

Xerox



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Project Report AICT Frontend

1. Introduction

Xerox is a beginner level front end website created as part of a personal learning and professional development journey. The goal of this project was to build a structured, clean, and visually appealing front end for a clothing brand using only basic tools: HTML ,CSS and Bootstrap . The project focuses on simplicity, usability, and clear layout design to give users a pleasant browsing experience. This report outlines how the project evolved as a learning opportunity and helped lay the foundation for future earning through freelancing.



2. Problem Identification in Existing Clothing Websites

While researching clothing brand websites in Pakistan, it was noticed that many of them are difficult to navigate and have inconsistent designs. Users often face problems like poor organization of categories, unresponsive mobile layouts, and crowded visuals that make it hard to find what they're looking for. These issues not only reduce user satisfaction but can also affect business performance. For someone starting out in web development, it presented a good opportunity to learn by solving real world problems.

3. Solution Overview

To address the above problems, the Xerox website was built with clarity and user friendliness in mind. It uses a simple design structure, clear headings, neatly arranged product sections, and proper spacing so users can find what they need quickly. Instead of adding heavy animations or complex code, the focus remained on making a reliable layout using pure HTML ,CSS and Bootstrap . This helped keep the project lightweight and easy to maintain while still achieving a professional look.

4. Platform Features

The website includes several key sections that form the backbone of most clothing brand platforms: a homepage that introduces the brand, individual category pages for men, women, and kids clothing, and a contact page for user queries. Each category page presents sample products with images and prices in a clean grid layout. The navigation bar at the top allows users to move easily between sections. The footer includes brand information and copyright notice.

The screenshot shows the homepage of the Xerox website. At the top, there is a navigation bar with links for Home, Men, Women, Kids, Summer, and Winter. Below the navigation bar, there is a large banner for the 'MEN'S COLLECTION' featuring a blue long-sleeved shirt. The banner text says 'Premium fashion curated for men.' Below the banner, there are four product cards: 'Men's Summer Cotton Shirt' (blue long-sleeved shirt), 'Men's Summer Shorts' (tan cargo shorts), 'Men's Winter Fleece Jacket' (black zip-up jacket), and 'Men's Thermal Innerwear Set' (tan thermal set).

KIDS COLLECTION

Comfortable wear for kids.



Kids Printed T-Shirt



Kids Summer Shorts



Winter Hoodie

WOMEN'S COLLECTION

Elegant styles designed for modern women.



Floral Summer Dress



Tank Top



Leather Jacket

SUMMER COLLECTION

Light, breathable & stylish.



Men's Summer Cotton Shirt



Men's T-shirt



Womens Casuals

WINTER COLLECTION

Warm styles for cold days.



Mens Jacket



Men's Thermal



Men's Thermal Innerwear Set

5. Certificate and Learning through Online Platforms

During the early stages of this project, I enrolled in an online course on Udemy titled “HTML ,CSS and Bootstrap for Beginners.” Completing the course provided me with foundational knowledge of how websites are built from scratch using only markup and styling tools. I earned a certificate at the end of the course, which served as a confidence boost and a credential to display when offering freelance services later. This also made me more aware of best practices in web design, like using responsive layouts and clear content separation.



Certificate no: UC-91bbffwce-c5b4-4d44-b548-4e88ad5bd283
Certificate url: ude.my/UC-91bbffwce-c5b4-4d44-b548-4e88ad5bd283
Reference Number: 0004

CERTIFICATE OF COMPLETION

Advanced Course : Frontend Web Development,HTML development,CSS development ,Bootstrap development

Instructors Ali Asghar Noorani

Daniyal Aziz

Date December ,25,2025
Length 8.5 total hours



Raheem Ullah Wardag

has successfully completed the requirements to be recognized as a Microsoft Office Specialist

