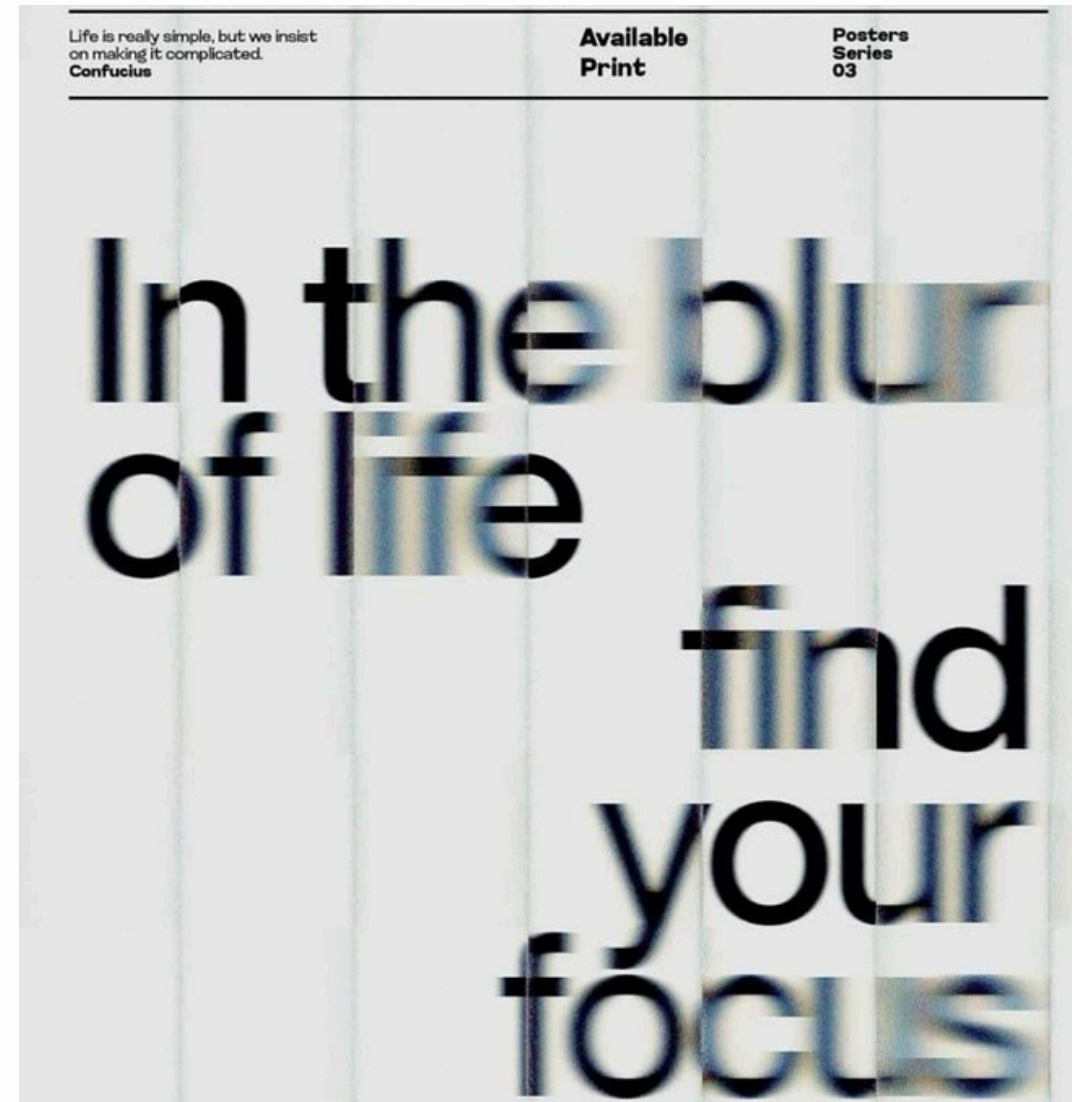




DESIGNING A WEBSITE FOR ONLINE BOOKSTORE

ONG KAI FENG, IAIN

Interaction design process

I have chosen to develop a website for an Online Bookstore with checkout e-form services for eBook purchase (E-Commerce)

(Problems identified)

Navigation and Discoverability

- Poorly organized categories or genres.
- No clear search or filtering options (e.g. by author, genre, price).
- No recommendations or best-sellers shown.

Post-Purchase Uncertainty

After paying, users may not clearly know:

- Where to download the eBook.
- Whether the payment was successful.
- How to get help or contact support.

Checkout Complexity

Users abandon the purchase midway due to:

- Too many form fields.
- No visual progress indicator.
- No clear confirmation or receipt after payment.

Accessibility limitations

The platform isn't usable for people with visual, cognitive, or physical impairments.

- No screen reader compatibility.
- Poor contrast or font readability.
- Difficult navigation using only keyboard.

Stakeholder identification (Internal)

Customers

Goals:

- Find their desired books fast and purchase it
- A smooth and secured experience when navigating through the

Expectations:

- Easy navigation, smart filters, and good search results
- A fast, mobile-friendly checkout process
- Safe payment with visible security
- Clear confirmation and download after purchase

Payment service providers

Goals:

- Facilitate secure and seamless online transactions.
- Ensure customers trust in the payment process.
- Minimize transaction errors and chargebacks.

Expectations:

- That the payment system is properly connected.
- The checkout is secure and follows safety rules.
- Users trust the payment process.
- There are no major errors during payment.

Stakeholder identification (External)

Store Manager

Goals:

- Manages the e-commerce business; caring about smooth operations, inventory, and sales

Expectations:

- An efficient, intuitive back-end to add/edit book listings
- Sales analytics and easy order management tools for uploading and managing books
- A secure and reliable checkout system
- A way to track orders and see sales reports

Web Developer

Goals:

- To build a user-friendly, functional, and responsive website
- Ensure security, performance, and accessibility
- Ensuring future updates or improvements are easy to implement

Expectations:

- Clear ideas and feedback from the team.
- A simple design that's easy to build and test.
- A layout that works well on all devices (responsive).
- A site that's easy to update later on.

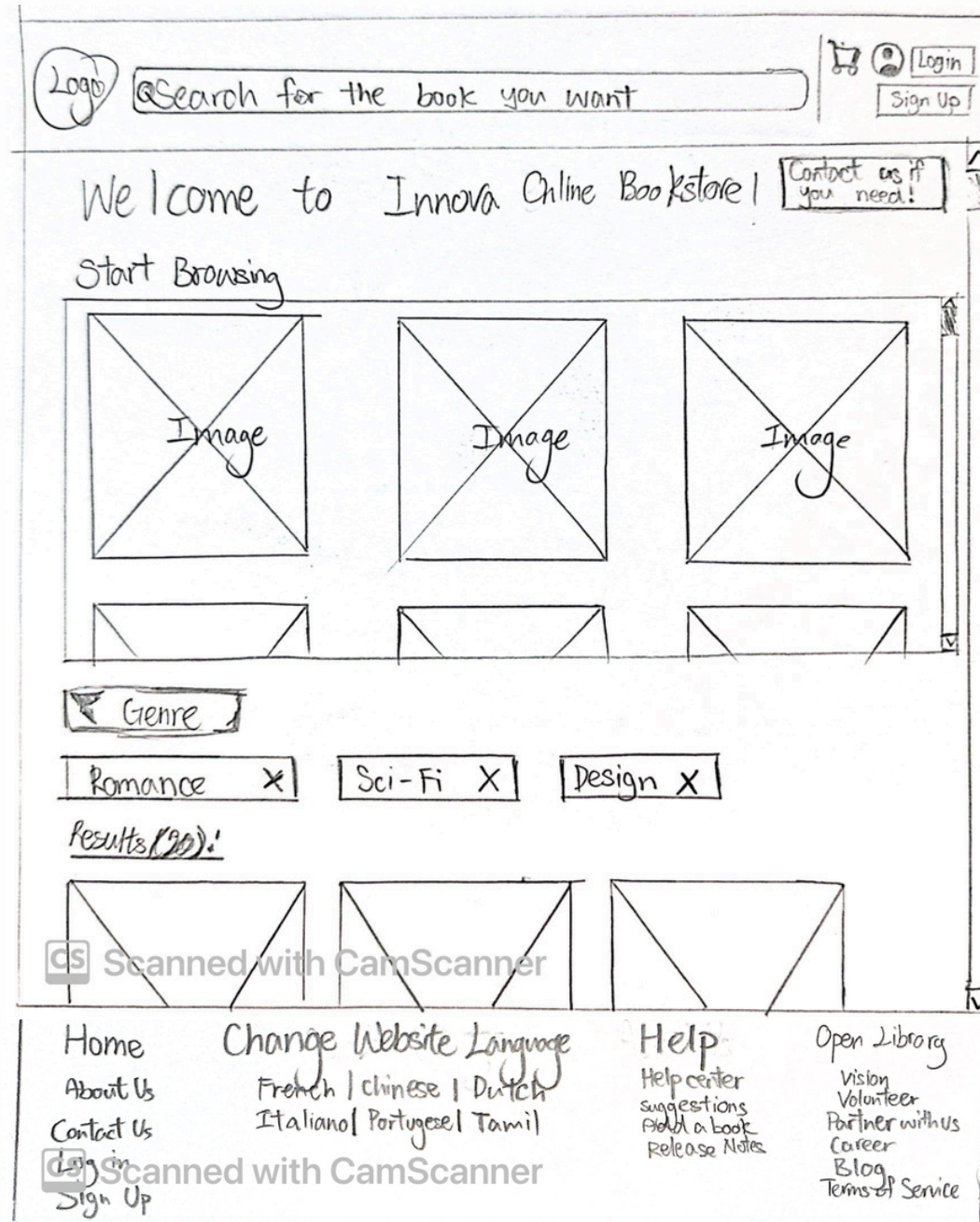
Interaction design process

(Design Goals)

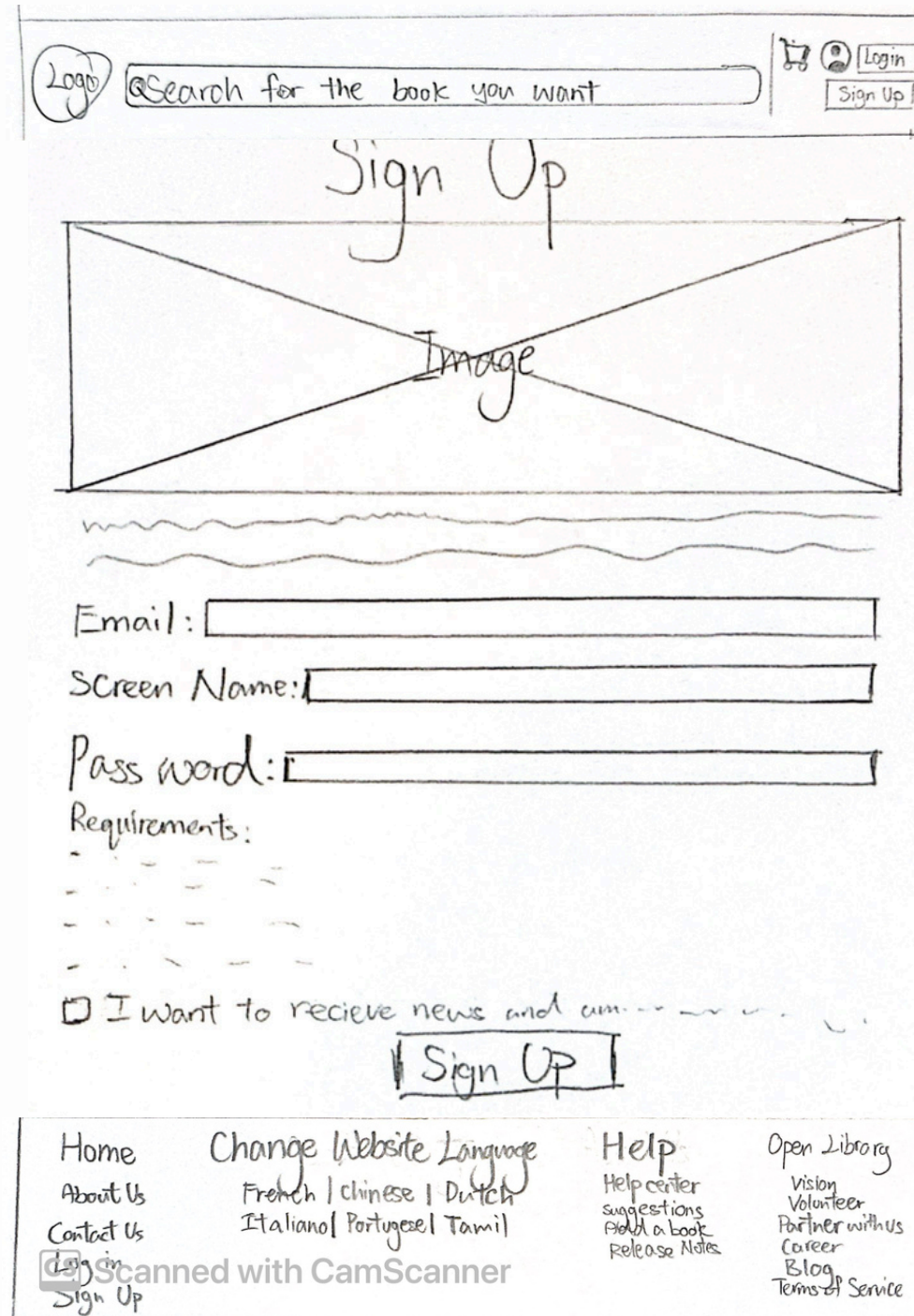
- The goal of designing a website for this online bookstore is to allow users to search, preview, and select eBooks easily. **(Good Navigation and Discoverability)**
- Create a simple, secure, and fast checkout form (e-form). **(Efficient checkout)**
- Ensuring it's accessible for all users, including those with less tech experience. **(Accessibility)**

