regular updates guarantee users receive the most recent and relevant pricing information when conducting searches.

To maintain reliability, the system includes built-in error handling and monitoring protocols. If an external API becomes temporarily unavailable, the system responds with fallback messages that inform users without disrupting their experience. Additionally, user data and retailer information are protected through the use of secure API keys and encrypted data transmissions, ensuring that security and privacy standards are upheld at all times.

For long-term scalability, PriceBite is designed with cloud infrastructure in mind. Platforms such as AWS or Google Cloud may be used to store user data, manage historical analytics, and support predictive modeling tasks. This approach not only ensures system performance under increased load but also enables future integration with more complex machine learning pipelines and recommendation engines.

Web scraping is used as a complementary technique where APIs are not available or do not provide sufficient data. All data collection methods will comply with legal standards and respect terms of service. Over time, PriceBite is expected to evolve based on user interaction data. This will allow for more tailored product recommendations, such as suggesting specific laptop models to students based on their major or academic requirements—for example, offering high-performance devices to computer science students.

By combining structured data sourcing, robust infrastructure, and adaptive personalization features, PriceBite is positioned to scale as both a reliable price forecasting tool and a personalized budget assistant for students.

System Actors and Interactions

In designing PriceBite, careful consideration was given to the key actors who would interact with the system and derive value from its features. These include student users, retailer data sources, and the technical components that operate behind the scenes to support real-time analysis and forecasting.

Students are the primary end users of the system. They engage with PriceBite by setting budgets, creating wish lists, monitoring price trends, and receiving notifications when items of interest fall within their budget or approach seasonal lows. The system is tailored to meet the financial and academic needs of students, helping them plan purchases around constraints and avoid impulsive spending. The **design prioritizes usability, m**aking it easy for students to access actionable insights without requiring technical knowledge.

Retail data providers such as Amazon, Best Buy, and similar platforms—serve as indirect system actors. Although they do not interact with the user directly, they supply the pricing and product data that drives PriceBite's analytics. These data integrations occur through APIs where available or via legally compliant web scraping methods. The system uses this data to ensure pricing recommendations reflect the most current market conditions, and in future iterations, retailers could participate more actively by sharing promotional data or offering student-specific discounts.

Technical components within the system architecture also play a vital role. Modules handle data collection, perform pattern recognition on historical prices, and generate alerts based on predictive models. The system's infrastructure ensures secure and scalable performance, and design decisions reflect both immediate functional needs and long-term growth potential. As the sole designer of this system, I structured these internal interactions to support clear information flow, timely responses, and accurate insights.

Every actor and interaction modeled in PriceBite contributes to its central mission: enabling students to make informed, financially responsible decisions through the power of data and automation.

Conclusion:

PriceBite was developed in response to a clear and recurring problem faced by students: the lack of a smart, data-driven tool for managing academic purchases within tight budgets. By combining real-time price comparison with historical trend forecasting, the system empowers students to make informed decisions, reduce unnecessary spending, and optimize their financial planning. Throughout the design process, I applied business analysis techniques to gather user requirements, identify solution gaps, and translate those insights into a fully modeled system. The platform's architecture reflects not only technical feasibility but also user-centered design, ensuring that features like price tracking, notifications, and personalized recommendations align with actual student needs.

While the initial release focuses on foundational features, PriceBite is built with scalability and future enhancements in mind. Planned improvements include tailored product suggestions based

on a student’s field of study and deeper integrations with vendor platforms. These additions will strengthen the system’s ability to deliver high-value insights while maintaining simplicity and accessibility.

Ultimately, this project demonstrates how data, design, and strategic planning can come together to create meaningful, real-world solutions. PriceBite reflects my ability to identify business problems, analyze user needs, and build systems that are practical, efficient, and aligned with long-term impact.