Word 2019 Associate

Word 2019

Date of achievement: November 25, 2022
verify.certipoint.com sY2b-XM8x

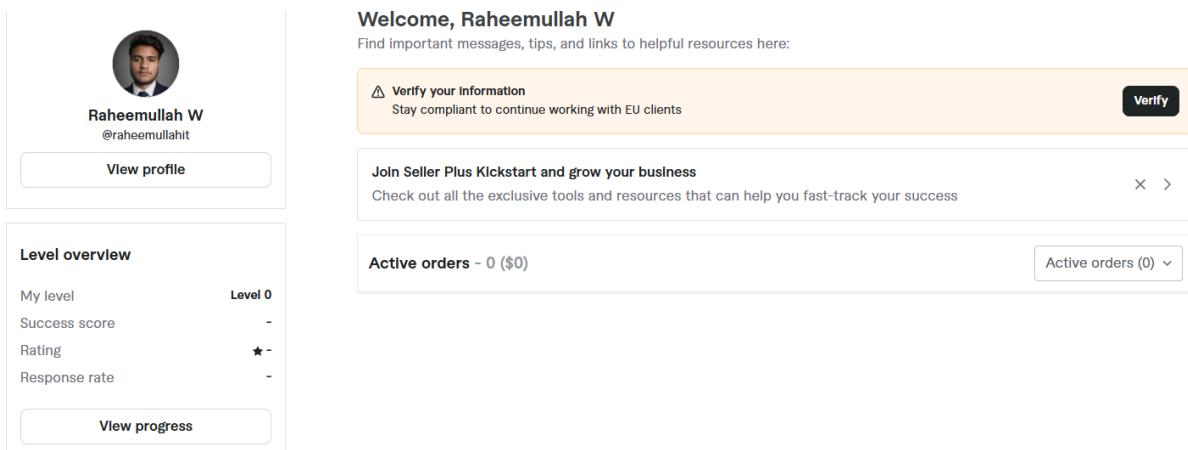
A handwritten signature of Satya Nadella.

Satya Nadella
Chief Executive Officer



6. Fiverr Journey and Early Challenges

After completing the website, I set up a profile on Fiverr and created a gig offering to build simple front end websites for clothing brands and small businesses. Initially, I did not receive any real orders. I did get some responses, but many turned out to be scams or misleading proposals. This was partly due to my lack of experience and also because the sample website I uploaded was basic and lacked interactive features that some clients expected. However, I treated this as a learning opportunity. I worked on improving the project, redesigned parts of the layout, and made the gig description more clear and professional.



7. Technical Details

The Xerox website was developed using basic web development tools HTML for structure and CSS for styling. The layout is responsive and designed to adjust gracefully to different screen sizes, although mobile optimization was not a primary focus. Each page contains structured sections like navigation, product display grids, and footers. Images were displayed using placeholders initially, and the layout was styled with custom colors, padding, fonts, and borders to give the site a brand specific look.

8. User Dashboard Simulation

Since this is a beginner level front end project, it does not include a login system or an actual dashboard. However, the navigation and structure of the site are built in a way that mimics a basic user experience. Visitors can browse different clothing categories, view product images and prices, and find a way to contact the business through the contact page. This simple approach helps simulate a real shopping experience using only static elements.

9. Gamification and Engagement Features

At this stage of the project, no gamification features such as reward systems, quizzes, or progress tracking have been added. However, the future version of this project could benefit from simple engagement strategies like product highlight effects, featured collections, or a newsletter signup form that encourages repeat visitors.

10. Benefits and Impact

This project not only improved my technical knowledge but also gave me hands-on experience in managing a complete design workflow from start to finish. I learned how important it is to focus on user interface (UI) and user experience (UX), even when working with basic tools. It also helped me build the confidence to start freelancing. Though I faced difficulties early on, the experience made me more aware of how online platforms work and how to communicate better with potential clients.

11. Future Improvements

In future versions, the site could include additional features such as a shopping cart, product filters, responsive mobile support, and possibly a CMS for easier content updates. Adding JavaScript would allow for interactive elements, and eventually, the site could be integrated with a backend for handling user data or orders. Making the site live using platforms like GitHub Pages or Netlify could also help with reaching real clients.