Interaction design process

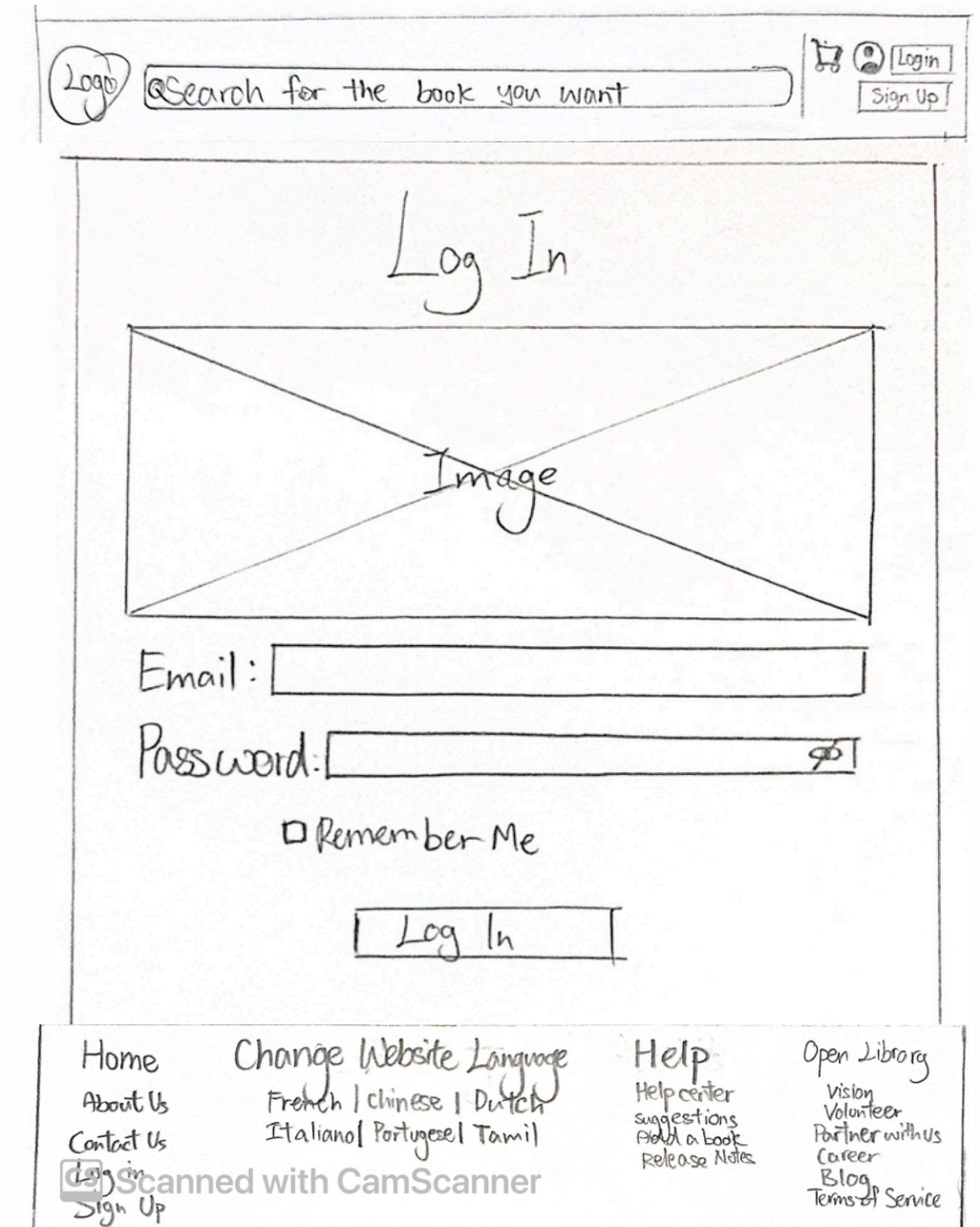
First user research studies: Sketches



Home Page



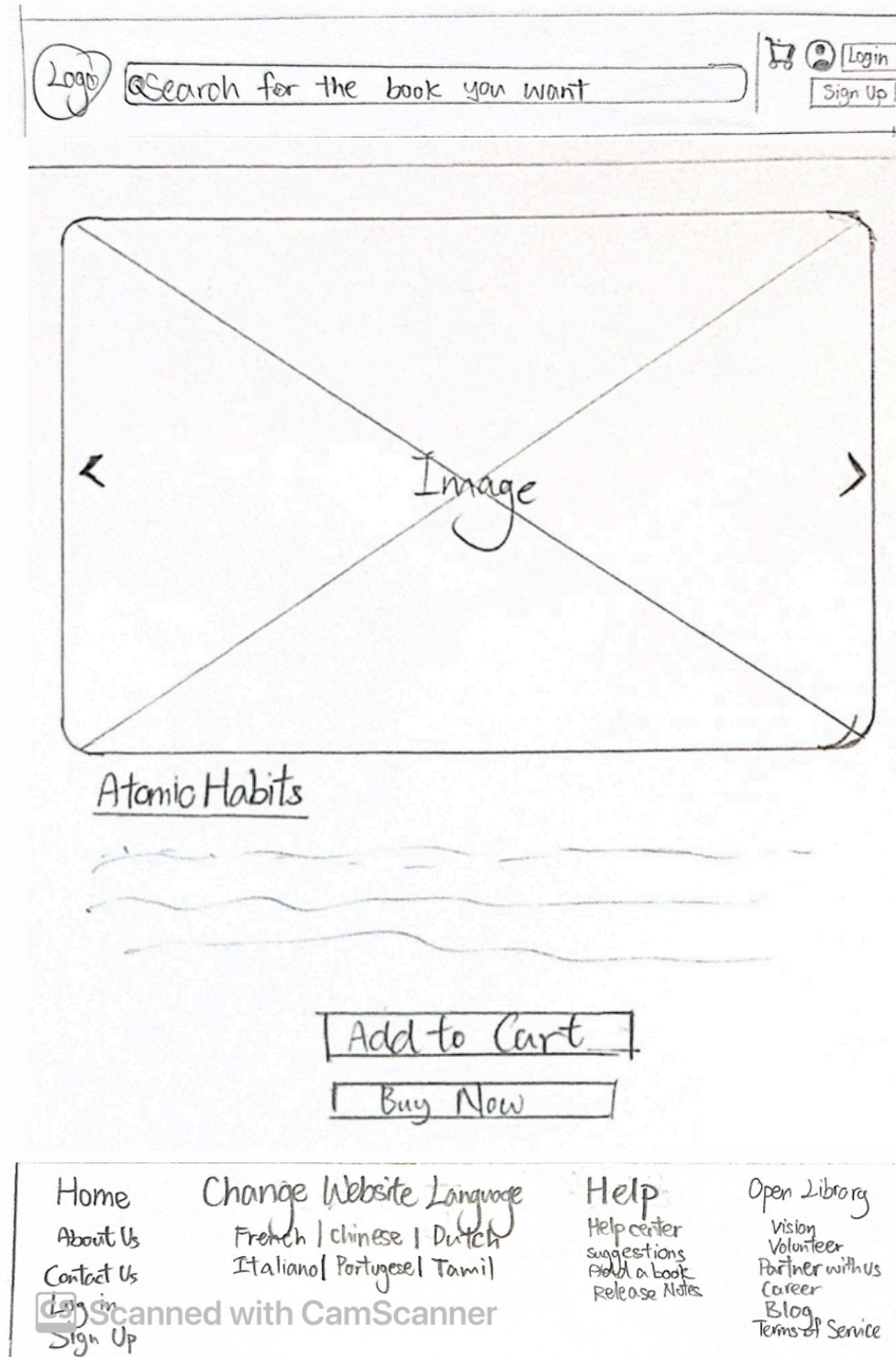
Sign Up Page



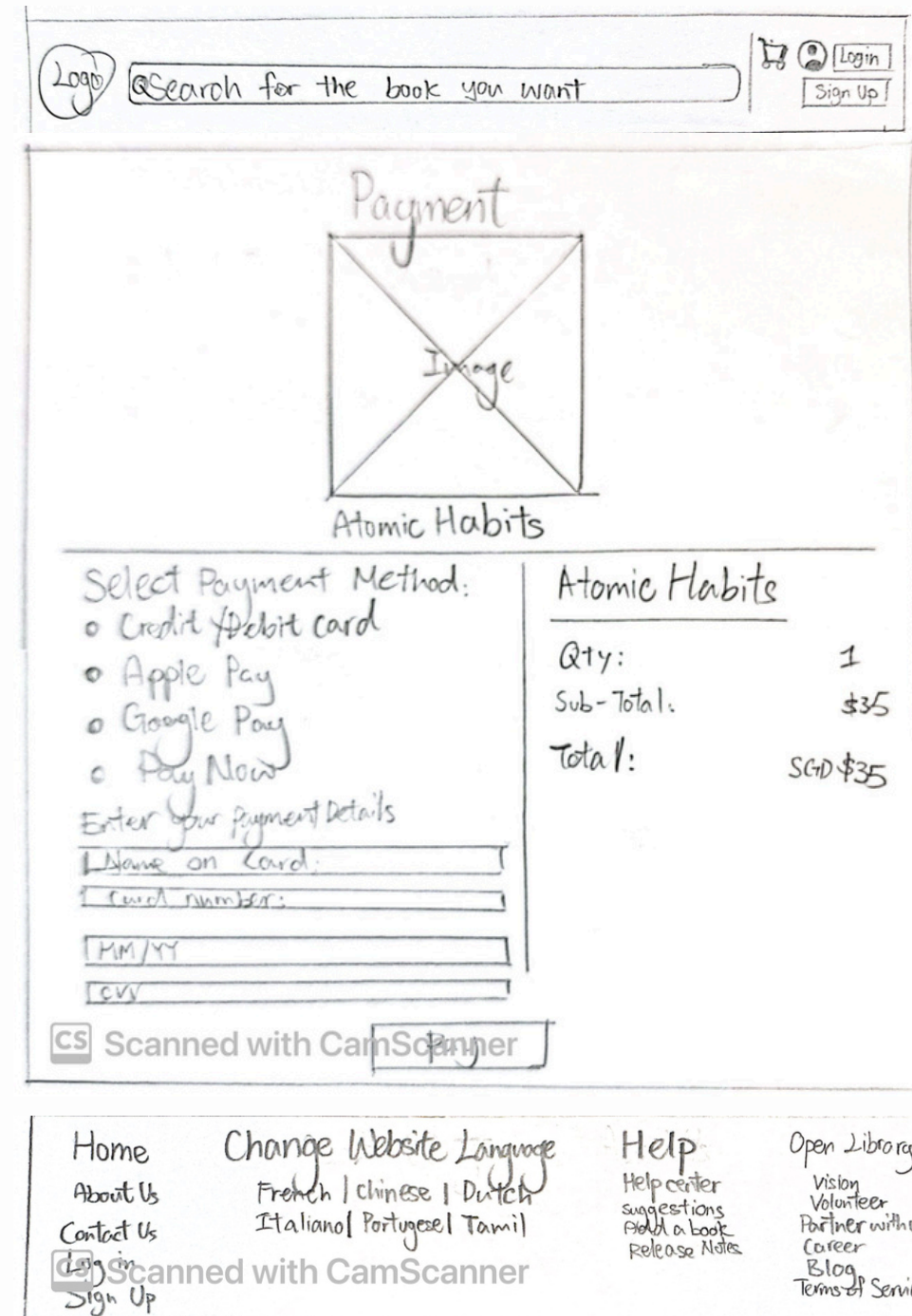
Log In Page

Interaction design process

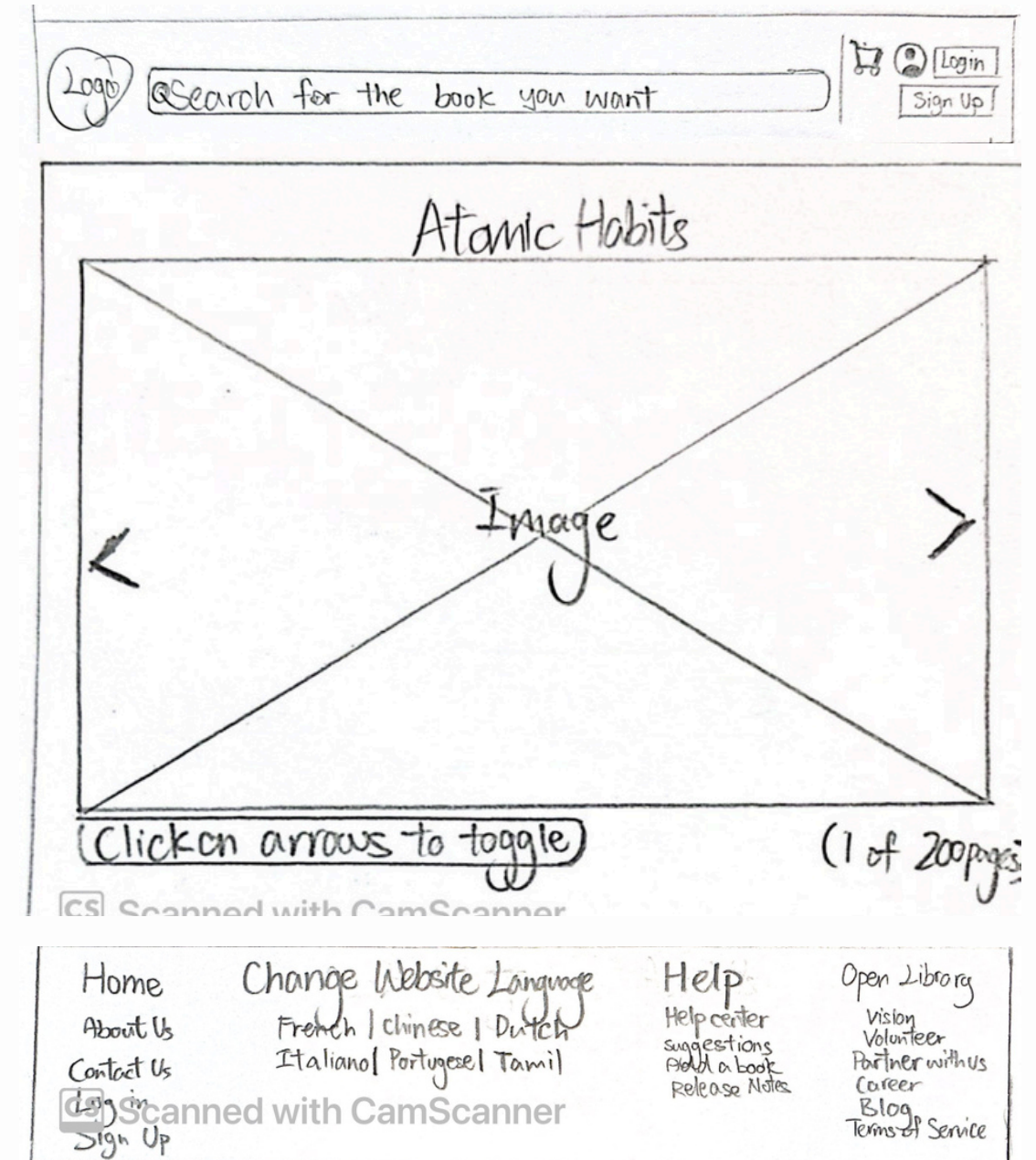
First user research studies: Sketches



Preview Page



Payment Page



Paid eBook Page

User Studies

I decided to use a survey as a way to study the users, to understand these questions will help me gather feedback on user's needs, expectations, and preferences, which would be perfect for my user research.

Survey questions:

Section 1

1. How often do you read eBooks?
2. What device do you mostly use to read eBooks?
3. Where do you usually buy or get your current eBooks from?

Section 2: Online shopping preference

4. Where do you usually buy or get your current eBooks from?"
5. Have you ever abandoned a purchase online? If yes, why?

Section 3: Checkout and eforms experience

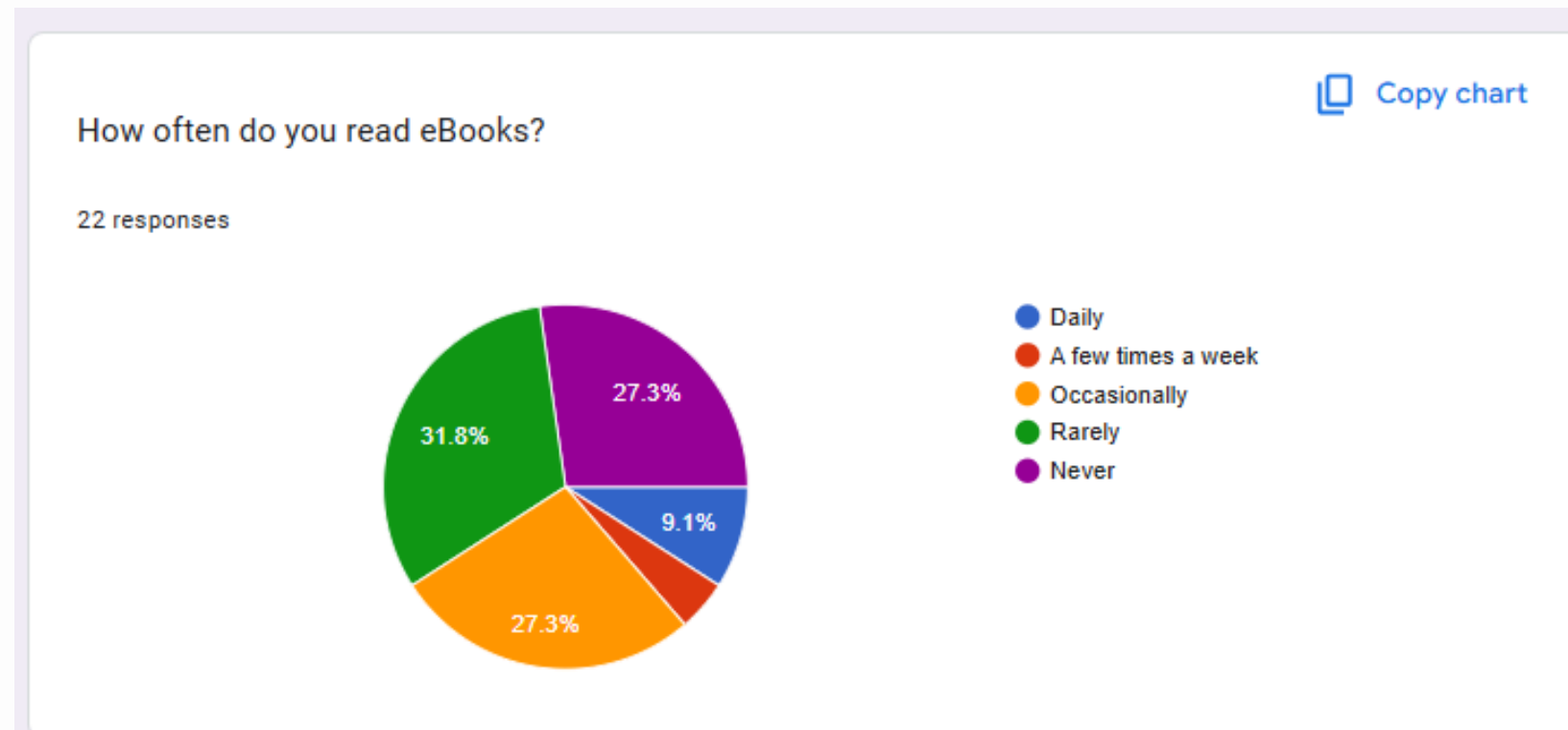
6. What frustrates you the most about online checkout forms?
7. What payment methods do you prefer when buying eBooks?
8. Do you feel confident when making online payments?

Section 4: User Interface Expectations

9. What features do you expect in an online bookstore?
10. What would make you trust an online bookstore enough to buy from it?

User Studies (Survey Analysis)

Question 1: How often do you read eBooks?