APPENDIX

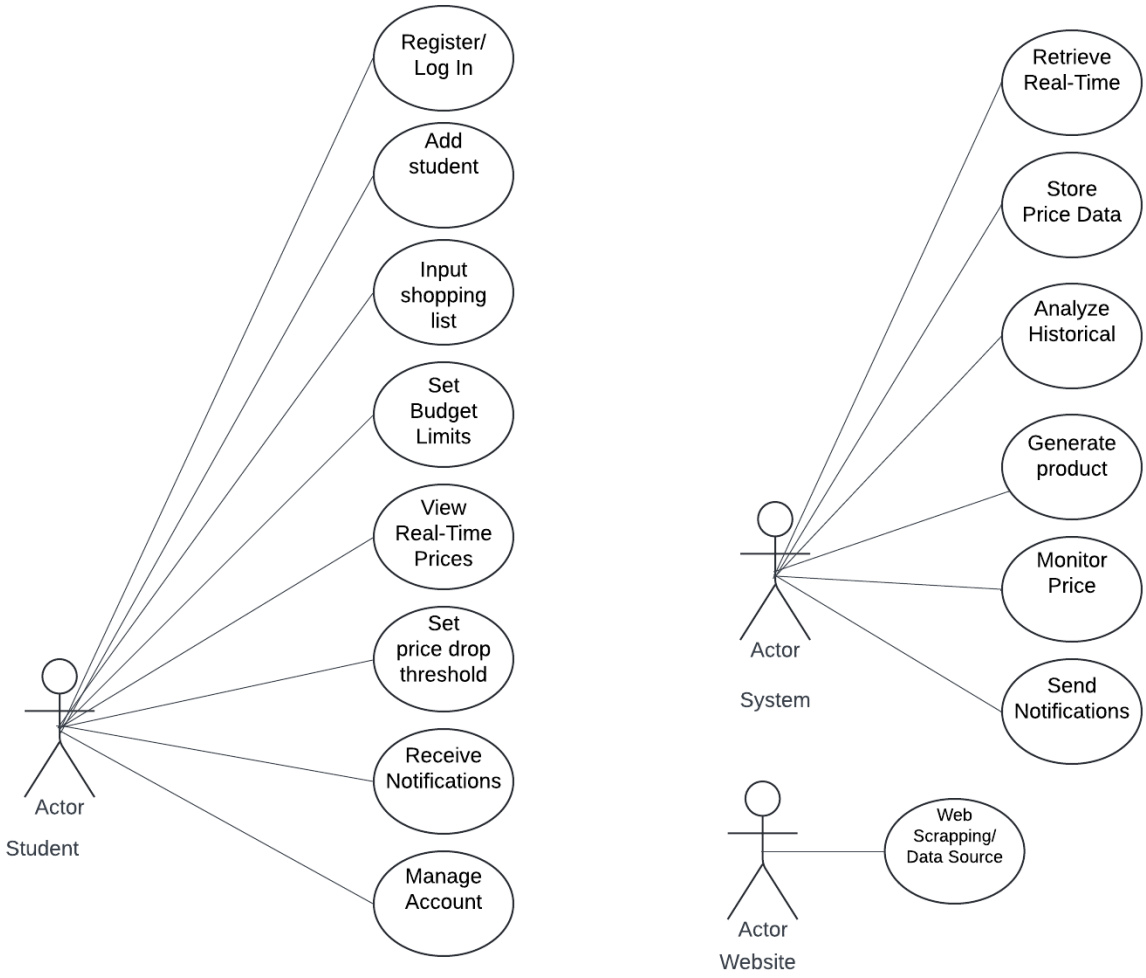


Figure 1- Use Case Diagram

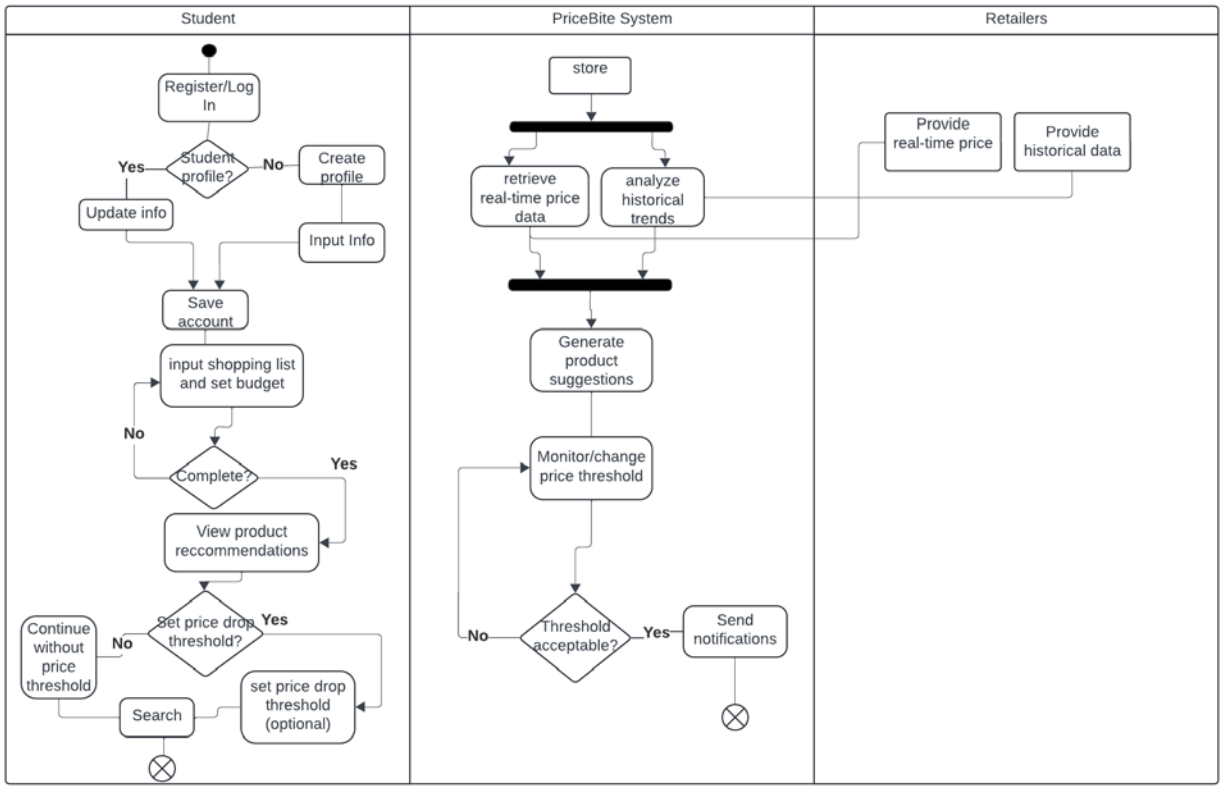


Figure 2- Activity Diagram

Questionnaire for PriceBite

Student Questionnaire:

1. Have you ever encountered challenges finding good deals while shopping online?

- Yes
- No

2. Would you find it helpful to have assistance in finding the best prices when shopping online?

- Yes
- No

3. Would you use a platform that finds the best prices for you, based on your specific item requirements?

- Yes
- No

4. Does your major influence the electronics you buy (e.g., specific software or hardware requirements)?

- Strongly
- Somehow
- Minimally

5. If an electronic device is recommended by your department or professors, are you more likely to buy it?

- Yes
- No
- Depends

6. What features would you expect from a price comparison platform? (e.g., notifications, product tracking, reviews)

_____

7. What would motivate you to use a price comparison platform?

_____

Resellers and Vendors Questionnaire:

1. Which types of electronics do you sell most frequently to students?
   - Laptops
   - Tablets
   - Accessories

2. How often do you introduce new products or models to your inventory?
   - Monthly
   - Annually
   - Other(please specify)
   - Quarterly
   - Based on Demand

3. Do you offer student discounts on particular electronics?
   - Yes
   - Depends on the item
   - No

4. Are there specific electronics you prioritize for student buyers?
   - Yes
   - No
   - Occasionally

5. How frequently do you adjust prices for promotional periods or student sales?
   - Monthly
   - Depends on demand
   - Seasonally

6. Are you open to offering exclusive deals on PriceBite for students?
   - Yes
   - Depends on the item
   - No

7. Do you track the preferences or purchasing trends of student customers?
   - Yes
   - No
   - Occasionally

8. What feedback have you received from students about your products or prices?
   - Positive
   - Mixed
   - Negative

9. Would you find it helpful if PriceBite shared trends on popular electronics among students?
   - Yes
   - No
   - Unsure

10. Would you be open to sharing your forecasted price changes for electronics with PriceBite to help students plan their purchases?
    - Yes
    - No
    - Possibly

Document Analysis:
Document Title/Source: Requirements Specification
Description: This document details the functional and non-functional requirements for PriceBite. Analyzing this helped to ensure all essential features were considered and prioritized.
Key Findings:

- Functional requirements include price tracking, notifications for price drops, and user accounts for personalization.
- Non-functional requirements emphasize system performance, security, and scalability.
- Highlighted the need for user-friendly interface design to enhance user experience.

Document Title/Source: Project Charter
Description: This document outlines the purpose, objectives, stakeholders, and scope of the PriceBite project. Analyzing it provided clarity on the project's vision and key goals, which is essential for aligning the team's efforts.
Key Findings:

- The primary objective is to help students forecast prices of goods based on seasonal trends.
- Identified key stakeholders, including students (end users), retail partners, and project team members.
- Established that the project will focus on user-friendly features to enhance student engagement and savings.

Document Title/Source: User Stories
Description: User stories were created to capture the interactions different users would have with the PriceBite application. This analysis contributed to understanding user needs and expectations.
Key Findings:

- Users want to receive timely notifications about price changes for specific products they are tracking.
- The ability to compare prices across different retailers is a crucial feature.
- User stories revealed a demand for a simple and intuitive user interface.

Part 3

System Design

Class Diagram:

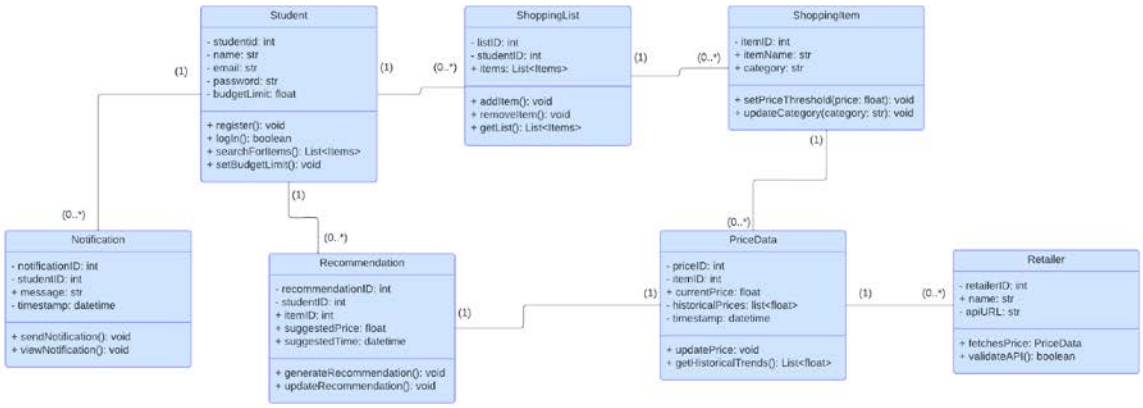


Figure 1: Class Diagram

The Class Diagram for the Price Bite system outlines the key classes and their relationships, showcasing the system's structure and functionality. The primary class, Student, interacts with the system to search for electronics and manage their preferences, such as budgets and shopping lists. The ShoppingList class organizes items of interest, represented by the ShoppingItem class, which stores details like item name and category. The PriceData class captures real-time and historical pricing information for each item, retrieved from the Retailer class, which interfaces with external websites. The system generates suggestions through the Recommendation class, providing students with the best retailer and price based on their criteria. Notifications are handled by the Notification class, alerting students about price drops or sales. This diagram illustrates how the system's components interact to deliver price comparisons and recommendations without facilitating direct purchases. Also to note, this design doesn’t depict inheritance.