12. Conclusion

The Xerox project served as both a learning tool and a stepping stone into the freelance world. It represents how basic skills in HTML ,CSS and Bootstrap can be turned into a functional and visually appealing website. Through this project, I developed my understanding of front end development, earned a certificate, and started building my Fiverr profile. Although the path was not easy and included some early setbacks, it marked the beginning of my journey in web development and freelancing. With continued learning and improvement, this project will open more doors for income opportunities and career growth.

13. References

Udemy Course – HTML ,CSS and Bootstrap for Beginners

Personal Fiverr Profile and Gig Setup

Basic HTML ,CSS and Bootstrap documentation from W3Schools and MDN

Project Report PF Backend

1. Introduction

This backend is written in **Python** and is based on **Programming Fundamentals (PF)** concepts.

The backend works using **file handling** instead of database.

All product data is stored in a file called **products.json**.

2. Problem Statement

While researching clothing brand websites in Pakistan, it was observed that many websites are difficult to use and manage. One major reason behind these problems is poor handling of data on the backend side. Products, categories, and prices are often not properly organized, which causes confusion for users and makes it hard to find items.

In many cases, product information is stored in an unstructured way, leading to repeated data, missing details, and slow updates. When the backend is not managed properly, even a good-looking website can fail to work smoothly. This affects both users and business owners.

3. Files Used in Backend

The backend has **two main files**:

1. `backend.py`
2. `products.json`

4. Purpose of `backend.py`

`backend.py` is the **main program file**.

It controls:

- Admin login
- Customer view
- Product management
- Shopping cart
- Billing system
- File reading and writing

5. PF Concepts Used in backend.py

The following **Programming Fundamentals concepts** are used:

- Variables
- Lists
- Dictionaries
- Functions
- If / else conditions
- Loops (for, while)
- File Handling
- Input / Output
- Basic Logic Building
- Error Handling

6. Code Explanation

6.1 Importing Modules

```
import json  
import os
```

Explanation:

- `json` is used to read and write data in JSON format.
- `os` is used to check if file exists or not.

6.2 Shopping Cart Variable

```
shopping_cart = []
```

Explanation:

- This is an empty **list**.
- It stores products added by the customer.
- Used during billing.

6.3 File Handling Section

6.3a load_products() Function

```
def load_products():  
    if os.path.exists("products.json"):  
        with open("products.json", "r") as file:  
            return json.load(file)  
    return []
```

Explanation:

- Checks if `products.json` file exists.
- Open file in **read mode**.
- Reads data using `json.load()`
- Returns product list.
- If the file does not exist, it returns an empty list.

PF Concepts Used:

- Function
- If condition
- File handling
- Return statement

6.3b save_products() Function

```
def save_products(products):
    with open("products.json", "w") as file:
        json.dump(products, file, indent=4)
```

Explanation:

- Open file in **write mode**.
- Saves updated product data.
- `indent=4` makes the file readable.

PF Concepts Used:

- Function
- File handling
- Parameters

7. Loading Products Permanently

```
products = load_products()
```

Explanation:

- Products are loaded once when the program starts.
- Data stays saved in file.

8. Admin Login System

```
ADMIN_USER = "admin"
ADMIN_PASS = "admin123"
```

Explanation:

- Hard-coded admin credentials.
- Used only for learning.

8.1 login() Function

```
def login():
    username = input("Enter Username: ")
    password = input("Enter Password: ")
```

Explanation:

- Takes input from the user.
- Checks if admin or customer.

```
if username == ADMIN_USER and password == ADMIN_PASS:
    admin_panel()
else:
    show_products()
```

Logic:

- Admin → Admin Panel.
- Customer → Product display.

9. Admin Panel

```
def admin_panel():
    while True:
```

Explanation:

- Infinite loop.
- Admin can perform multiple actions.