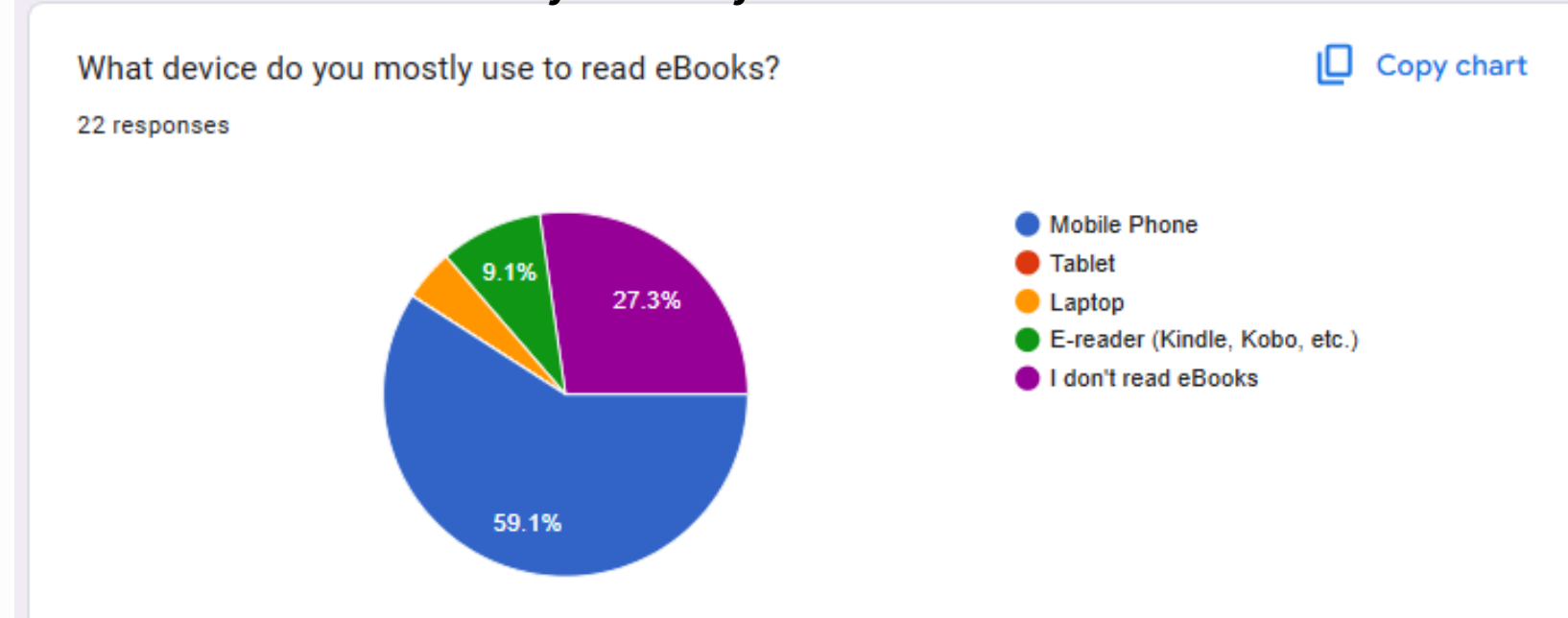


Q1 analysis:

According to the pie chart's results, only a handful of people **(13.6%)** have a higher tendency of reading ebooks (from daily to a few times a week). While the majority **(86.4%)** has a lower tendency of reading ebooks (from occasionally to rarely and never).

With regard to these results, I can deduce that most people are not that interested in reading ebooks.

Question 2: What device do you mostly use to read eBooks?



Q2 analysis:

According to the pie chart's results, the majority **(59.1%)** use mobile phones to read eBooks. The second largest group of people **(27.3%)** does not read eBooks. While a small amount **(4.5%)** of people only read through their laptop, tablet, and e-reader, such as Kindle, Kobo, etc.

With regard to these results, I can deduce that most people who read eBooks use their mobile phones to do so. While a handful amount of people does not read eBooks at all.

User Studies(Survey Analysis)

Question 3: Where do you usually buy or get your current eBooks from?

Where do you usually buy or get your eBooks from?

22 responses

i don't read eBooks

app store

If i were to buy then it would be from online shops like kinokuniya

I don't usually read eBooks, however if i do, I will read it through the NLB app

Amazon's Kindle Store

Libby

Read the free ones

I dont usually purchase ebooks, i usually search for free online resources.

amazon

Q3 analysis:

Based on my analysis of the responses for this question, I discovered that there are three common groups of places where people get their current sources for eBooks.

1. **Do not read eBooks** — A significant portion either don't read or rarely read eBooks.
2. **Free or public sources** — NLB app, Libby, free websites, PDFs, piracy.
3. **Paid platforms** — Amazon Kindle Store, Rakuten Kobo, Google Play Books, App Store, Kinokuniya, official websites.

With regard to these results, I can deduce that most people uses free/public sources or they pay on paid platforms.

User Studies(Survey Analysis)

Question 4: Where do you usually buy or get your current eBooks from?



Q4 analysis:

Based on my analysis of the bar chart, there are two groups of people that has different priorities.

Top priorities:

- Easy book search and filters (59.1%)
- Low prices or promotions (59.1%)
- Book previews or descriptions (50%)
- Instant download access (36.4%)

Other important factors:

- Safe and quick checkout (31.8%)
- User reviews and ratings (27.3%)
- Recommendations for similar books (27.3%)

With regard to these results, I uncovered a few essential elements that has to be included in my website.

1. **Easy book search and filters**
2. **Low prices or promotions**
3. **Book previews or descriptions**
4. **Instant download into library**

User Studies (Survey Analysis)

Question 5: Have you ever abandoned a purchase online? If yes, why?

Have you ever abandoned a purchase online? If yes, why?

21 responses

No
no
Nope
yes, takes too long
Yes, as I found better options for the product I initially wanted to purchase
Confirmshaming
Thought premise of a book was good but after reviewing online decided to pass on it
Never, most online platforms does not allow any abandoning of purchase, although if allowed i would.
Yes, checked for better deals at other stores

Q5 analysis:

Based on my analysis of the responses, there are two groups of people as to why they have abandoned a purchase online.

No—many respondents have not abandoned a purchase online before.

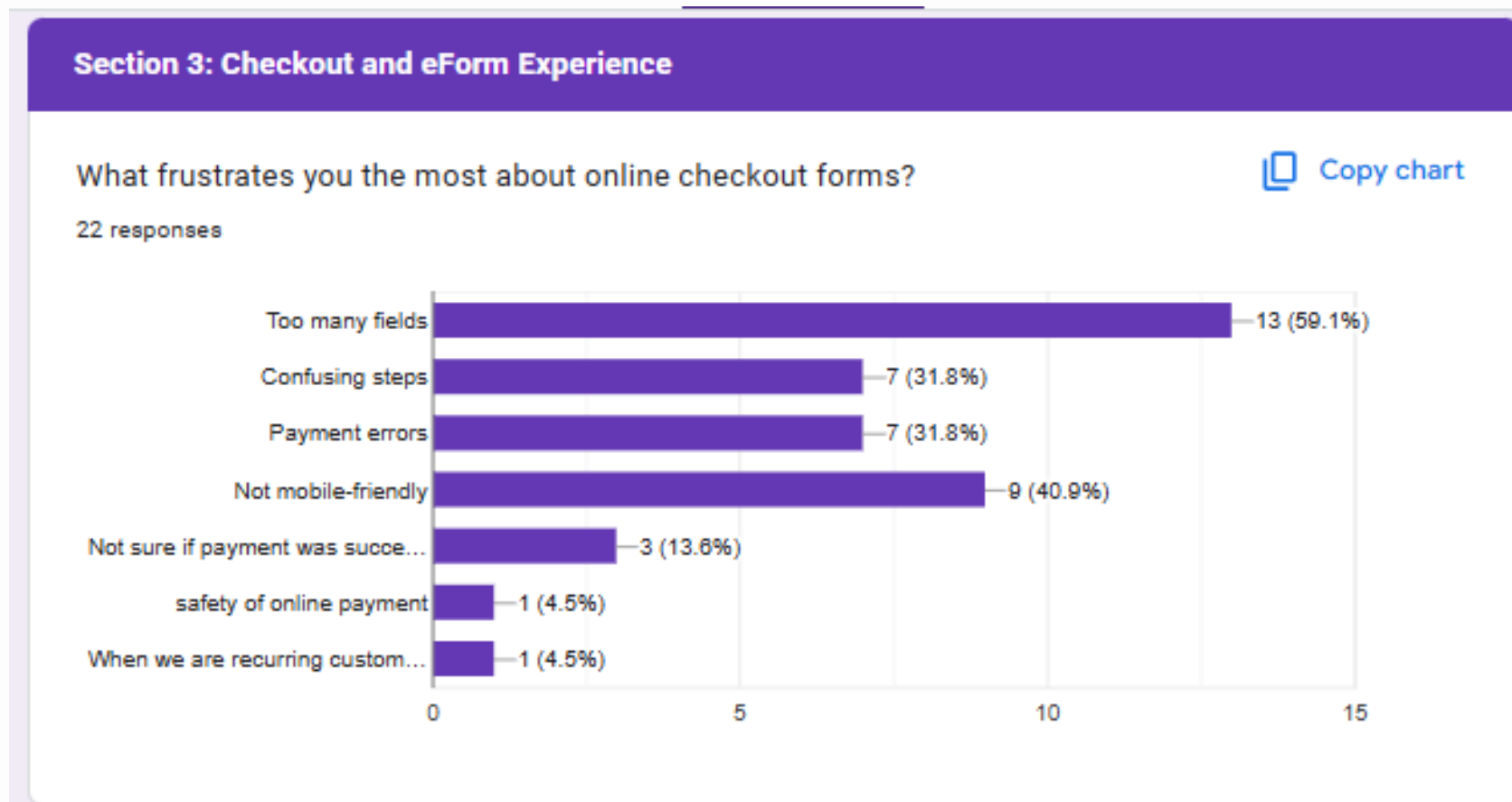
Yes—main reasons given:

- Better options elsewhere; found a cheaper price or a better deal.
- Slow or long checkout—takes too long to complete.
- Changed mind—impulse buying reconsidered after review.
- Quality concerns—product not as expected.
- Suspicious website—lack of trust in payment/security.
- Promo/code issues—wanted to use a coupon but couldn't find one.
- Confirmshaming—manipulative checkout prompts discouraged purchase

With regard to these results, I can deduce that the main issue as to why people abandon an online purchase is due to dark UX patterns. Dark patterns are manipulative design practices in websites or apps that are made to confuse or pressure users into doing something they may not want to do. This will be noted of during the designing of the website.

User Studies(Survey Analysis)

Question 6: What frustrates you the most about online checkout forms?



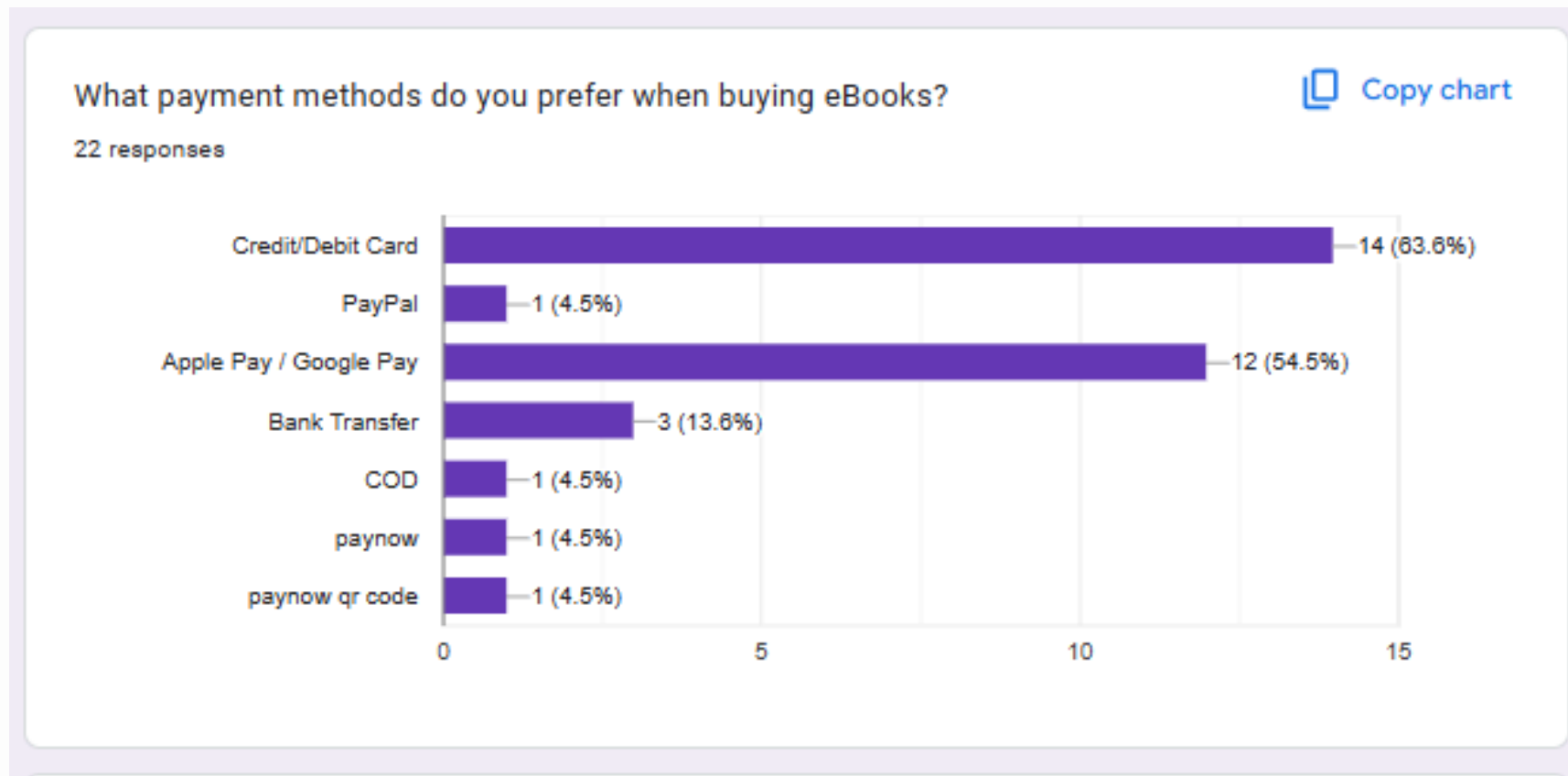
Q6 analysis:

Based on my analysis of the bar chart, the most common frustration is having too many fields **(59.1%)**, followed by it not being mobile-friendly **(40.9%)**. Having confusing steps and payment errors also frustrates a handful in checking out **(31.8%)**. The smaller issues consist of uncertainty if payment succeeded **(13.6%)**, safety concerns **(4.5%)**, and recurring customer process issues **(4.5%)**.

With regard to these results, I can deduce that I should place higher emphasis on reducing the fields and having less confusing steps. However, I will also focus on the smaller issues such as having a payment successful page to reassure users and not include unnecessary steps that confuse users.

User Studies(Survey Analysis)

Question 7: What payment methods do you prefer when buying eBooks?



Q7 analysis:

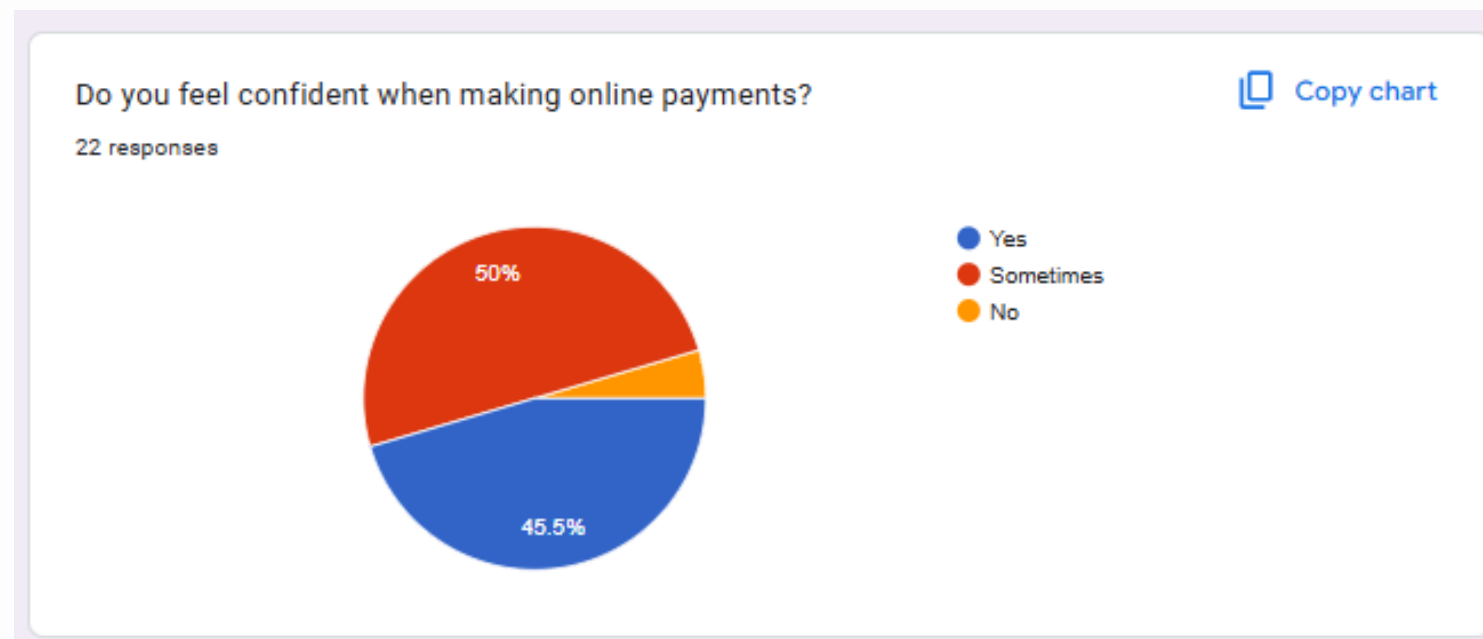
Based on my analysis of the bar chart, the most common payment method is by Credit/Debit Card **(63.6%)**, followed by Apple Pay/Google Pay **(54.5%)**. The least common payment methods are Bank Transfer **(13.6%)**, PayPal **(4.5%)**, COD **(4.5%)**, PayNow **(4.5%)**, PayNow QR Code **(4.5%)**.