Sequence Diagram:

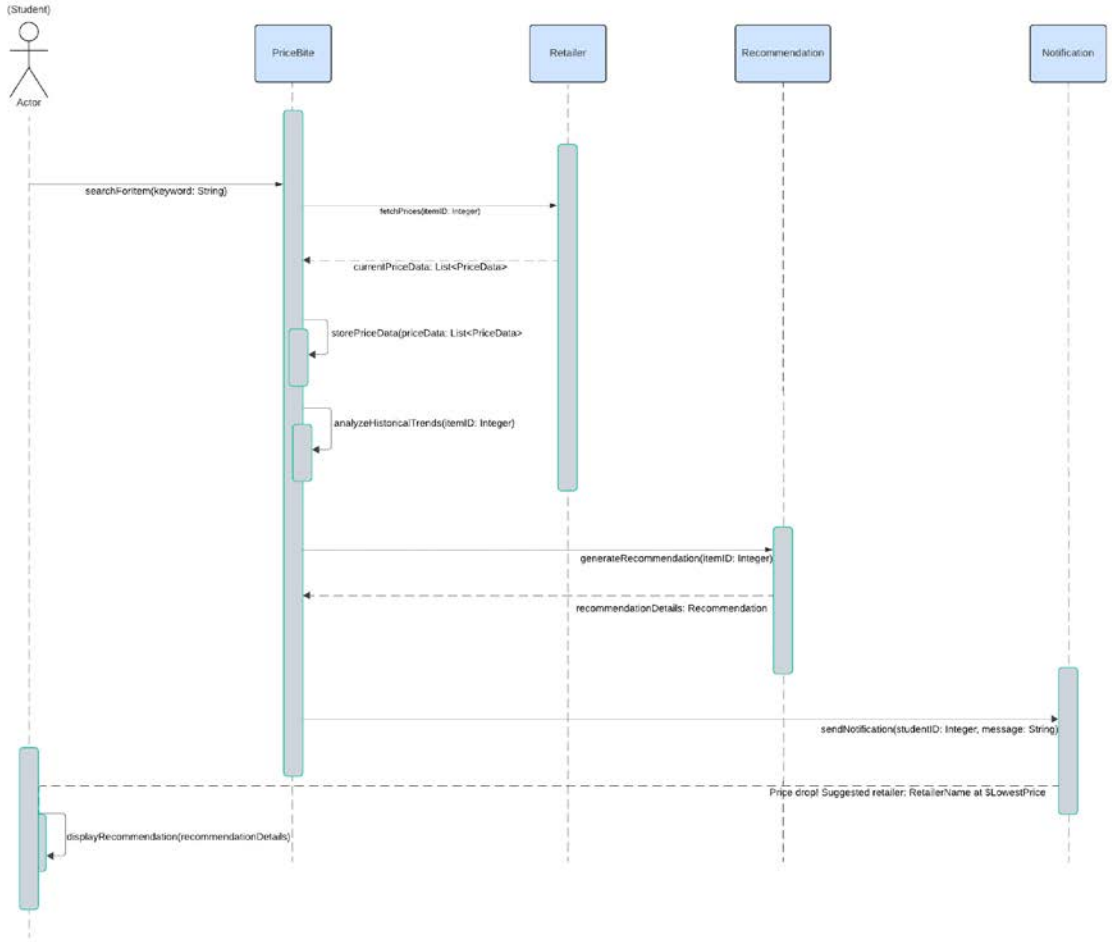


Figure 2: Sequence Diagram

This models the interactions between system components during key operations. The Sequence Diagram for the Price Bite system demonstrates the interaction flow between the student, system, and external retailers during the price search and recommendation process. The sequence begins when the Student initiates a search, triggering the PriceBiteSystem to fetch real-time prices from connected Retailer APIs or web scraping. After retrieving the data, the system stores the current prices and analyzes historical trends to identify patterns. It then transitions to generating a recommendation, determining the retailer offering the lowest price, and sending the suggestion back to the student. If a price drop threshold is met, the system sends a notification alert to the student, ensuring timely updates. This diagram highlights the linear and conditional interactions required to provide students with actionable insights for budget-conscious purchasing decisions. It ensures that all processes flow logically, providing a roadmap for developers to validate and optimize system workflows.

State Diagrams:

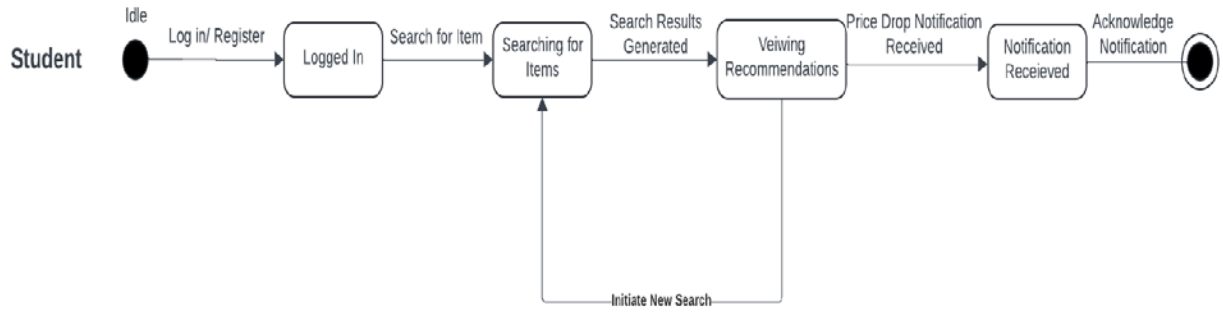


Figure 3: Student Behavioral State Diagram

The Student Interaction State Diagram illustrates the flow of actions a student takes when using the Price Bite system. It begins with the Idle state, where the system awaits a student logging in or registering. Once logged in, the student transitions to the Searching for Items state by initiating a search. After the system generates results, the student enters the Viewing Recommendations state, where they review price suggestions. If a price drop notification is received, the system transitions to Notification Received, and the student can acknowledge or act upon the alert. The process then returns to Idle or allows for a new search. This diagram highlights how a student navigates the system to find the best prices and manage alerts.

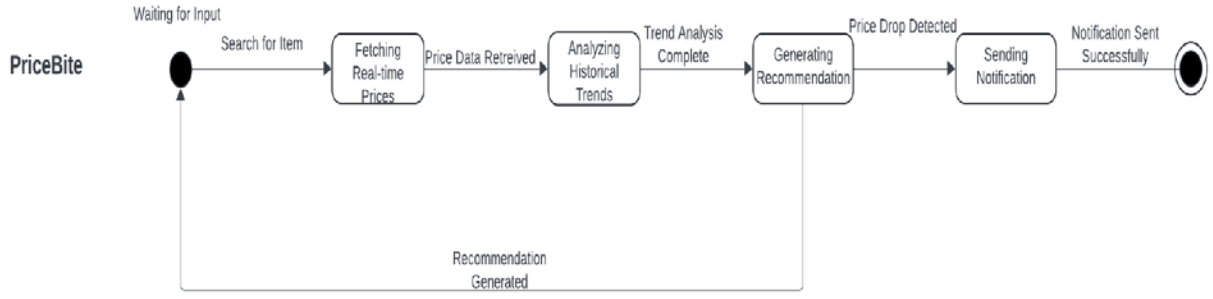


Figure 4: PriceBite System Behavioral State Diagram

The Price Bite System State Diagram focuses on the internal processes the system performs in response to student actions. The system starts in a Waiting for Input state, ready to process a student's request. Upon receiving a search query, it transitions to Fetching Real-Time Prices, where it collects current price data from external retailers. Once the data is retrieved, the system moves to Analyzing Historical Trends, where past pricing patterns are processed to predict future price changes. After completing the analysis, the system transitions to Generating

Recommendation, offering the best retailer and price to the student. If a price drop is detected that matches the student's threshold, the system moves to Sending Notification; otherwise, it returns to Waiting for Input. This diagram showcases the decision-making and data-handling logic within the Price Bite system.

