

**Booked: Lab 1 Outline**

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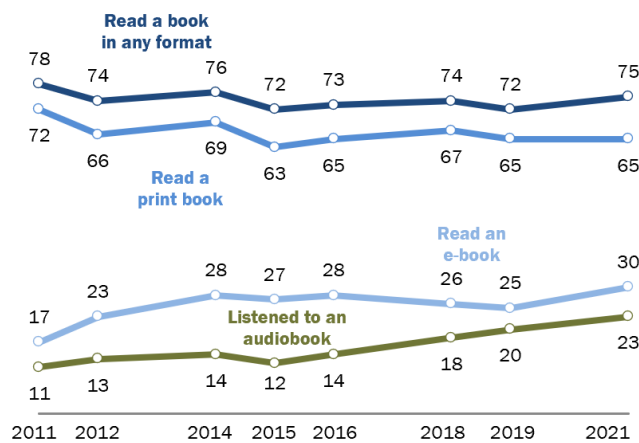
## 1. Introduction

### 1.1. Societal Problems

- Over the years, there has been a decrease in physical bookstores and increase in online bookstores.
  - This could be due to Amazon dominating the book market.
- It can be difficult to find specific books as not all booksellers list the same criteria.
  - This includes type, edition, condition, etc.
- It can be hard to find the lowest cost when buying books online.
  - Book collecting can be an expensive hobby.

#### Print books continue to be more popular than e-books or audiobooks

% of U.S. adults who say they have \_\_\_\_ in the previous 12 months



Note: Those who did not give an answer are not shown.  
Source: Survey conducted Jan. 25-Feb. 8, 2021.

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*“There exists no platform that allows a user to search for a book based on its type (physical or electronic), edition (e.g., hardcover or paperback), and condition (new or used) as well as display its cheapest cost (including shipping and handling) for small and/or independent bookstores.”*

### 1.2. Solution

- To solve these problems, we propose the following software:

*“Booked is a web-based application that shows users which independent bookstore to purchase a book from based on its type, edition, condition, and lowest total cost.”*

## 2. Product Description

### 2.1. Summary

- Booked allows users to search for a book across various independent seller websites.
- Once the book is found, if they prefer to shop online, they will be presented with the link to the seller's website.
- If they prefer to shop in-person, they will be presented with the local bookstore's address.

### 2.2. Goal

- Booked will save time and money during the book-searching process by laying out the type, edition, condition, and cost for customers.
- It will also introduce users to local and/or independent businesses.

### 2.3. Objectives

- Build a searchable database of businesses and their inventory.

### 2.4. Key Product Features and Capabilities

- Booked Search
- Booked Scraper
- Booked Recommendation System

### 2.5. Major Components

- Hardware:
  - Only a PC capable of running the software tools listed is needed.
- Software:
  - Front-End: HTML, CSS, JavaScript (React)
  - Back-End: Python, Django, PostgreSQL
  - Scheduling: Trello
  - Issue Tracking: GitHub
  - Version Control: Git via GitHub
  - IDE: Visual Studio Code
  - Unit Testing: Jest, PyTest
  - Documentation: PyDoc, GitHub Pages
  - API Testing: Postman
  - GUI Mockups: Figma

### 3. Identification of Case Study

#### 3.1. Who is this product for?

- Booked customers will be independent bookstores.
- Booked end-users will be book-lovers.

#### 3.2. What will this product be used for?

- As mentioned above, Booked will be used to find a book from independent bookstores or sellers based on user-selected criteria.
- It will also be used to advertise businesses and their inventory.

### 4. Product Prototype Description

#### 4.1. Prototype Architecture

##### **Hardware**

- Computer or laptop with internet connection

##### **Software**

- Language:
  - Front-End: HTML, CSS, JavaScript, ReactJS
  - Back-End: Python, Django, PostgreSQL
  - API:
- Back-End Requirements:
- Deployment:

##### **Development Tools:**

- IDE:
  - Visual Studio Code
- Version Control:
  - Git via Github
- Testing:
  - Postman
  - Jest
  - Pytest
- Documentation:
  - Pydoc
  - Github Pages
- Issue Tracking:
  - Github

- Scheduling:
  - Trello
- GUI Mockups:
  - Figma

#### 4.2. Prototype Features and Capabilities

1. Proof of Concept
  - a. User (Customer or Retailer)
    - i. Sign-in
    - ii. Get preferences
    - iii. See book information
    - iv. Add-to-cart
  - b. Administrators
2. Customer Feedback
  - a. Help button
  - b. Contact information

#### 4.3. Prototype Development Challenges

1. Missing Knowledge:
  - a. Third-party API Integration
2. Learning Programming Language:
  - a. Python
  - b. Javascript
  - c. CSS
  - d. HTML

### 5. Glossary

1. API (Application Programming Interface) - Rules explaining the communication between computers and their applications.
2. CSS (Cascading Style Sheets) - A style sheet language used for web and mobile browsers.
3. Database - A structured collection of data held in a computer.
4. GUI (Graphical User Interface) - A user interface that allows users to interact with computer or computer programs.
5. HTML (HyperText Markup Language) - The standard markup language for building web browsers.
6. Internet Access - A router that connects with Wi-Fi.

7. PostgreSQL - An open source relational database management system that extends the SQL language with features to safely store the most complicated databases.
8. REST API (REST -> Representational State Transfer Protocol) - A Web API / Service conforming to the REST design style.
9. User - Another word referring to a customer. It is anyone who accesses the website with the intention of using the product.

## 6. References

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