With regard to these results, I can deduce that including three payment methods would be sufficient for the majority of the targeted audience (youths to adults aged 16-50) of an eBook website.

The three payment methods would be the top 3 most common methods: credit/debit card, apple/google pay and bank transfer.

User Studies(Survey Analysis)

Question 8: Do you feel confident when making online payments?



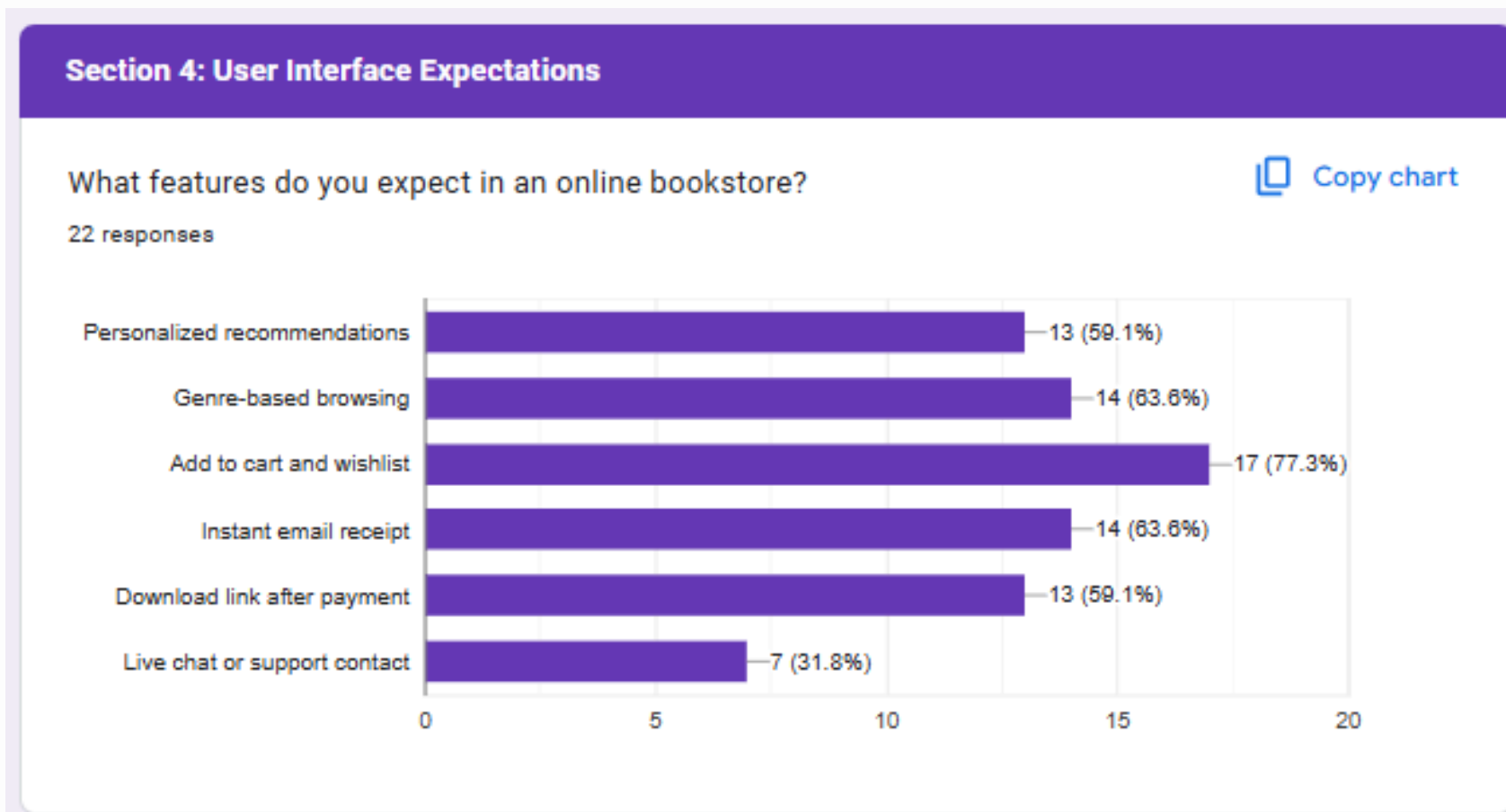
Q6 analysis:

Based on my analysis of the pie chart, the largest group **(50%)** hesitates a lot when making online payments. While the second largest **(45.5%)** is confident when making online payments. The smallest group **(4.5%)** is not confident when making online payments.

With regard to these results, I can deduce that I should design a checkout/payment page as straightforward as possible where users can recognize rather than recall, which prevents the frequency of making errors.

User Studies(Survey Analysis)

Question 9: What features do you expect in an online bookstore?



Q9 analysis:

Based on my analysis of the bar chart, the most desired feature (**77.3%**), is the “Add to cart and wishlist button.” Followed by genre-based browsing and an instant email receipt (**63.6%**), personalized recommendations, and a downloading link after payment (**59.1%**). Lastly, the least popular feature is live chat or support contact (**31.8%**).

With regard to these results, I can deduce that I should include these features:

- **Add to cart and wishlist button**
- **Genre-based browsing**
- **Instant email receipt**

The least popular feature, “live chat or support contact,” is not favorable in this instance of an online bookstore. It would be much more favorable on other services.

User Studies(Survey Analysis)

Question 10: What would make you trust an online bookstore enough to buy from it?

What would make you trust an online bookstore enough to buy from it?

21 responses

- reviews
- it's good ratings and clear steps on how i can access the book aft purchase
- Reviews from trusted brands
- the design of the website and making sure it's a safe website
- Verifiable Credentials and Task Feedback
- Verified by people that are well regarded in online reading of literature
- with many many good reviews
- Reputation and trusted reviews.
- good reviews, well known reputation

Q10 analysis:

Based on my analysis of the responses,

- Customer reviews, and ratings. Multiple mentions of positive reviews, good ratings, and feedback from other buyers.
- Reputation & Trusted Brands – Trust in well-known, credible, or highly regarded sources.
- Clear Purchase Process – Straightforward steps on accessing purchased books.
- Website Design & Security – Safe-looking, professional design with security assurances.
- Verified Credentials – Proof of authenticity and legitimacy through certifications or verifiable feedback.

With regard to these results, I can deduce that these features are what I should add into my design to ensure a higher number of users purchasing ebooks from this website which I've designed. Since safety and precautions are highly emphasized one,

Security Feature

I have decided to add a few security features into my website to ensure the customer's safety, since safety is a concerning factor for most through the survey analysis. The few security features that I would incorporate into my website to safeguard the safety of the customer's information and privacy are:

1. **SSL Certificate (HTTPS)**
2. **Third Party Services**
3. **Form Validation and Input Protection**
4. **Email Confirmation and Receipt System**
5. **Two-Factor Authentication**

Security Feature

1. SSL Certificate (HTTPS)

SSL (Secured Sockets Layer) certificate is basically a digital certificate that authenticates a website's identity and enables an encrypted connection between a web server and a web browser. I will be including a small “lock icon” that will be located in the search bar right before “https://.”

2. Third Party Services

Third party services are when a service provider processes payments for two parties. Examples of such providers are PayPal, Stripe, and Apple/Google Pay. These networks provide payment processing services, including payment gateways, fraud protection, and multi-currency support. Hence, I will be including these third party services as the payment methods.

3. Form Validation and Input Protection

Form validation ensures that data submitted through web forms is accurate, consistent, and conforms to the specific rules and requirements before it is processed or stored. Examples of such are like “Please enter a valid email, No spaces allowed..” By incorporating this into my design, it assures user that this is a secured and trustable website.

Security Feature

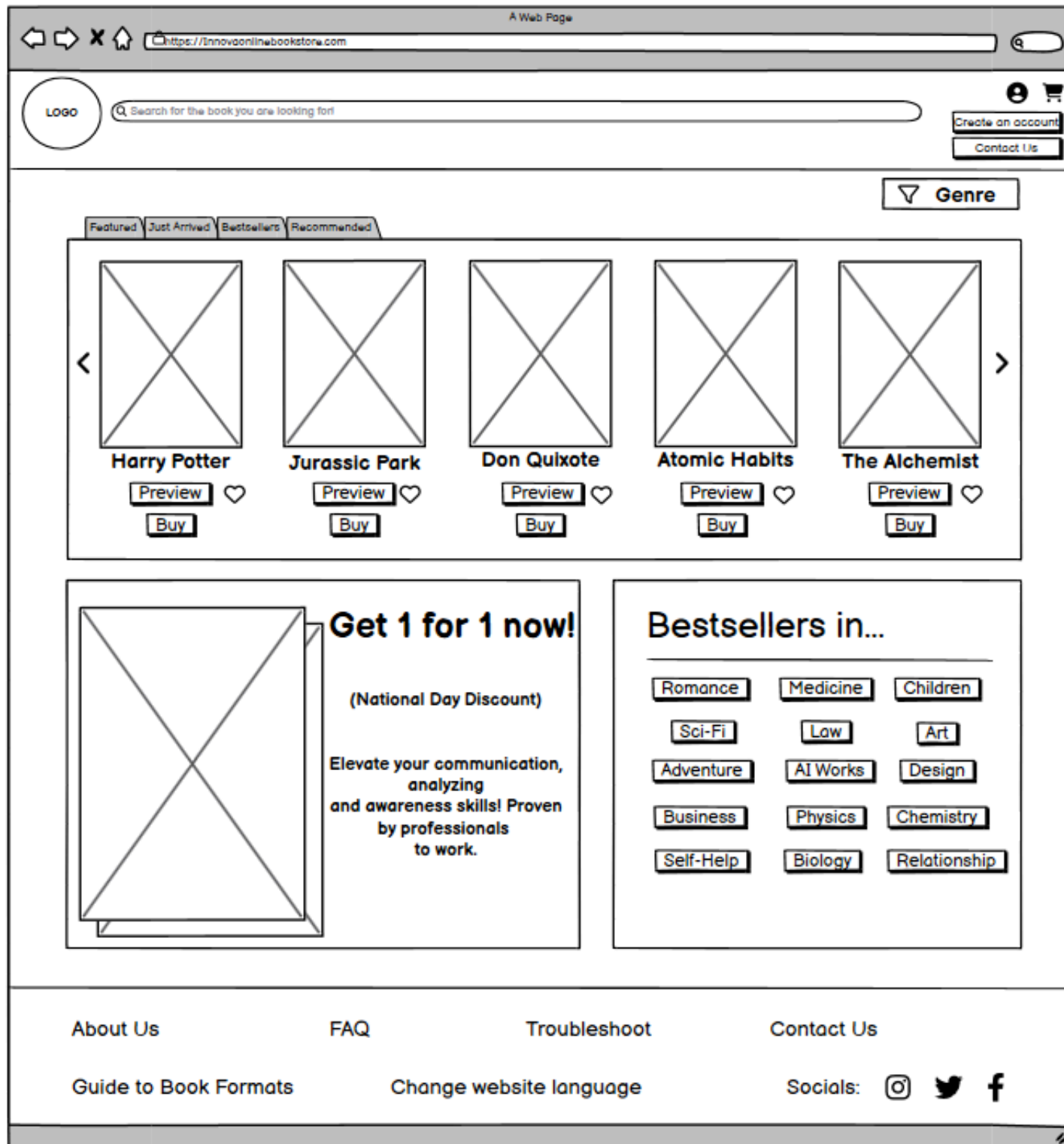
4. Email Confirmation and Receipt System

After payment, adding an email verification to verify if the one that purchased the item is the same user. Incorporating a “Payment is successful” page provides users with feedback, letting them know that their order has been processed by the system. Additionally, I will be enabling users to view the order once paid, allowing users to have proof of purchase in case of any accusations for not paying.

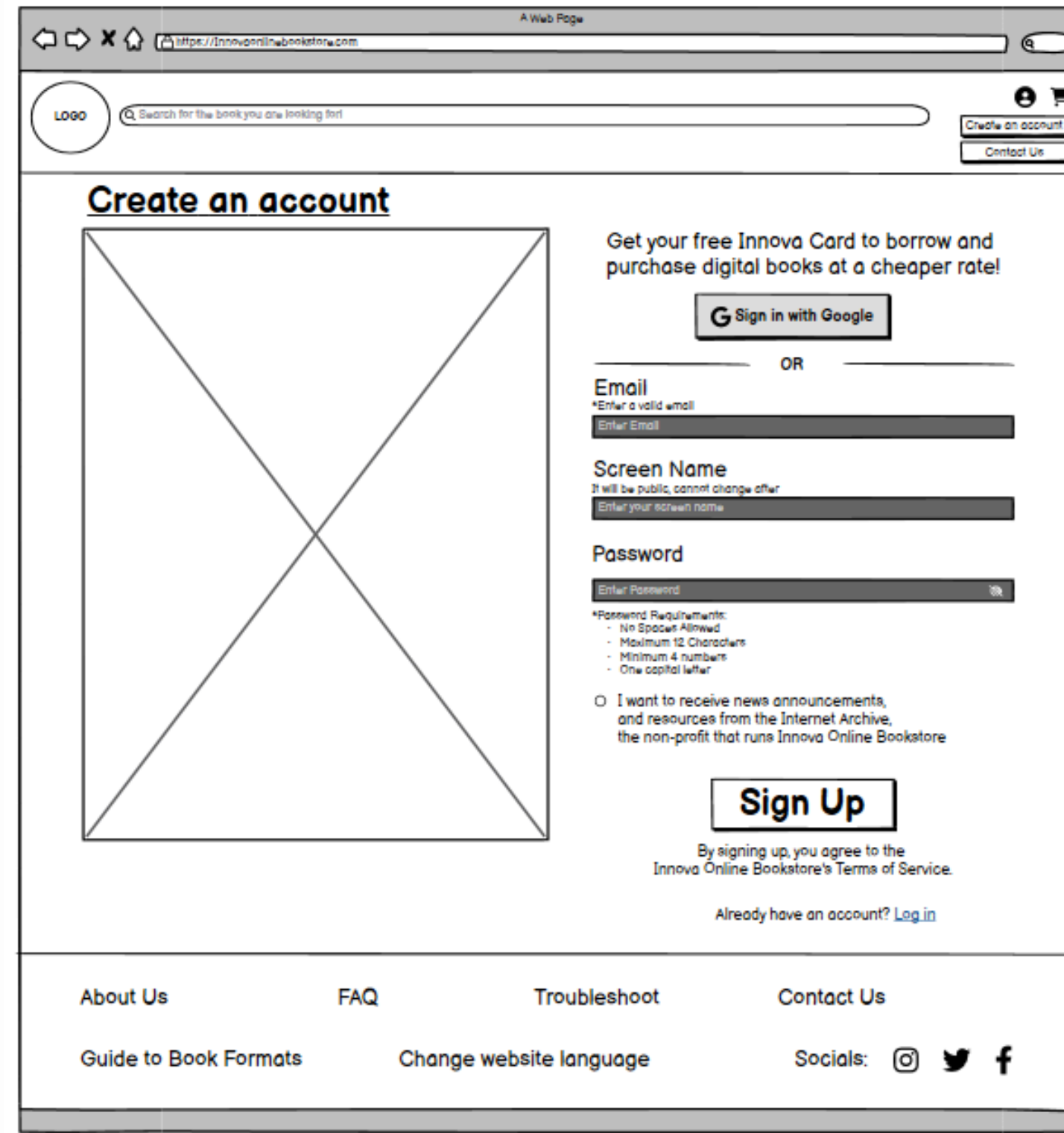
5. Two-Factor Authentication

Adding a required pin when signing in serves as an extra layer of protection for users with multiple accounts.