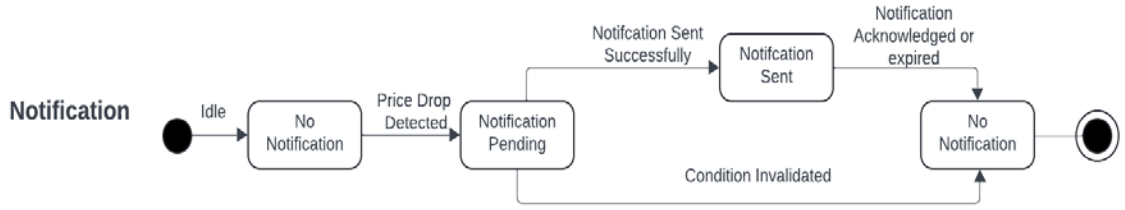
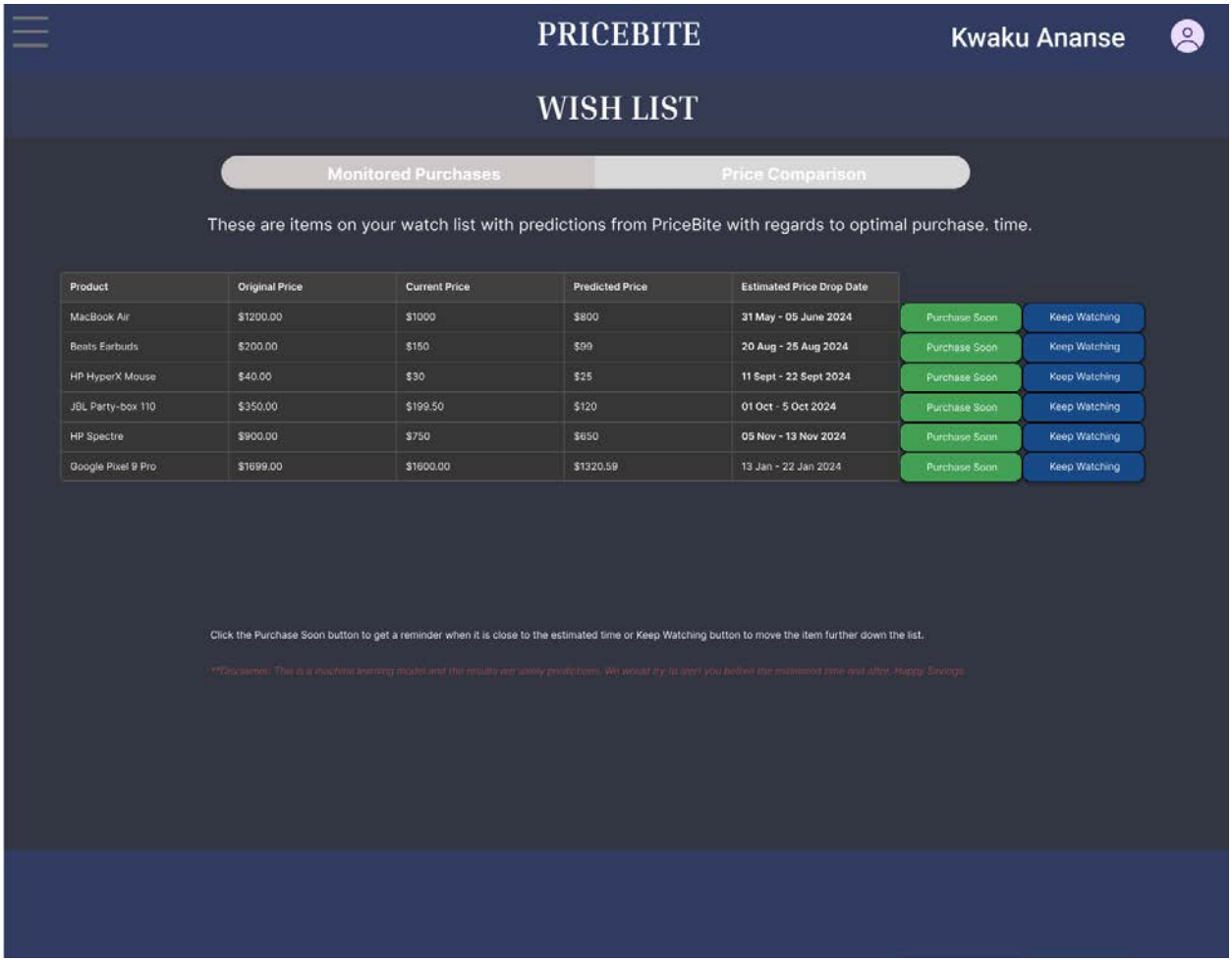
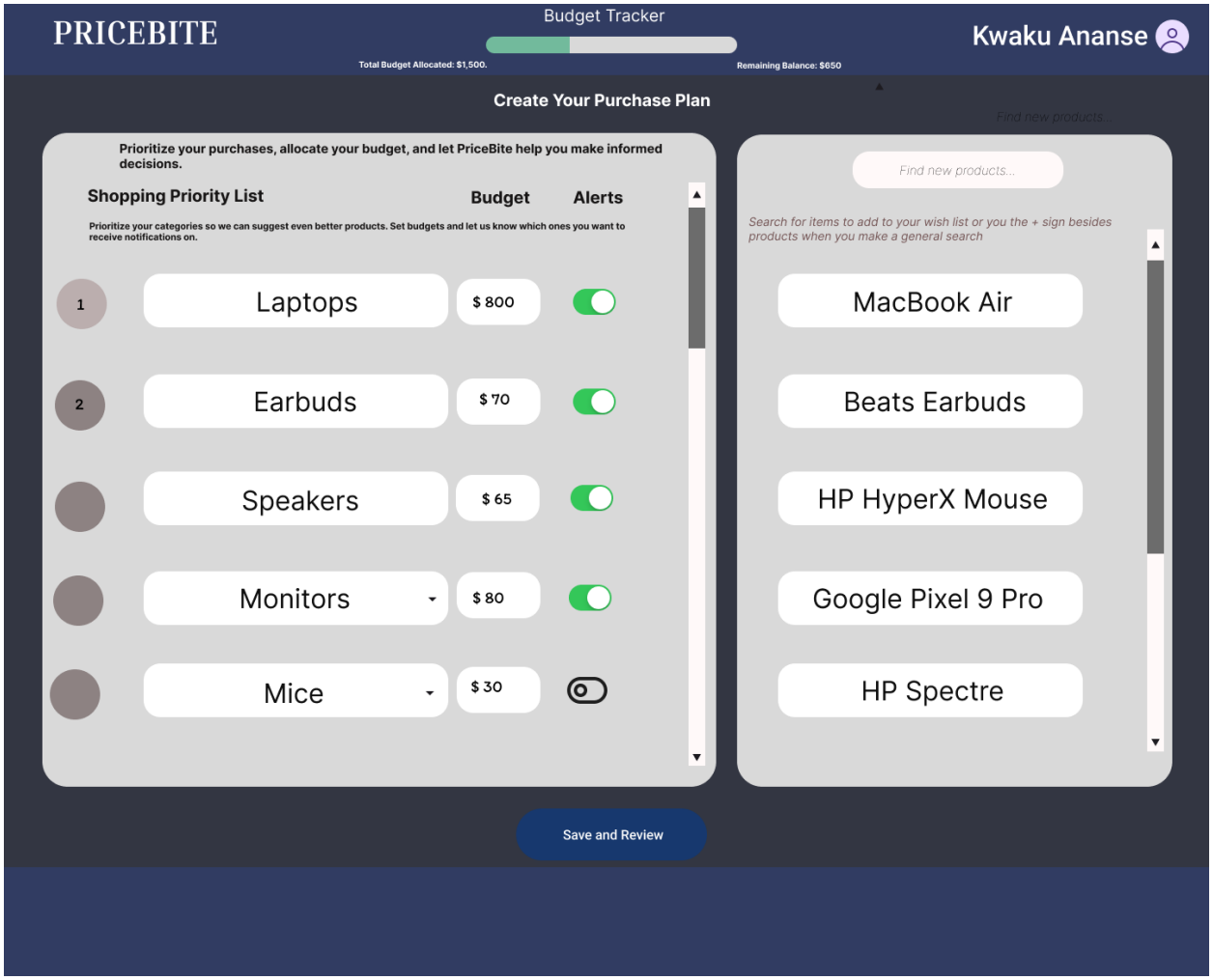