9.1 Admin Options:

1. View products
2. Increase quantity
3. Decrease quantity
4. Adjust price
5. Add product
6. Logout

10. Add Product Function

```
def add_product():
```

Explanation:

- Uses a dictionary to store products.
- Generates product ID automatically.
- Takes input for title, price, category, quantity.
- Saves data in JSON file.

PF Concepts Used:

- Dictionary
- Input
- Loop validation
- List append
- File saving

11. Stock and Price Management

adjust_price()

- Changes price using product ID

increase_quantity()

- Adds quantity to existing stock

decrease_quantity()

- Removes quantity
- Checks stock availability

PF Concepts Used:

- Loops
- Conditions
- Arithmetic operations

12. Shopping Cart System

```
def cart():
```

Explanation:

- Customer selects product ID.
- Product added to cart list.
- Quantity reduced from stock.
- Data saved in file.

13. Billing System

```
def generate_bill():
```

Explanation:

- Calculates total bill.
- Displays purchased items.
- Prints final amount.

PF Concepts Used:

- Loop.
- Accumulator variable.
- Print formatting.

14. Product Display for Customer

```
def show_products():
```

Explanation:

- Shows all products.
- Allows customers to add to cart.
- Uses input validation.

15. Program Start Point

```
login()
```

Explanation:

- The program starts from here.
- First, ask the user to login.

16. products.json File Explanation

16.1 Purpose of products.json

- Stores all product data.
- Acts like a **database**.
- Used because database is not taught yet

16.2 Structure of products.json

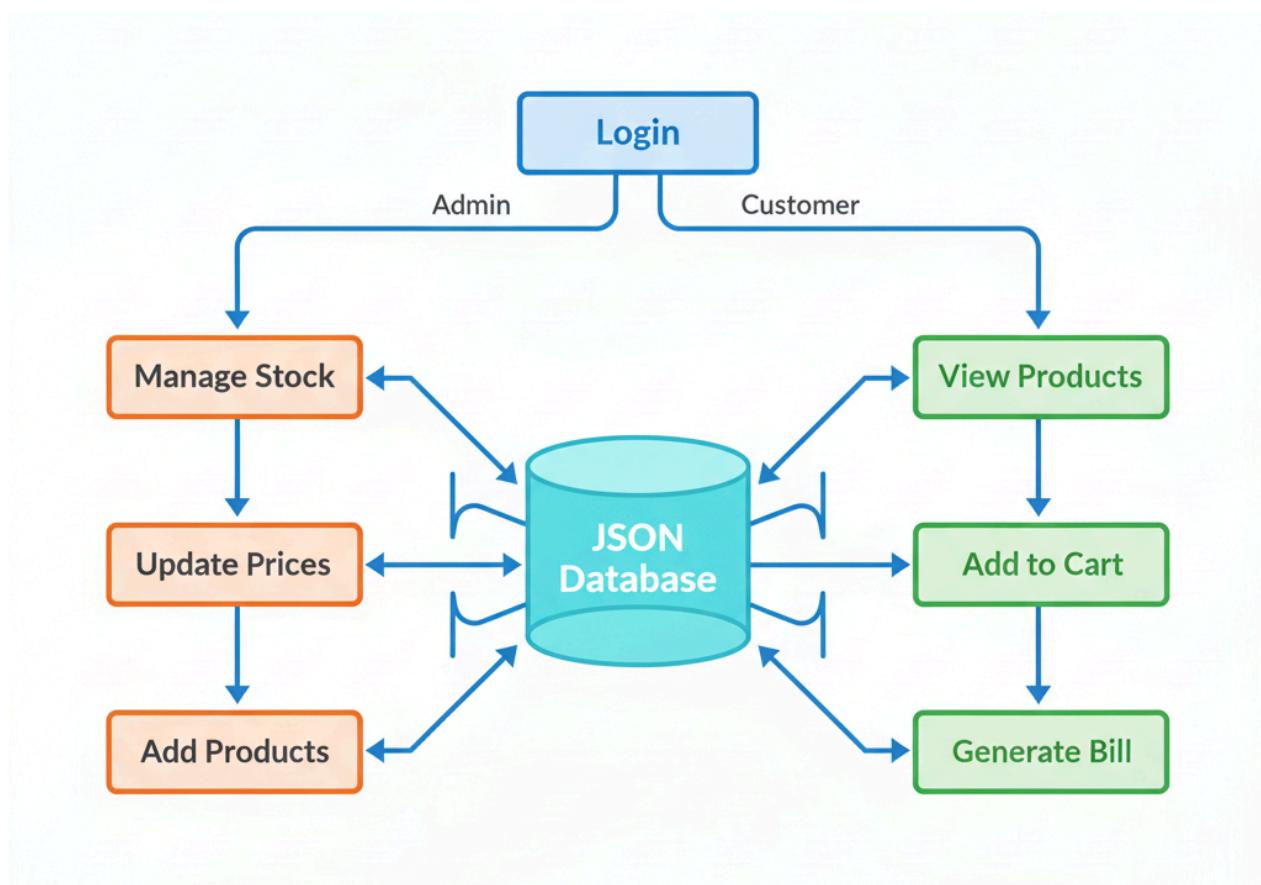
Each product has:

- id
- title
- price
- description
- category
- subcategory
- quantity

Example:

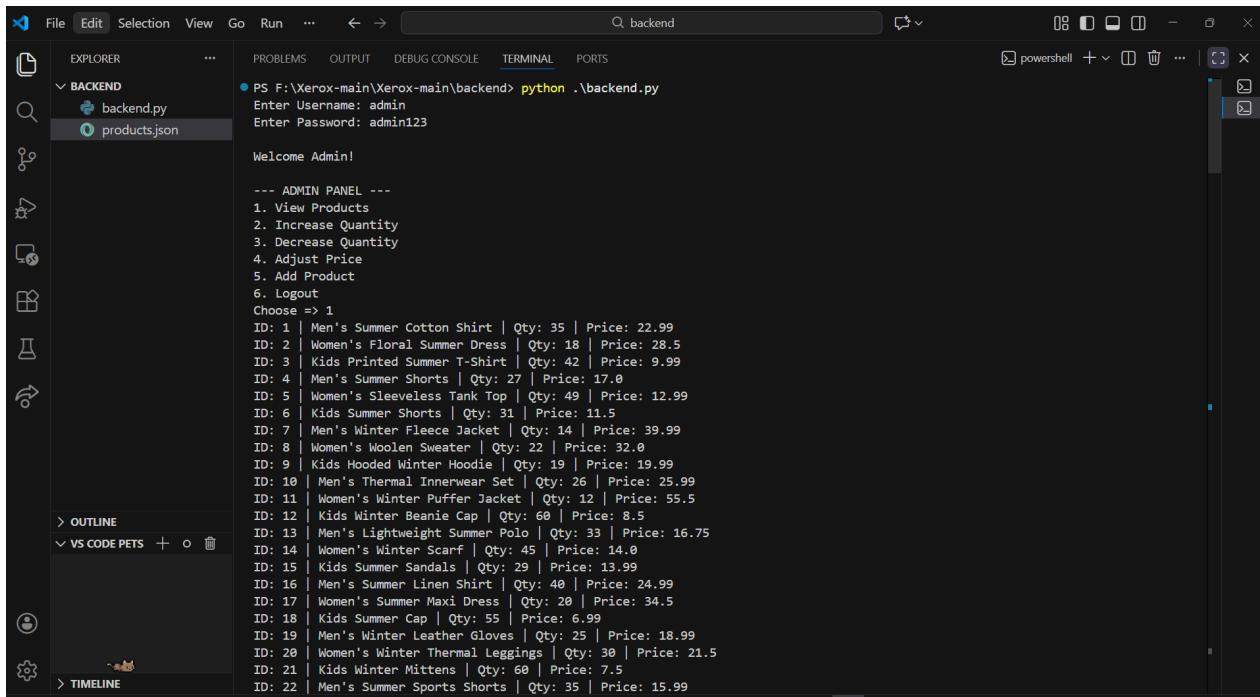
```
{  
  "id": 1,  
  "title": "Men's Summer Cotton Shirt",  
  "price": 22.99,  
  "description": "Lightweight breathable cotton shirt ideal for hot summer days.",  
  "category": "summer",  
  "subcategory": "men",  
  "quantity": 35  
}
```