Wireframes (Balsamiq)

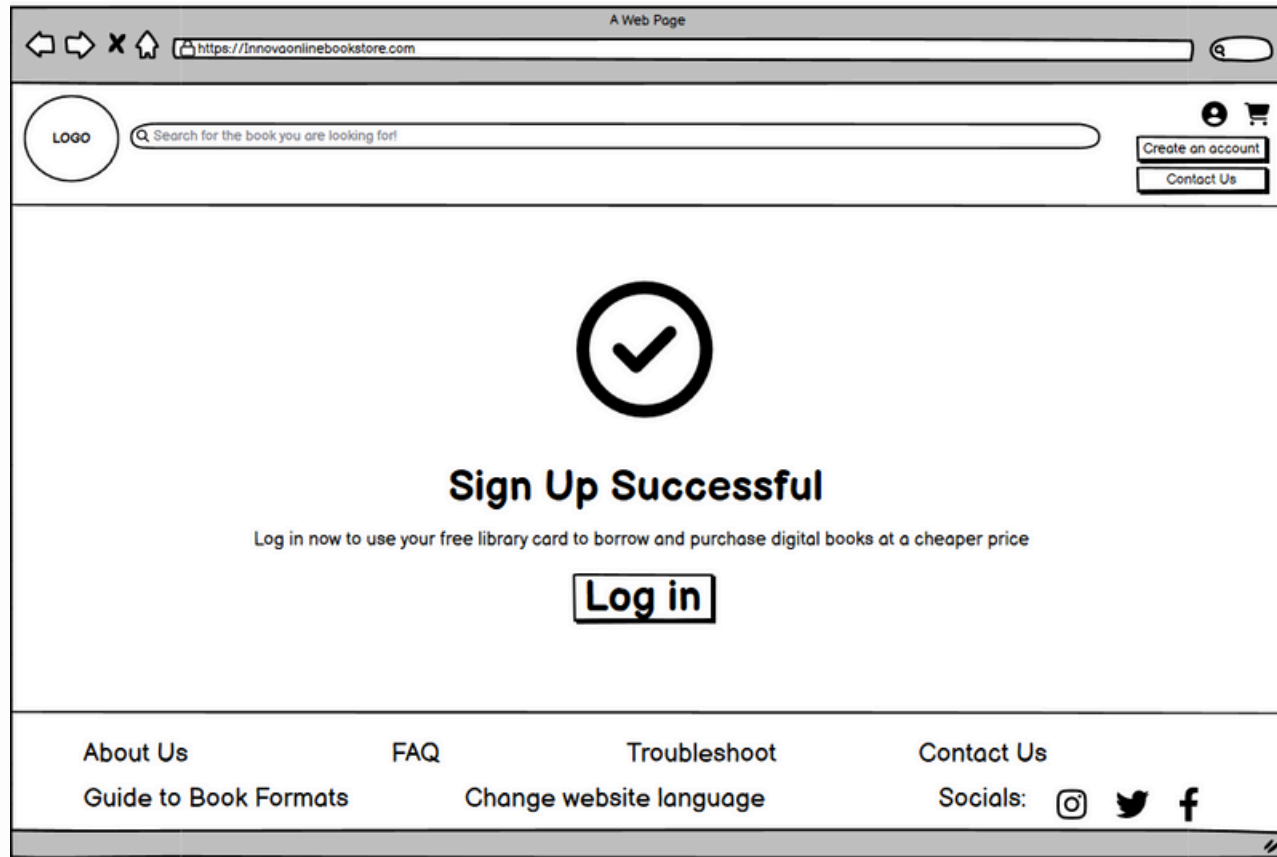


Home Page

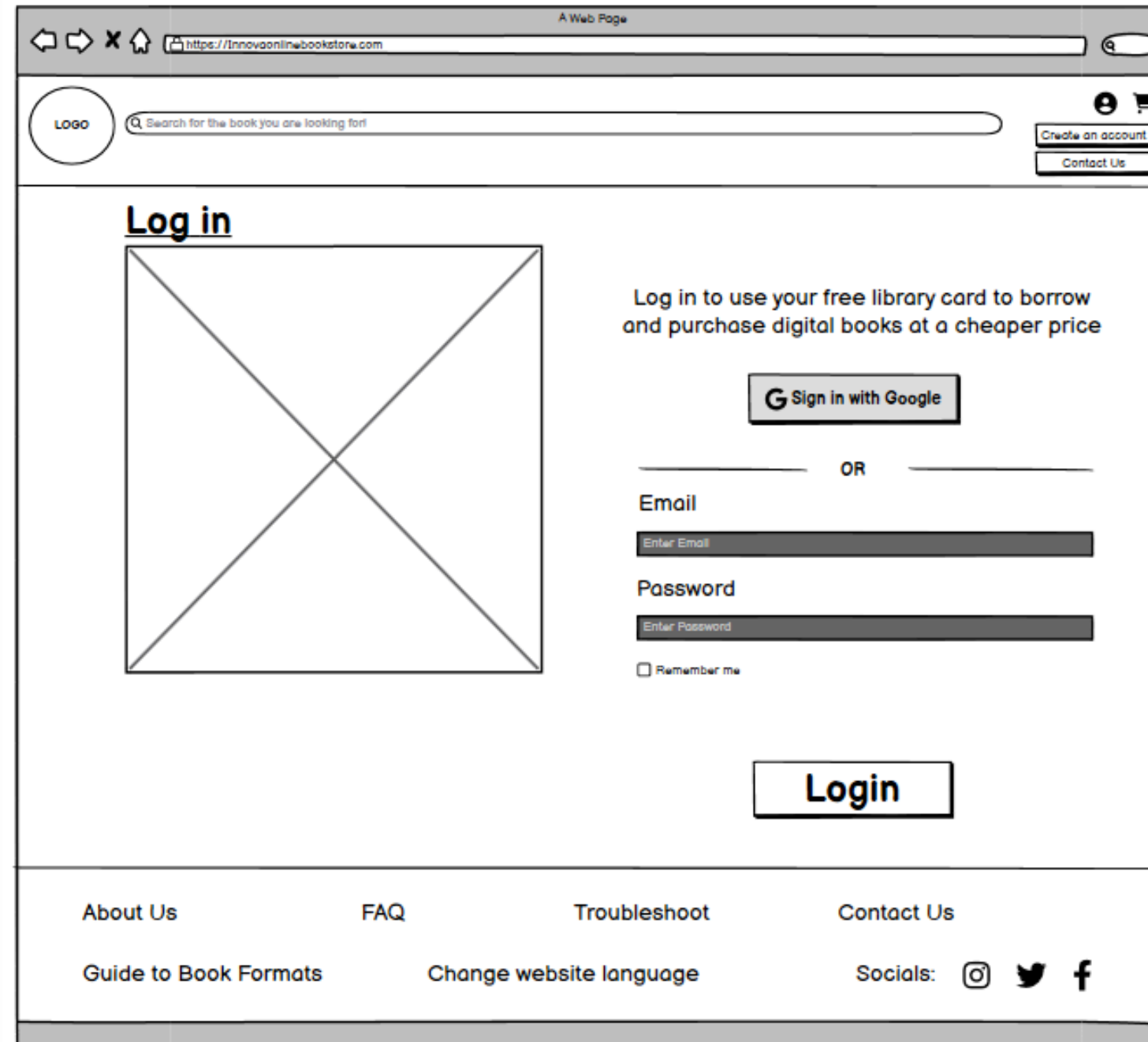


Sign Up Page

Wireframes (Balsamiq)

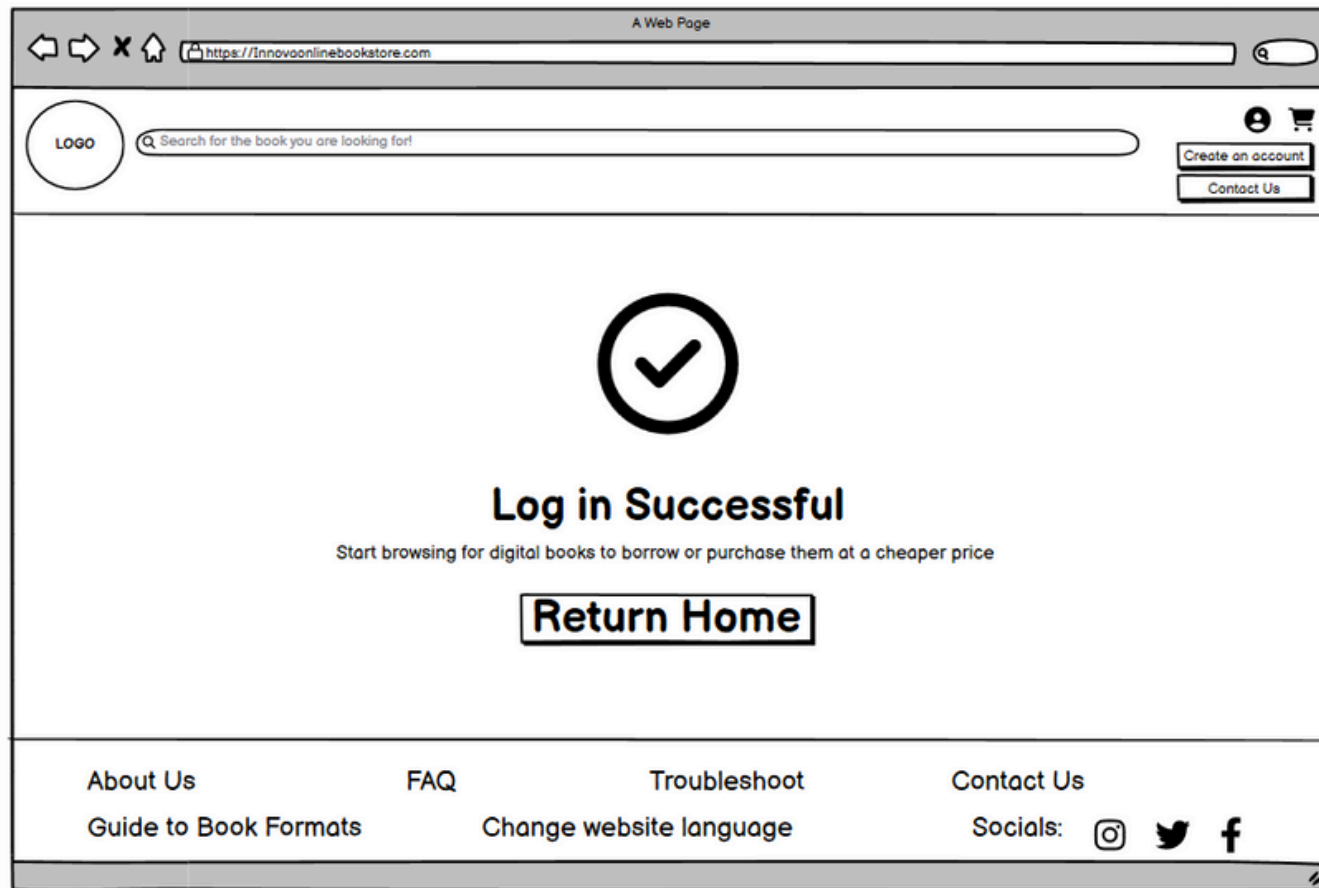


Sign Up Successful Page

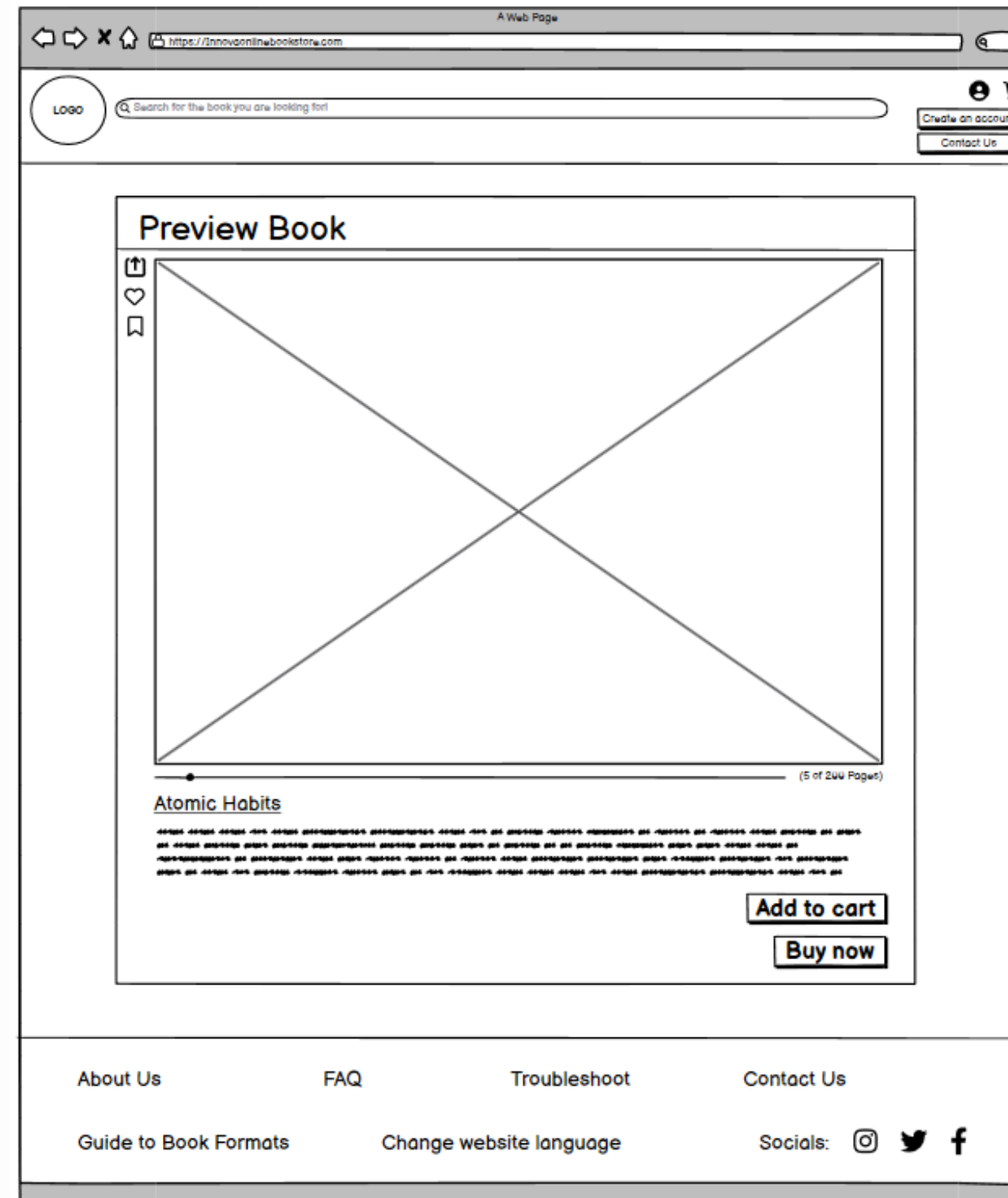


Log in Page

Wireframes (Balsamiq)



Log In Successful Page



Preview Page

Wireframes (Balsamiq)

A wireframe of a payment page for 'Innova Online Bookstore'. The page has a header with a logo, a search bar, and links for 'Create an account' and 'Contact Us'. The main content area is divided into two columns. The left column contains a 'Payment' section with a note '*All transactions are secured and encrypted', a list of payment methods (Credit/Debit Card, Google Pay, Apple Pay, PayPal, Bank Transfer), a form to 'Enter your payment details' (Name on Card, Card Number, MM/YY, CVV), a link to 'Terms and Conditions', and a 'Pay' button. The right column features a large placeholder image with a diagonal 'X', a table for 'Atomic Habits' (Qty: 1, Sub-Total: \$35, Total: SGD\$35), and a footer with links for 'About Us', 'FAQ', 'Troubleshoot', 'Contact Us', 'Guide to Book Formats', 'Change website language', and 'Socials' (Instagram, Twitter, Facebook).

Payment

*All transactions are secured and encrypted

- ☐ Credit/Debit Card
- ☐ Google Pay
- ☐ Apple Pay
- ☐ PayPal
- ☐ Bank Transfer

Enter your payment details:

Name on Card:

Card Number:

MM/YY

CVV

[Terms and Conditions](#)

By clicking pay, you agree to Innova Online Bookstore's Terms and Conditions

Pay

Atomic Habits

Qty:	1
Sub-Total:	\$35
Total:	SGD\$35

About Us FAQ Troubleshoot Contact Us

Guide to Book Formats Change website language Socials:

Payment Page

A wireframe of a payment successful page for 'Innova Online Bookstore'. The page has a header with a logo, a search bar, and links for 'Create an account' and 'Contact Us'. The main content area is centered and features a large checkmark icon, the text 'Payment Successful', and a message 'Your eBook is in your library, start reading your eBook now!'. Below this is a 'Read now' button. The footer is identical to the payment page, with links for 'About Us', 'FAQ', 'Troubleshoot', 'Contact Us', 'Guide to Book Formats', 'Change website language', and 'Socials' (Instagram, Twitter, Facebook).