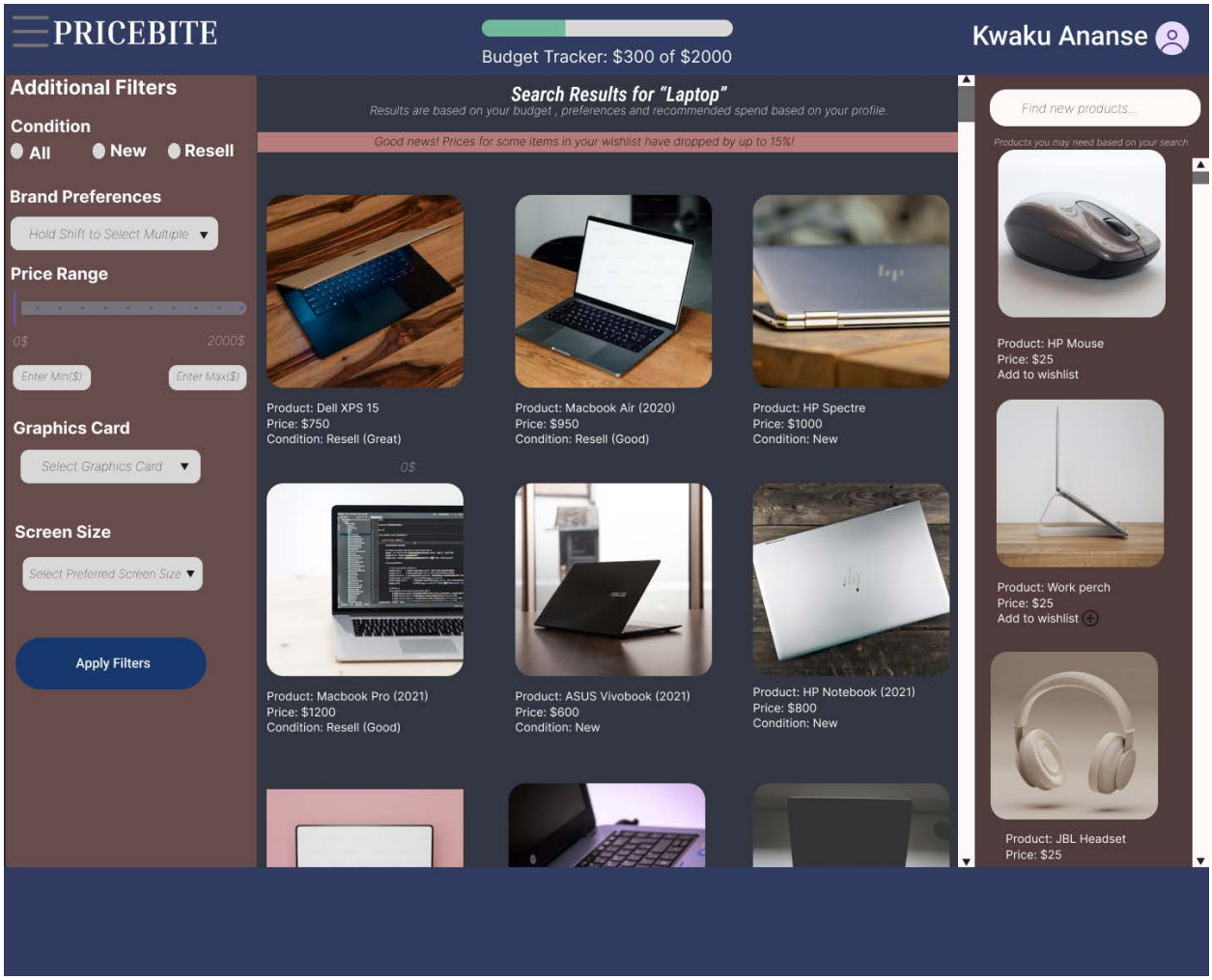
Figure 5: Notification Behavioral Diagrams

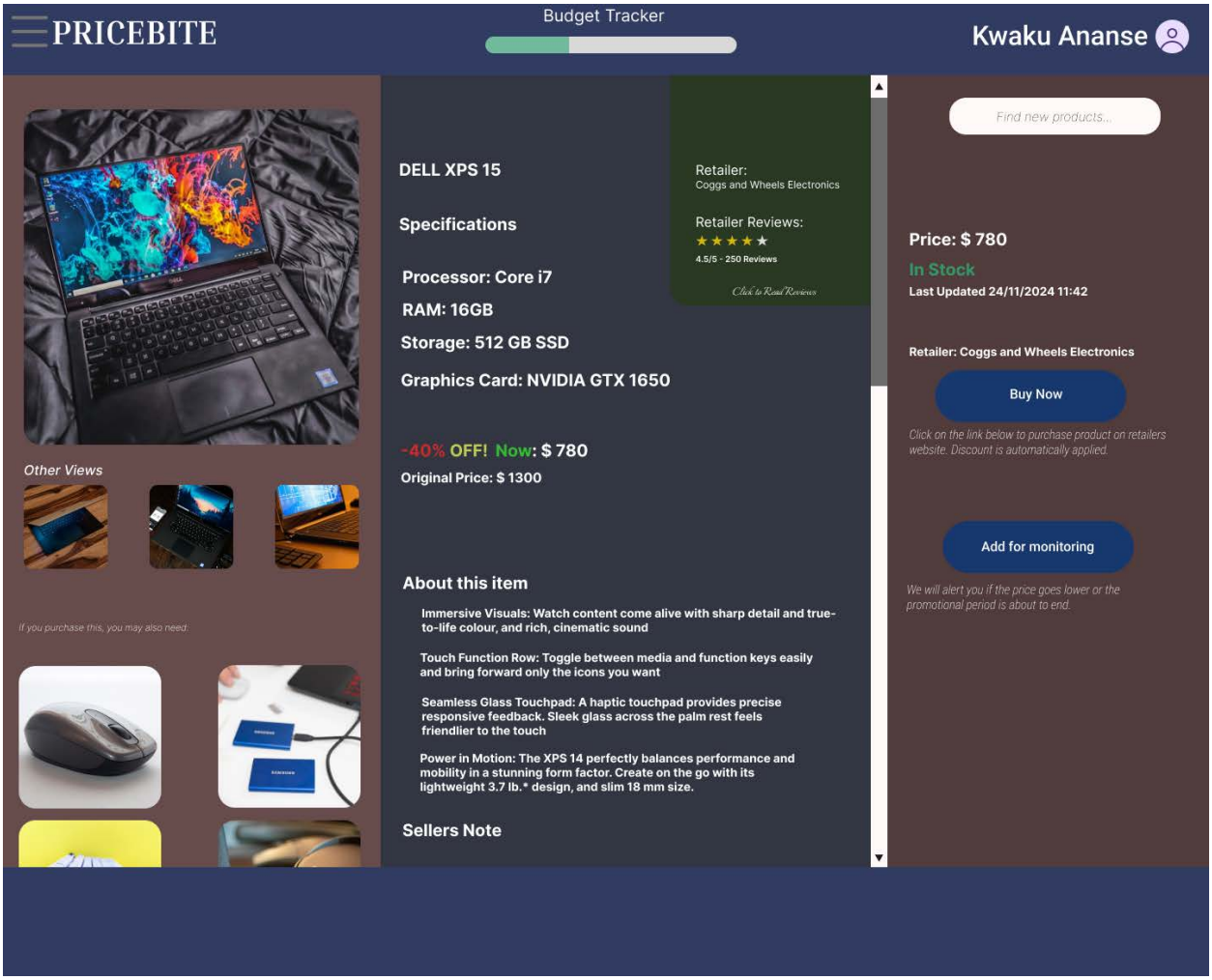
The Notification State Diagram shows how the Price Bite system handles alerts when a price drop or sale condition is detected. Starting in the No Notification state, the system remains idle until it identifies a relevant price drop, transitioning to Notification Pending. In this state, the system prepares to notify the student. If the notification is sent successfully, the system moves to Notification Sent, where it waits for the student to acknowledge or act upon the alert. Alternatively, if the price drop condition becomes invalid (e.g., the price rises), the system transitions directly back to No Notification without sending the alert. Both paths ultimately converge at the No Notification state, emphasizing the system's efficiency in managing notifications.