Payment Successful

Your eBook is in your library, start reading your eBook now!

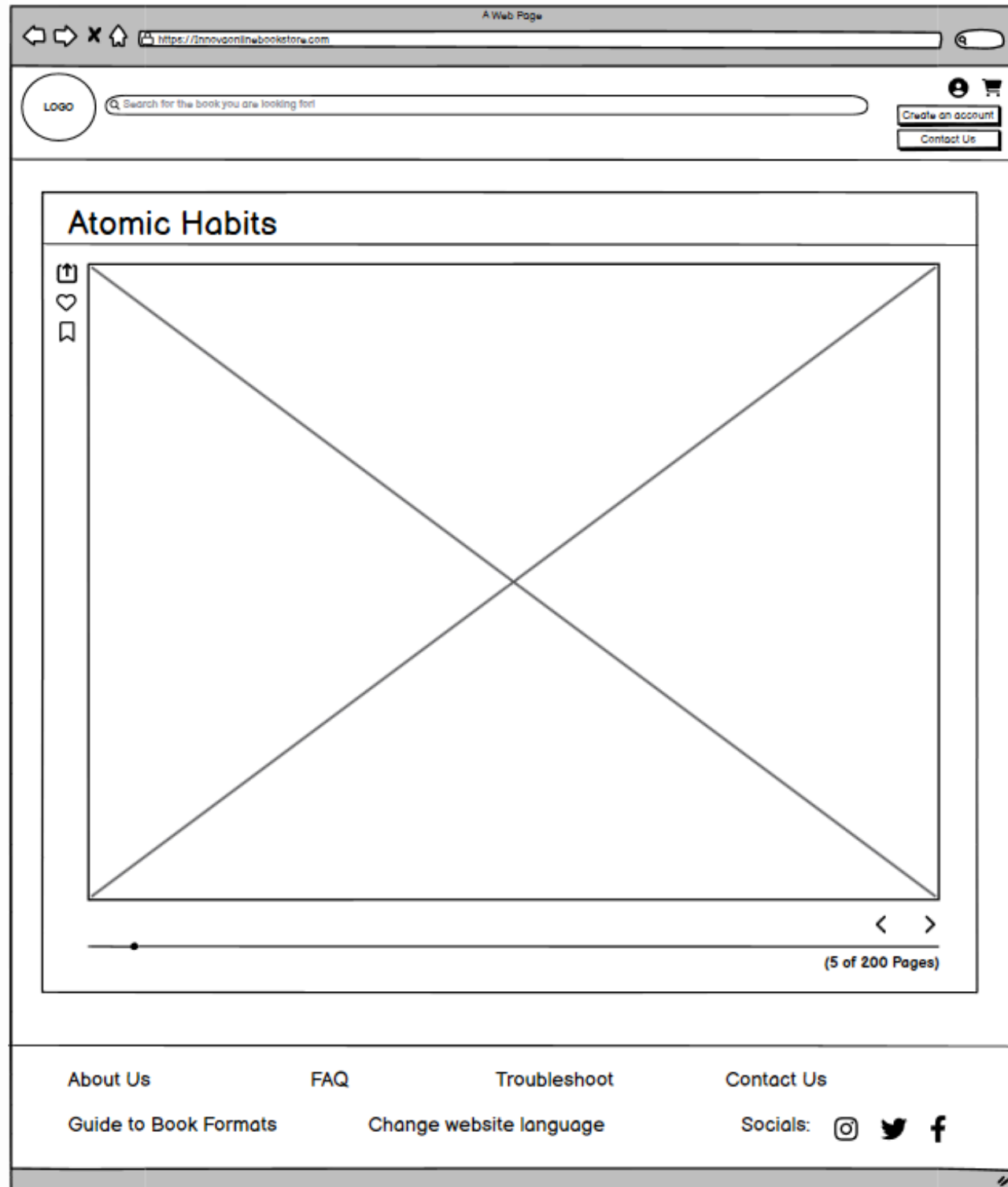
Read now

About Us FAQ Troubleshoot Contact Us

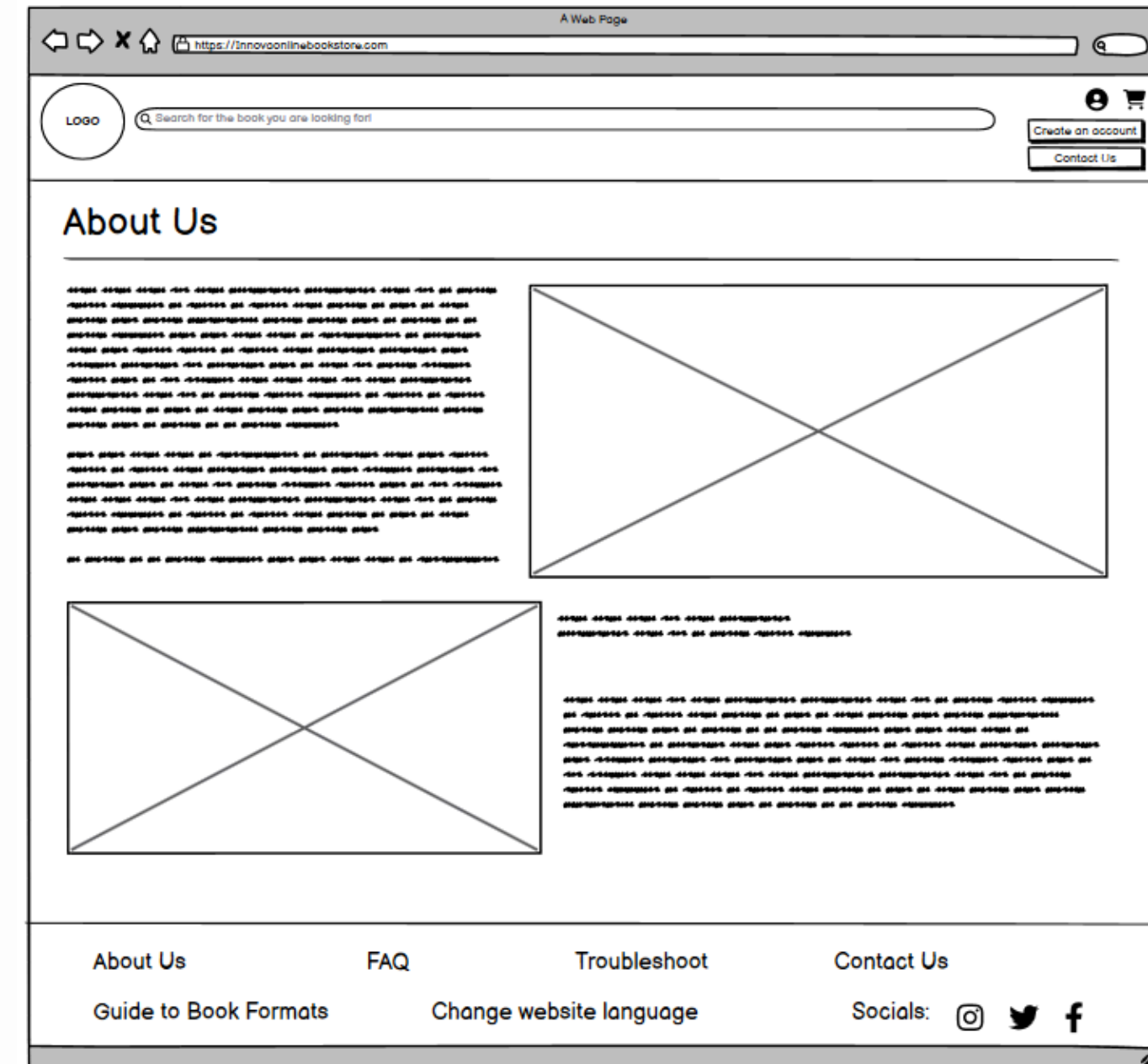
Guide to Book Formats Change website language Socials:

Payment Successful Page

Wireframes (Balsamiq)



Paid eBook Page



About Us Page

Wireframes (Balsamiq)

The wireframe depicts a web browser window titled "A Web Page" with the URL "https://InnovaOnlineBookstore.com". The page layout includes a top navigation bar with a "LOGO" placeholder, a search bar with the text "Search for the book you are looking for", and links for "Create an account" and "Contact Us". The main content area is titled "Contact Us" and features a large placeholder image on the left and a "Contact Form" on the right. The form contains fields for "Email" (with placeholder "Enter Email"), "Name" (with placeholder "Enter your name"), and "Contact" (with placeholder "+65"). Below these is a "Message:" label and a large text area. The footer contains links for "About Us", "FAQ", "Troubleshoot", "Contact Us", "Guide to Book Formats", "Change website language", and "Socials" with icons for Instagram, Twitter, and Facebook.

https://InnovaOnlineBookstore.com

LOGO

Search for the book you are looking for

Create an account

Contact Us

Contact Us

Contact Form

Email

Enter Email

Name

Enter your name

Contact

+65

Message:

About Us FAQ Troubleshoot Contact Us

Guide to Book Formats Change website language Socials:

Contact Us Page

Wireflow (Balsamiq)

User's Task 1: Create an account and sign in as a member of the bookstore



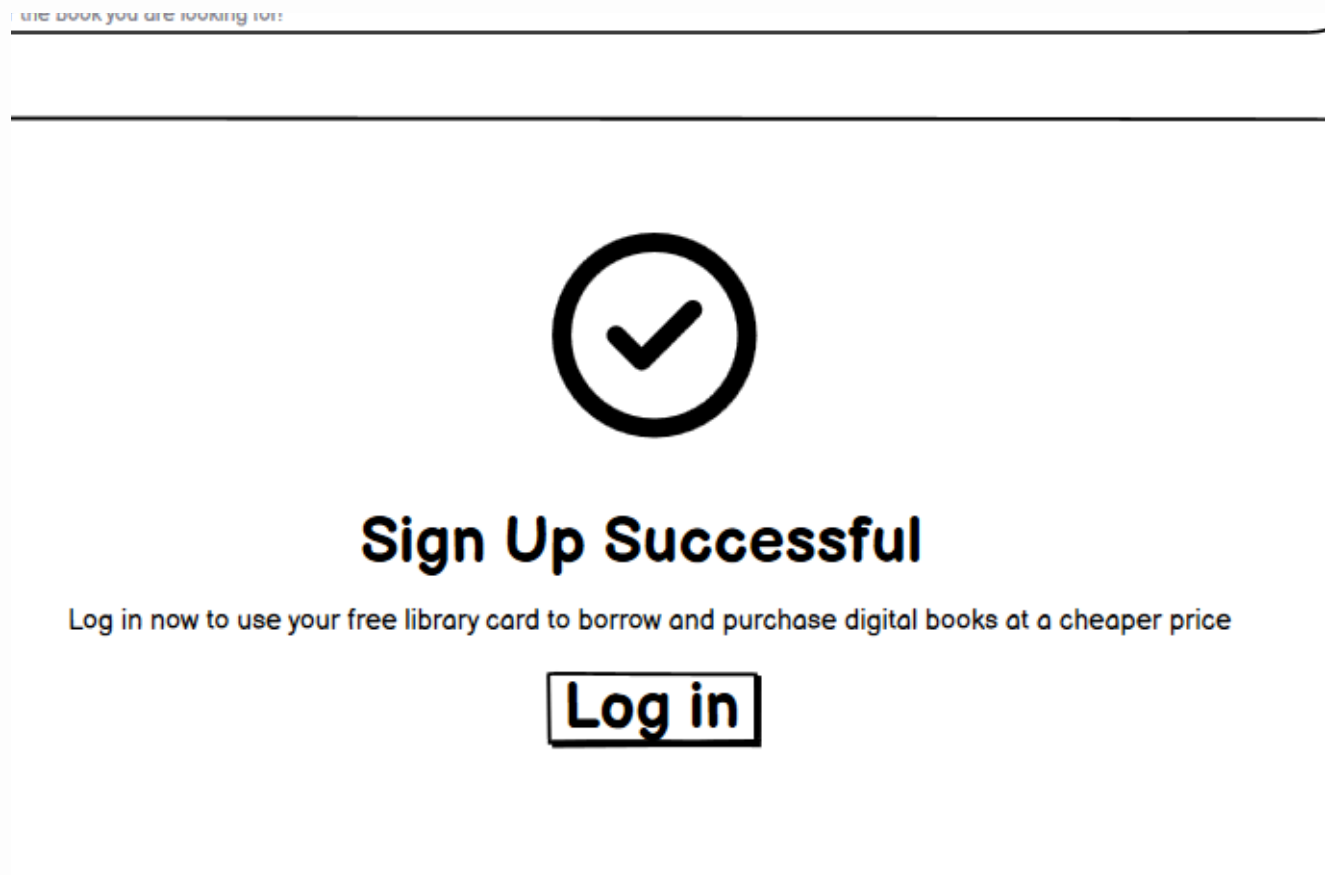
User clicks on create account button

A wireframe of the 'Create an account' page. The title is 'Create an account'. On the left is a large square placeholder with an 'X' inside. On the right, there is a form with the following elements: a heading 'Get your free Innova Card to borrow and purchase digital books at a cheaper rate!', a 'Sign in with Google' button, an 'OR' separator, an 'Email' field with a placeholder 'Enter Email', a 'Screen Name' field with a placeholder 'Enter your screen name', a 'Password' field with a placeholder 'Enter Password', a list of password requirements (No Spaces Allowed, Maximum 12 Characters, Minimum 4 numbers, One capital letter), a checkbox for receiving news announcements, and a 'Sign Up' button. Below the 'Sign Up' button is a note: 'By signing up, you agree to the Innova Online Bookstore's Terms of Service.' and a link 'Already have an account? Log in'. At the bottom, there is a footer with links: 'About Us', 'FAQ', 'Troubleshoot', 'Contact Us', 'Guide to Book Formats', 'Change website language', and 'Socials' with icons for Instagram, Twitter, and Facebook.

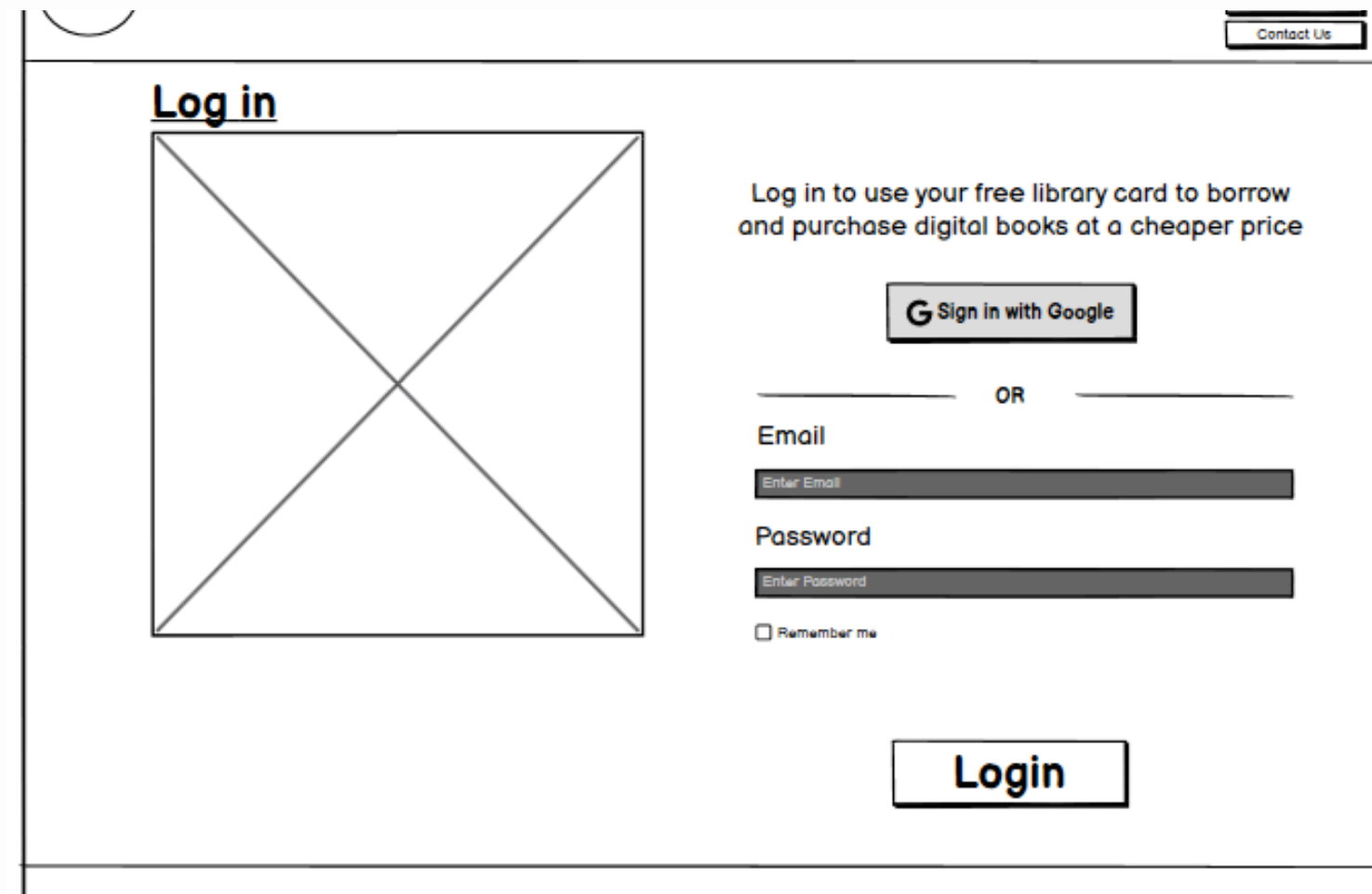
User arrives at this page, fills in the details and click sign up button

Wireflow (Balsamiq)

User's Task 1: Create an account and sign in as a member of the bookstore



System displays successful sign up, user clicks on log in button to log in



User arrives at log in page, fills in the details and clicks login button

Wireflow (Balsamiq)

User's Task 1: Create an account and sign in as a member of the bookstore

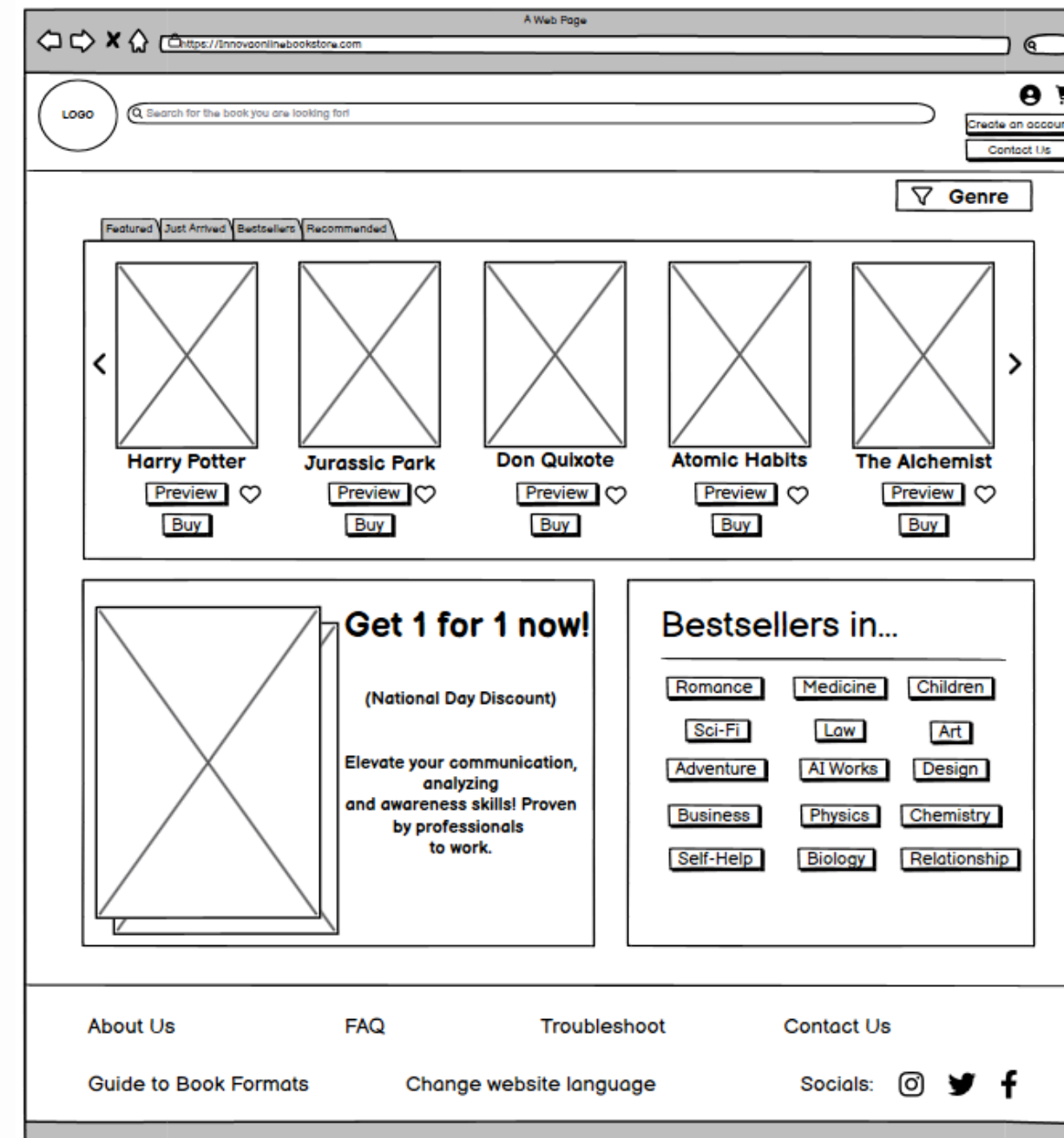


Log in Successful

Start browsing for digital books to borrow or purchase them at a cheaper price

Return Home

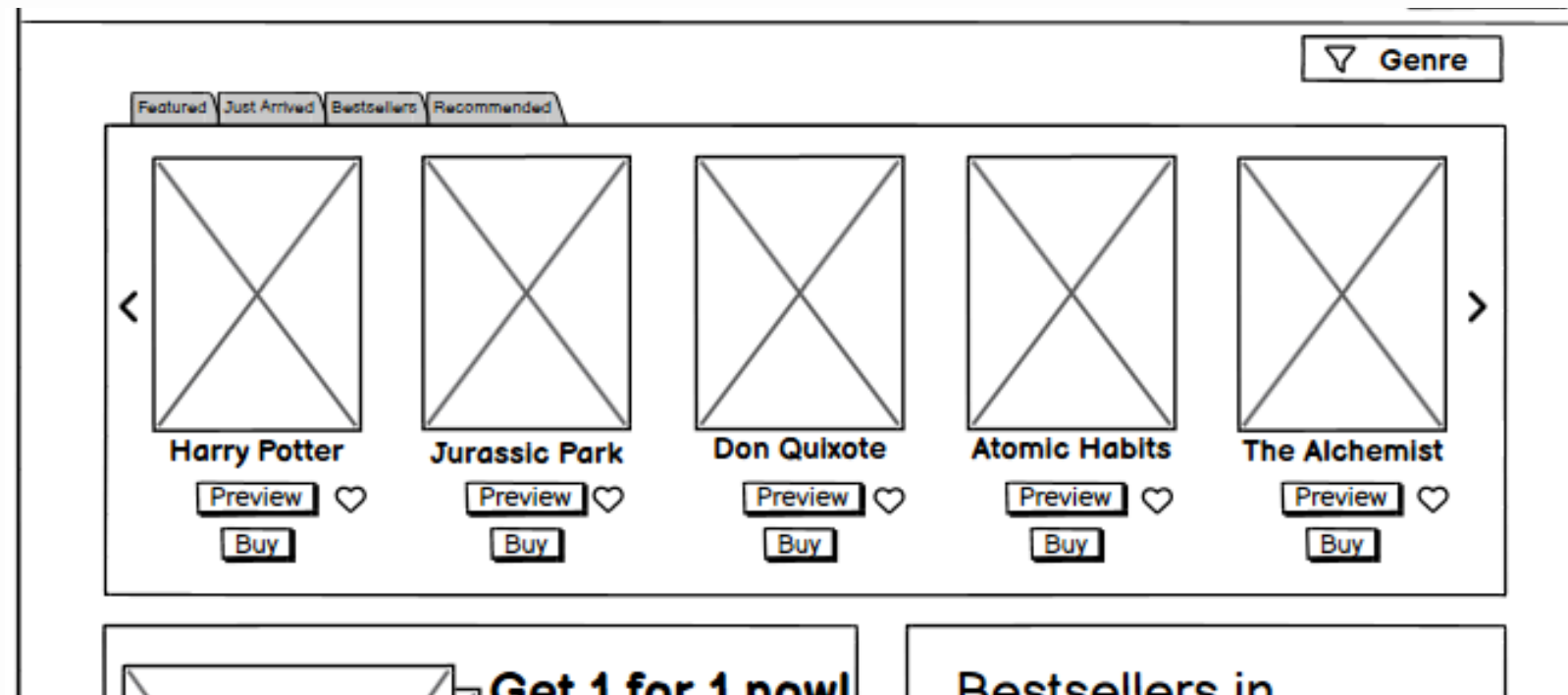
System displays successful log in, user clicks on return home button to start browsing/shopping



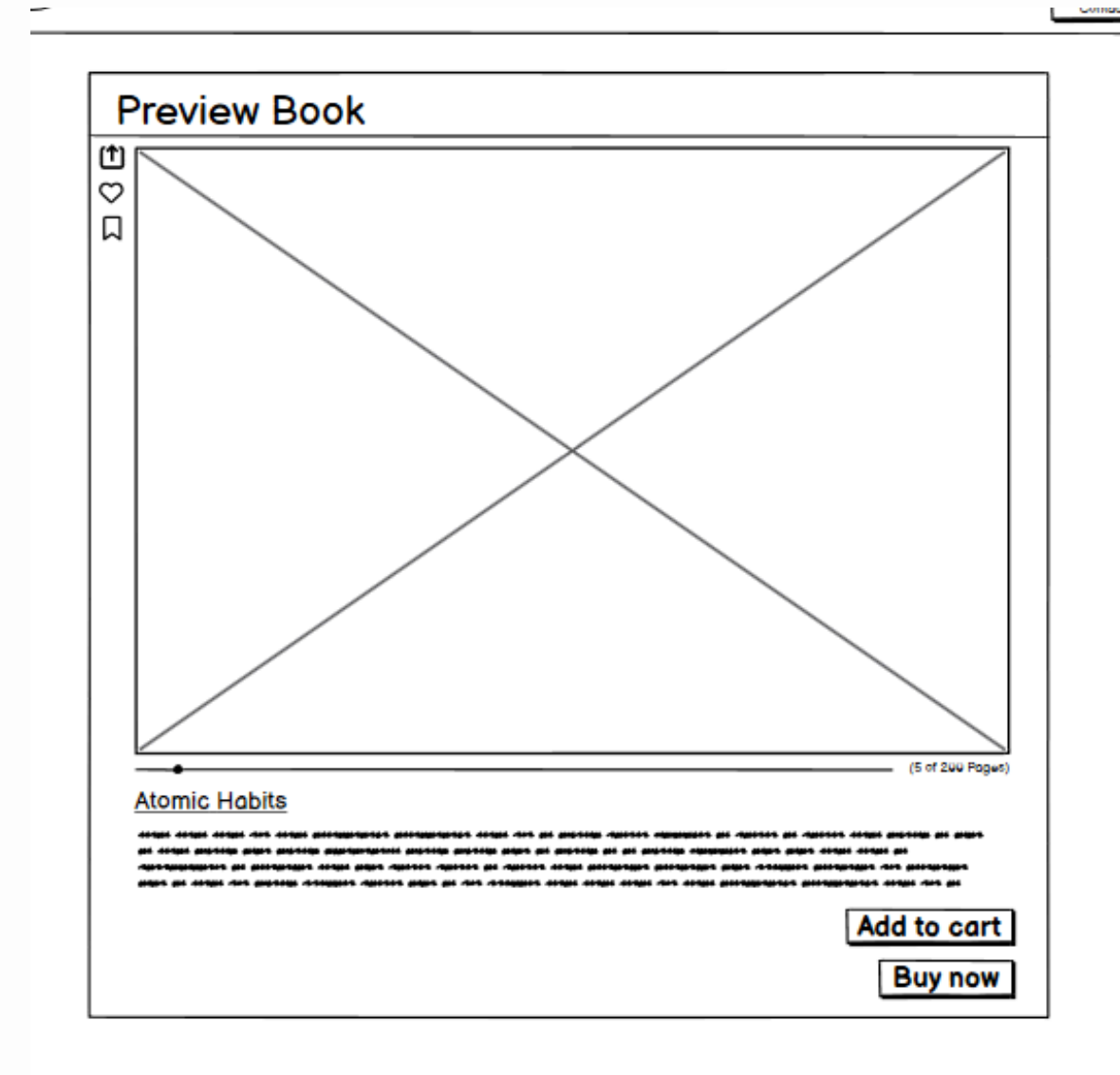
User gets send back to home page

Wireflow (Balsamiq)

User's Task 2: Purchase an eBook (Atomic Habits)



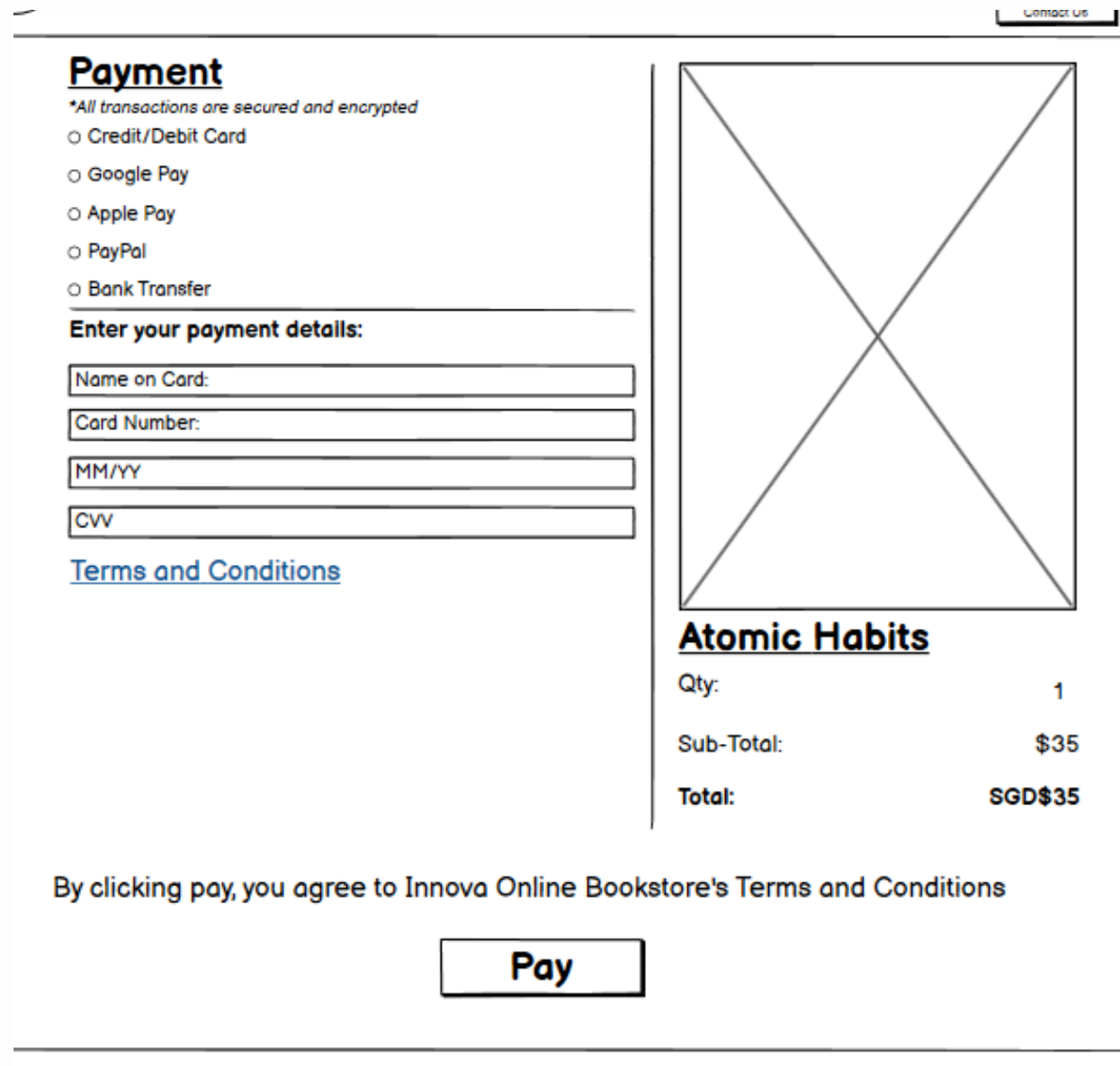
User clicks on preview button
under the book "Atomic Habits"
to preview it



User arrives at this page and is able to
scheme through the details of the book
and how the book looks like. Afterwhich,
the user clicks on buy now button