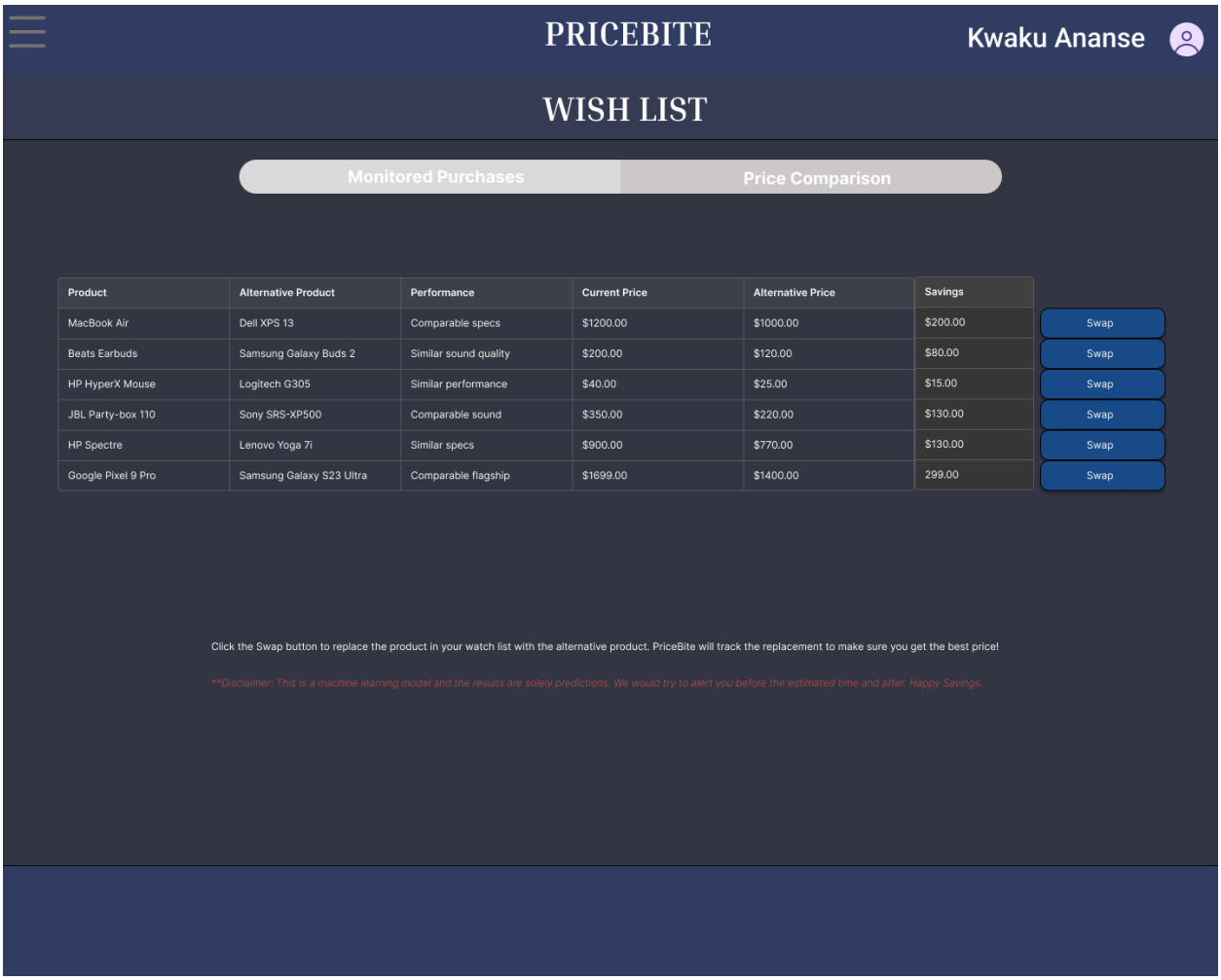
Forms and Reports

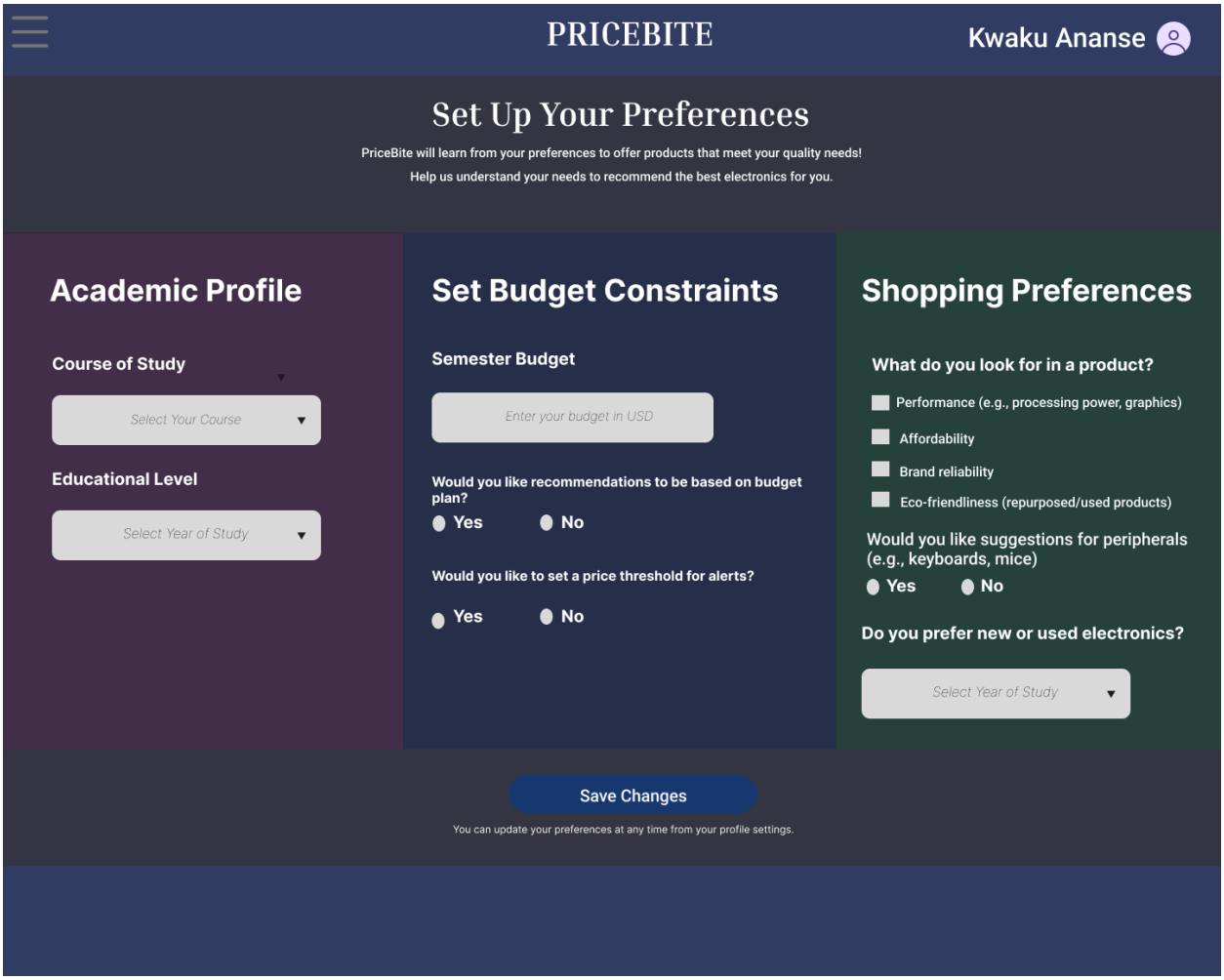


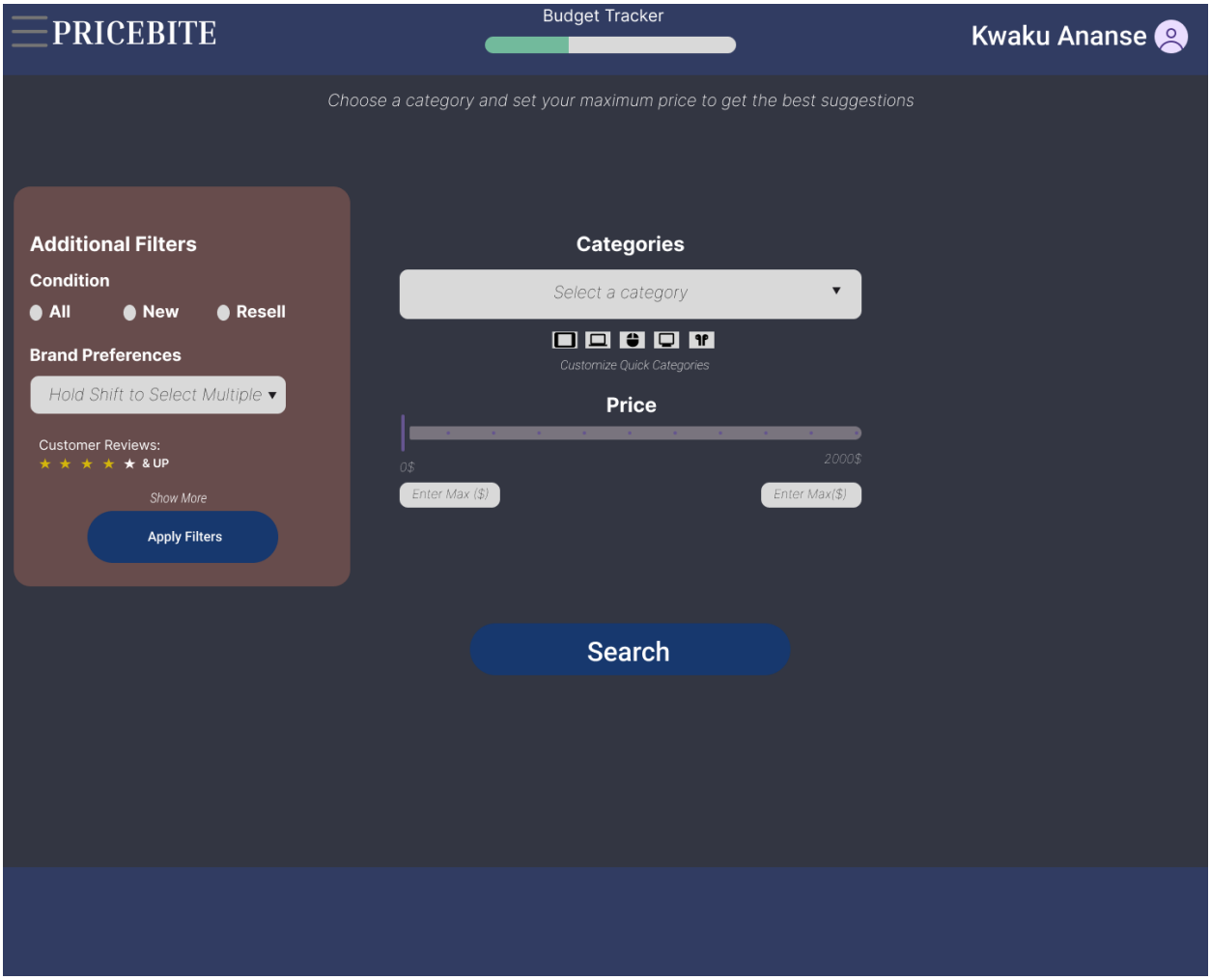

PRICEBITE
Budget Tracker
Total Budget Allocated: $1,500.
Remaining Balance: $650
Kwaku Ananse
Create Your Purchase Plan
Prioritize your purchases, allocate your budget, and let PriceBite help you make informed decisions.
Shopping Priority List
Budget
Alerts
Prioritize your categories so we can suggest even better products. Set budgets and let us know which ones you want to receive notifications on.
1
Laptops
$ 800
2
Earbuds
$ 70
Speakers
$ 65
Monitors
$ 80
Mice
$ 30
Find new products...
Search for items to add to your wish list or you the + sign besides products when you make a general search
MacBook Air
Beats Earbuds
HP HyperX Mouse
Google Pixel 9 Pro
HP Spectre
Save and Review


PRICEBITE
Budget Tracker: $300 of $2000
Kwaku Ananse
Additional Filters
Condition
All
New
Resell
Brand Preferences
Hold Shift to Select Multiple
Price Range
0$
2000$
Enter Min($)
Enter Max($)
Graphics Card
Select Graphics Card
Screen Size
Select Preferred Screen Size
Apply Filters
Search Results for "Laptop"
Results are based on your budget , preferences and recommended spend based on your profile.
Good news! Prices for some items in your wishlist have dropped by up to 15%!
Product: Dell XPS 15
Price: $750
Condition: Resell (Great)
Product: Macbook Air (2020)
Price: $950
Condition: Resell (Good)
Product: HP Spectre
Price: $1000
Condition: New
0$
Product: Macbook Pro (2021)
Price: $1200
Condition: Resell (Good)
Product: ASUS Vivobook (2021)
Price: $600
Condition: New
Product: HP Notebook (2021)
Price: $800
Condition: New
Find new products...
Products you may need based on your search
Product: HP Mouse
Price: $25
Add to wishlist
Product: Work perch
Price: $25
Add to wishlist
Product: JBL Headset
Price: $25


PRICEBITE
Budget Tracker
Kwaku Ananse
Find new products...
DELL XPS 15
Specifications
Processor: Core i7
RAM: 16GB
Storage: 512 GB SSD
Graphics Card: NVIDIA GTX 1650
Retailer:
Coggs and Wheels Electronics
Retailer Reviews:
4.5/5 - 250 Reviews
Click to Read Reviews
Price: $ 780
In Stock
Last Updated 24/11/2024 11:42
Retailer: Coggs and Wheels Electronics
Buy Now
Click on the link below to purchase product on retailers website. Discount is automatically applied.
Add for monitoring
We will alert you if the price goes lower or the promotional period is about to end.
Other Views
-40% OFF! Now: $ 780
Original Price: $ 1300
About this item
Immersive Visuals: Watch content come alive with sharp detail and true-to-life colour, and rich, cinematic sound
Touch Function Row: Toggle between media and function keys easily and bring forward only the icons you want
Seamless Glass Touchpad: A haptic touchpad provides precise responsive feedback. Sleek glass across the palm rest feels friendlier to the touch
Power in Motion: The XPS 14 perfectly balances performance and mobility in a stunning form factor. Create on the go with its lightweight 3.7 lb.* design, and slim 18 mm size.
If you purchase this, you may also need:
Sellers Note