Wireflow (Balsamiq)

User's Task 2: Purchase an eBook (Atomic Habits)

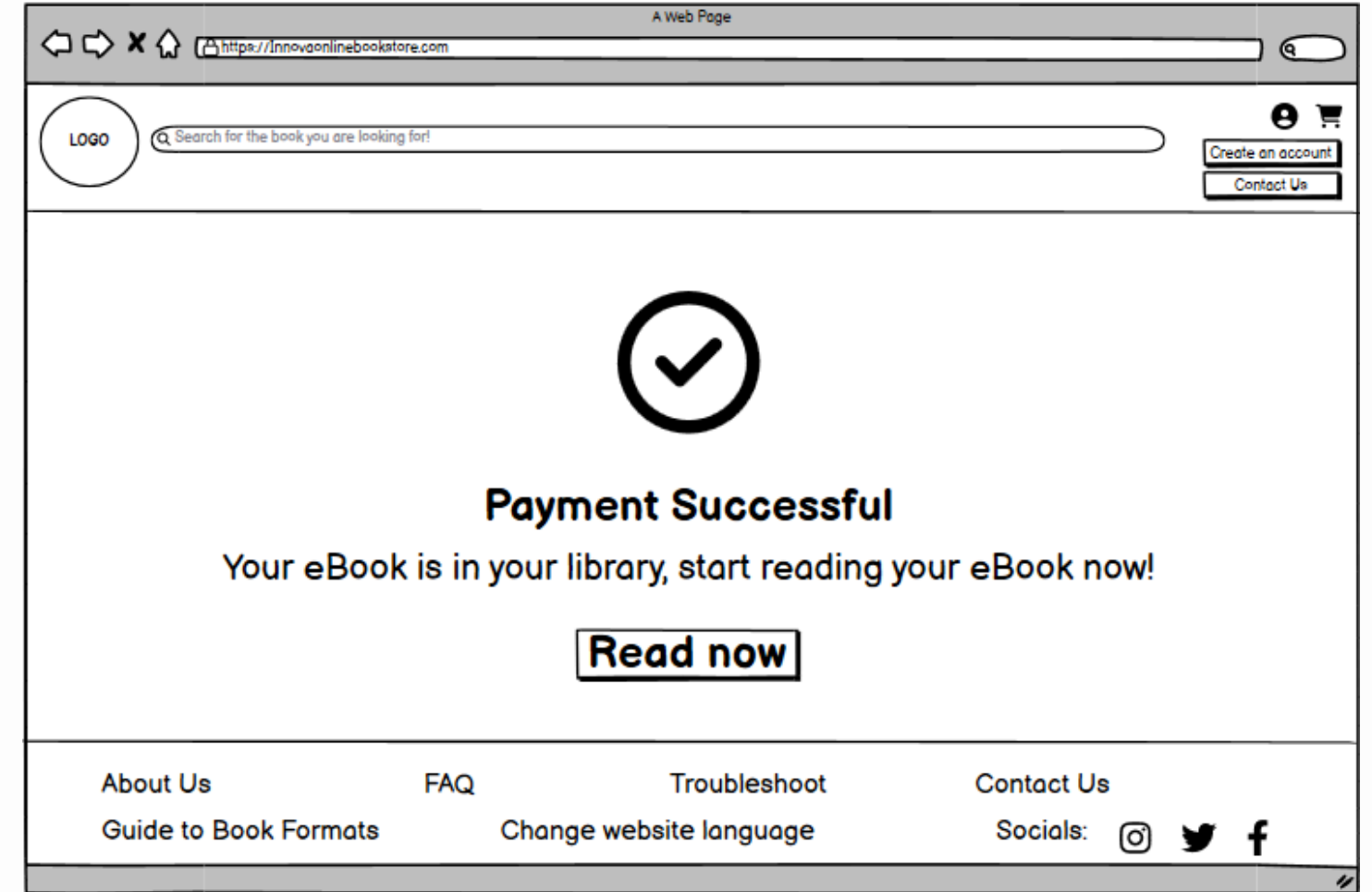


The payment form is titled "Payment" and includes a disclaimer: "*All transactions are secured and encrypted". It lists five payment methods: Credit/Debit Card, Google Pay, Apple Pay, PayPal, and Bank Transfer. Below these is a section "Enter your payment details:" with four input fields: "Name on Card:", "Card Number:", "MM/YY", and "CVV". A link for "Terms and Conditions" is provided. To the right of the form is a large placeholder box with a diagonal 'X'. Below this box is a table for the item "Atomic Habits":

Qty:	1
Sub-Total:	\$35
Total:	SGD\$35

At the bottom of the form, there is a disclaimer: "By clicking pay, you agree to Innova Online Bookstore's Terms and Conditions" and a "Pay" button.

User selects payment method and enters payment details. Afterwards, user clicks on the pay button

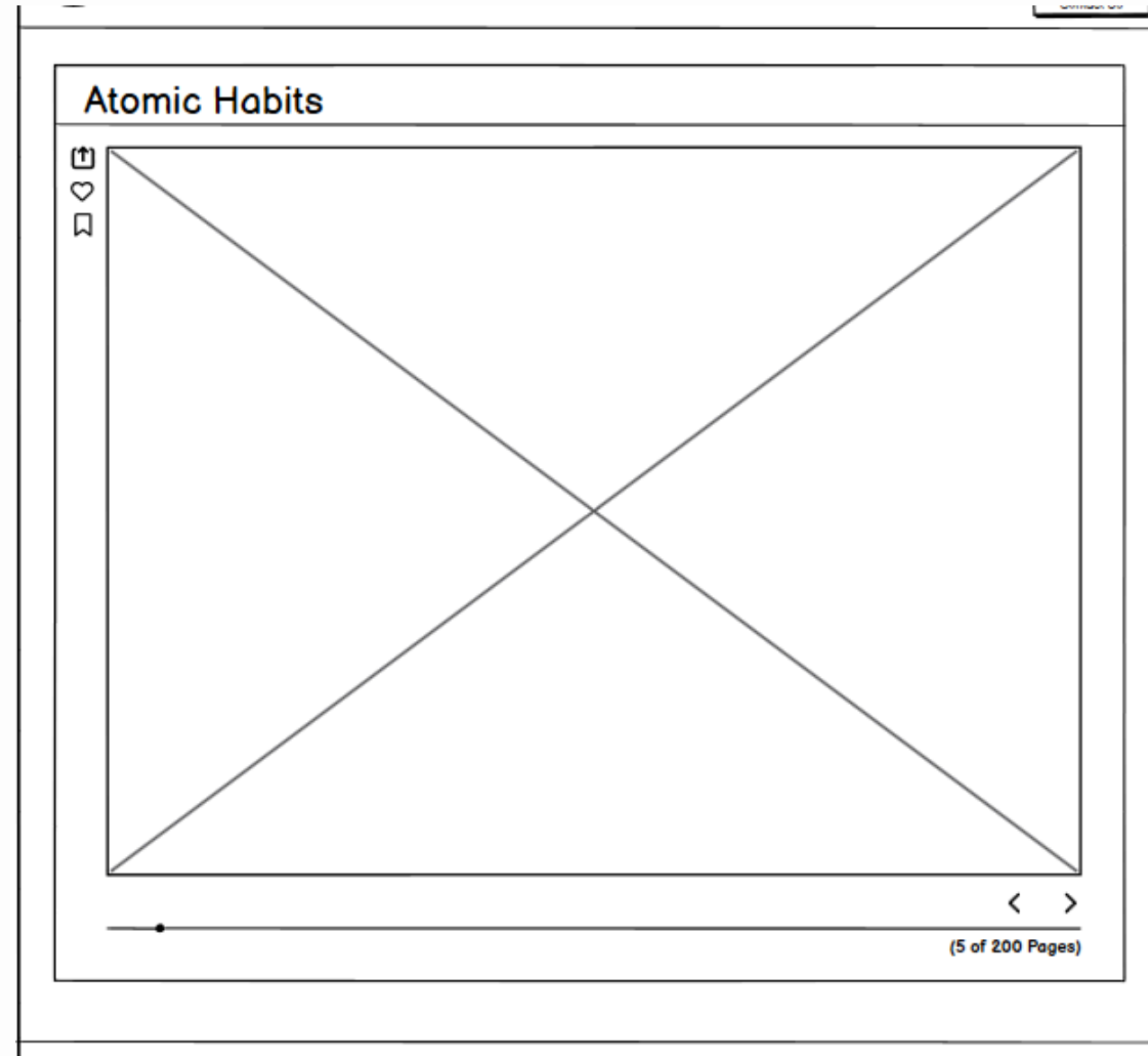


The success page features a large checkmark icon at the top. Below it, the text reads "Payment Successful" and "Your eBook is in your library, start reading your eBook now!". A "Read now" button is prominently displayed. The footer contains links for "About Us", "FAQ", "Troubleshoot", "Contact Us", "Guide to Book Formats", "Change website language", and "Socials" with icons for Instagram, Twitter, and Facebook.

System displays successful payment, user clicks on read now button to read the eBook which he just purchased

Wireflow (Balsamiq)

User's Task 2: Purchase an eBook (Atomic Habits)

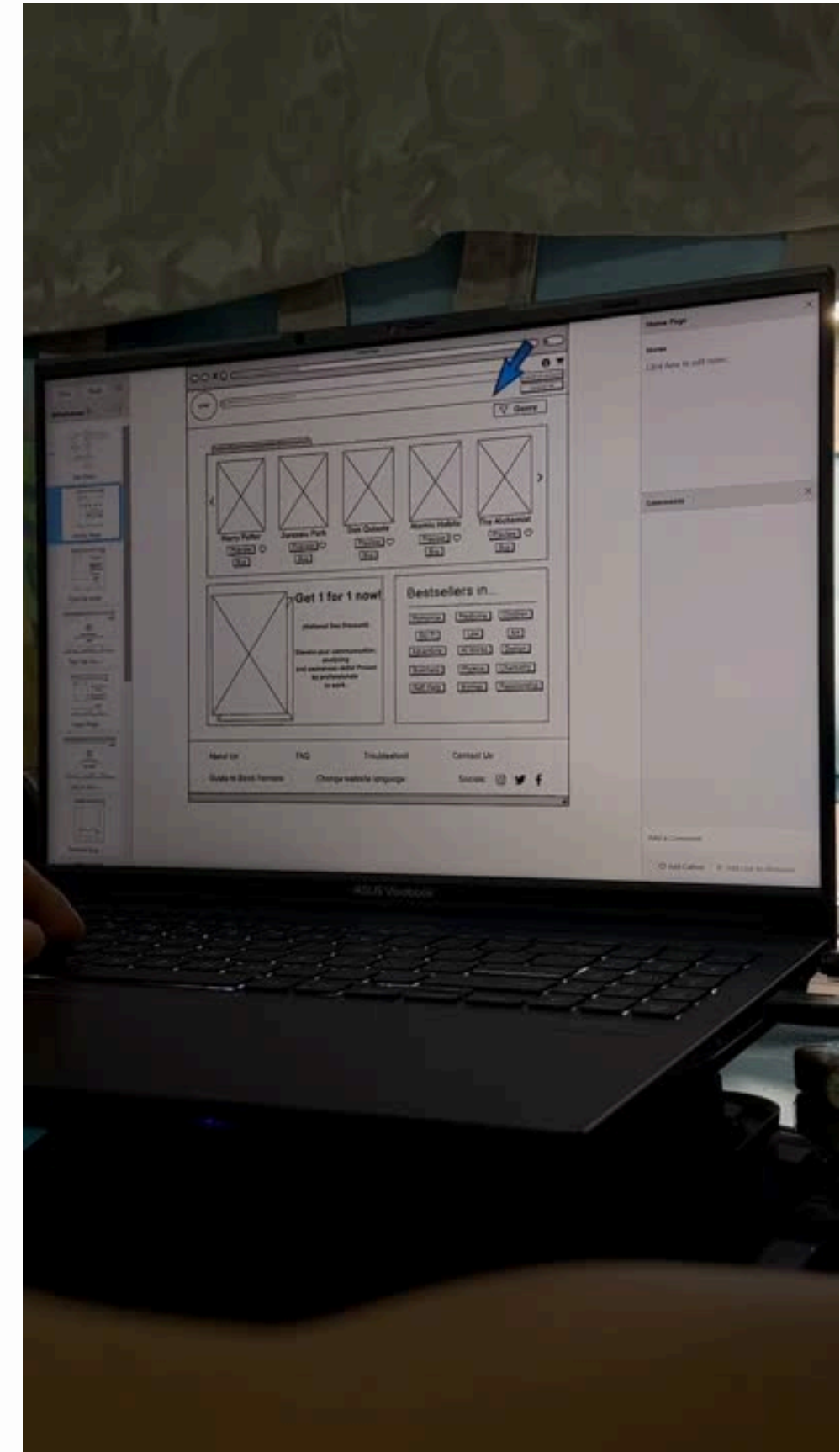


User will be directed to their purchased eBook and can start reading

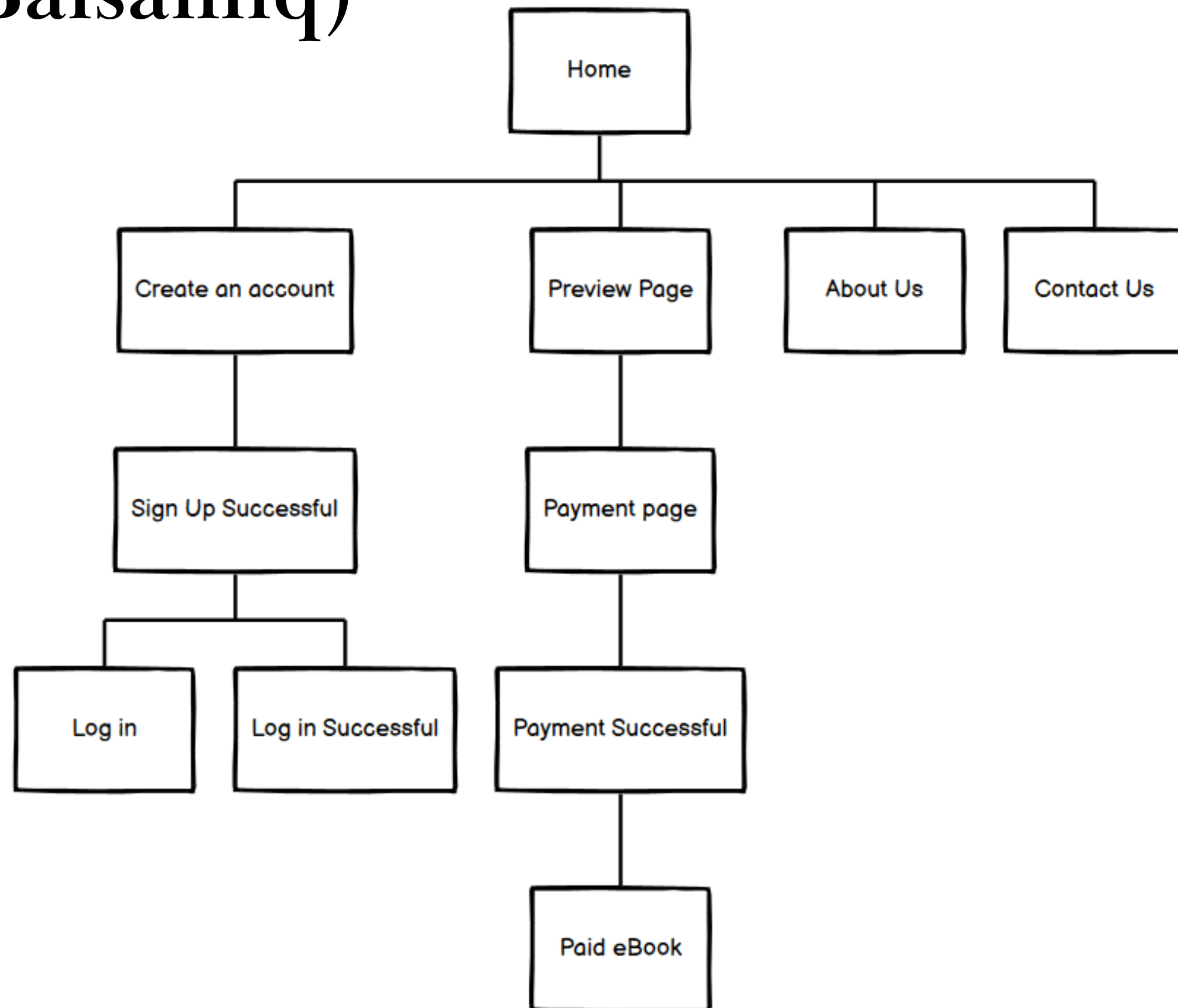
Usability Testing (2 User's tasks)

User's Task 1: Create an account and sign in as a member of the bookstore

User's Task 2: Purchase an eBook (Atomic Habits)



Sitemap (Balsamiq)



THANK YOU