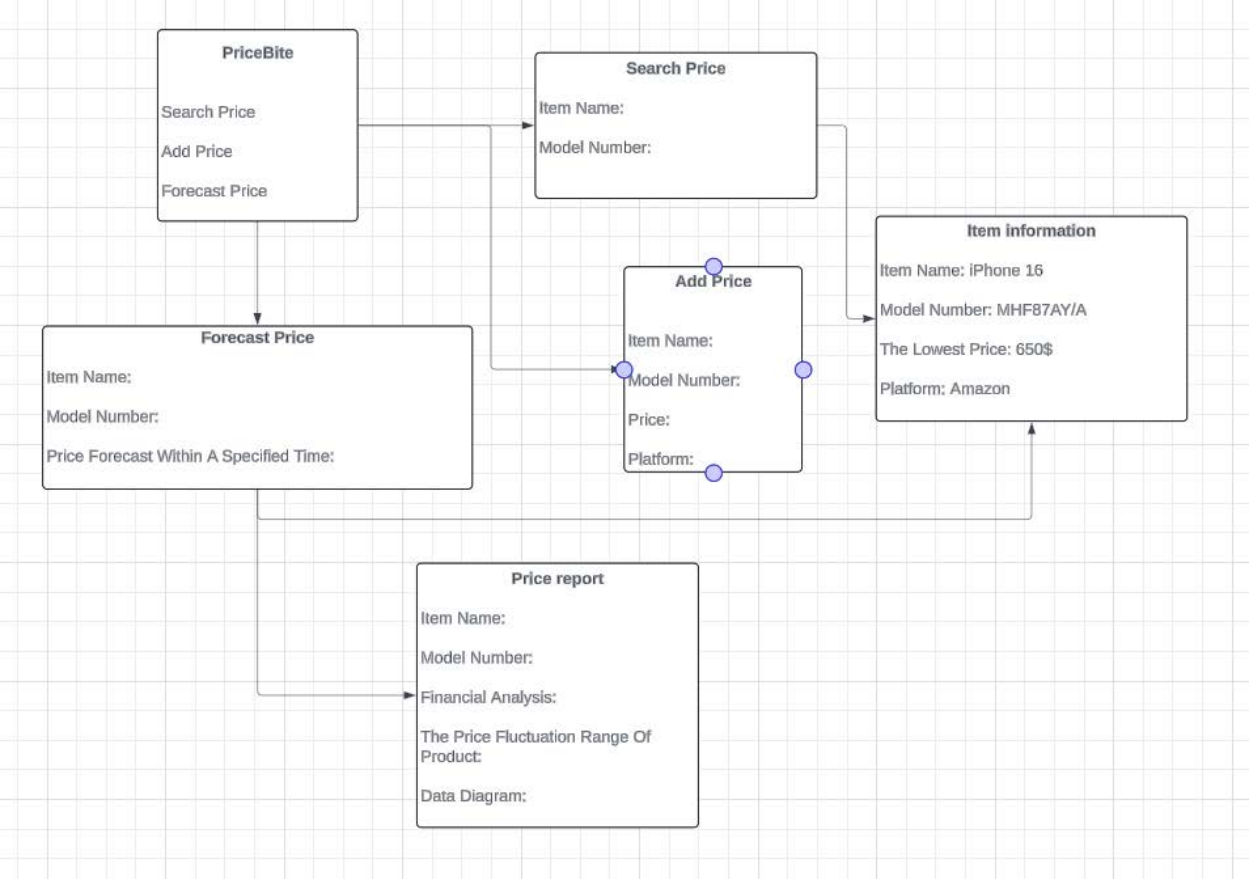

PRICEBITE
Kwaku Ananse
WISH LIST
Monitored Purchases
Price Comparison
Product
Alternative Product
Performance
Current Price
Alternative Price
Savings
MacBook Air
Dell XPS 13
Comparable specs
$1200.00
$1000.00
$200.00
Swap
Beats Earbuds
Samsung Galaxy Buds 2
Similar sound quality
$200.00
$120.00
$80.00
Swap
HP HyperX Mouse
Logitech G305
Similar performance
$40.00
$25.00
$15.00
Swap
JBL Party-box 110
Sony SRS-XP500
Comparable sound
$350.00
$220.00
$130.00
Swap
HP Spectre
Lenovo Yoga 7i
Similar specs
$900.00
$770.00
$130.00
Swap
Google Pixel 9 Pro
Samsung Galaxy S23 Ultra
Comparable flagship
$1699.00
$1400.00
299.00
Swap
Click the Swap button to replace the product in your watch list with the alternative product. PriceBite will track the replacement to make sure you get the best price!
**Disclaimer: This is a machine learning model and the results are solely predictions. We would try to alert you before the estimated time and after. Happy Savings.

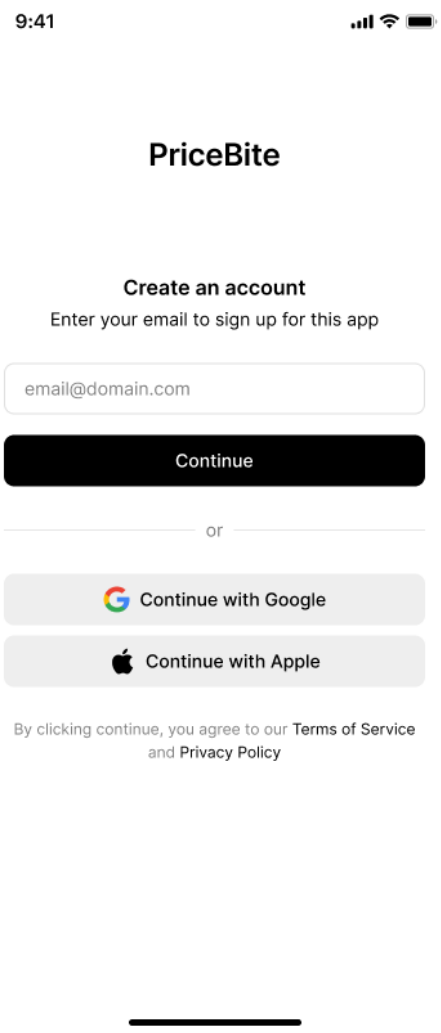

PRICEBITE
Kwaku Ananse
Set Up Your Preferences
PriceBite will learn from your preferences to offer products that meet your quality needs!
Help us understand your needs to recommend the best electronics for you.
Academic Profile
Course of Study
Select Your Course
Educational Level
Select Year of Study
Set Budget Constraints
Semester Budget
Enter your budget in USD
Would you like recommendations to be based on budget plan?
Yes
No
Would you like to set a price threshold for alerts?
Yes
No
Shopping Preferences
What do you look for in a product?
Performance (e.g., processing power, graphics)
Affordability
Brand reliability
Eco-friendliness (repurposed/used products)
Would you like suggestions for peripherals (e.g., keyboards, mice)
Yes
No
Do you prefer new or used electronics?
Select Year of Study
Save Changes
You can update your preferences at any time from your profile settings.

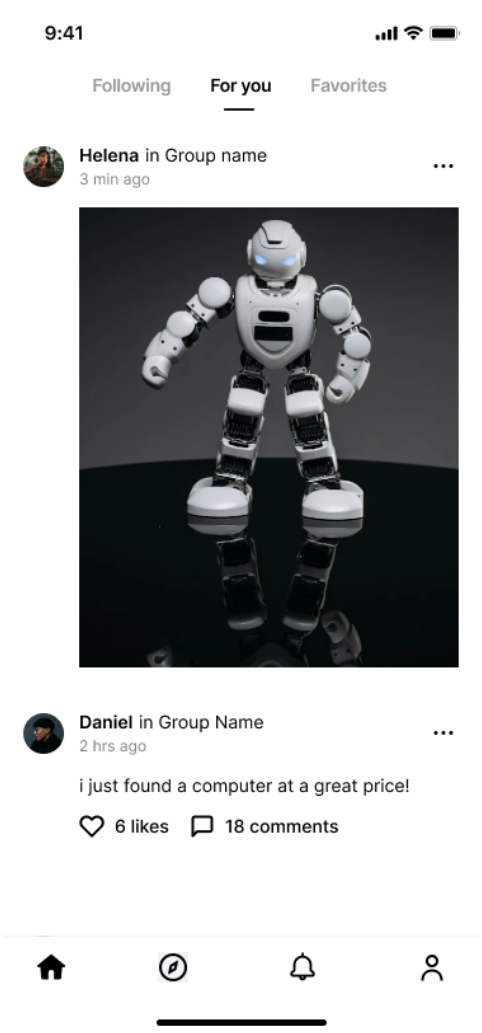

PRICEBITE
Budget Tracker
Kwaku Ananse
Choose a category and set your maximum price to get the best suggestions
Additional Filters
Condition
All
New
Resell
Brand Preferences
Hold Shift to Select Multiple
Customer Reviews:
& UP
Show More
Apply Filters
Categories
Select a category
Customize Quick Categories
Price
0$
2000$
Enter Max ($)
Enter Max($)
Search

Implementation

Storyboard and Prototype forMobile Devices:




9:41
PriceBite
Create an account
Enter your email to sign up for this app
email@domain.com
Continue
or
Continue with Google
Continue with Apple
By clicking continue, you agree to our Terms of Service and Privacy Policy


9:41
Following
For you
Favorites
Helena in Group name
3 min ago
Daniel in Group Name
2 hrs ago
i just found a computer at a great price!
6 likes
18 comments