17. Data Flow Diagram



18. Outputs

18.1 Admin Control Panel



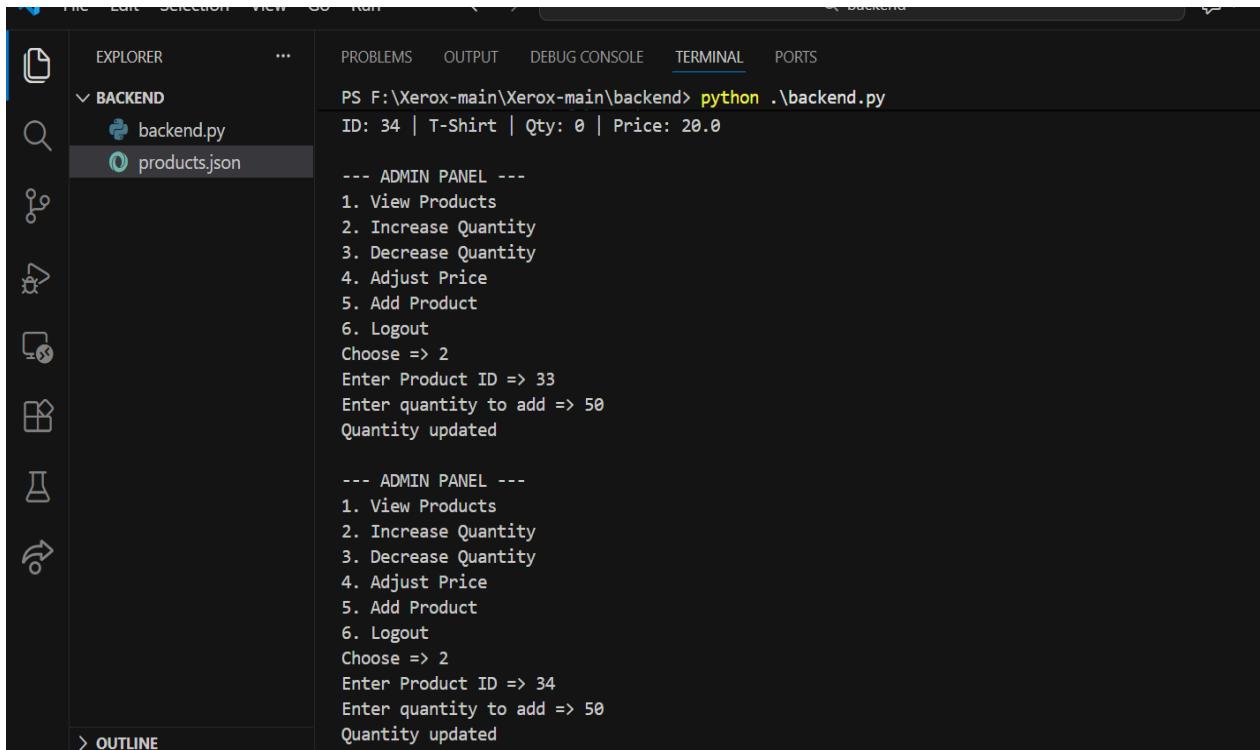
The screenshot shows the VS Code interface with the terminal tab active, displaying the output of a Python script named `backend.py`. The terminal window title is "backend". The output shows the script running and prompting for admin credentials. It then displays a welcome message and a menu of administrative actions. Finally, it lists all products in the system, each with an ID, name, quantity, and price.

```
PS F:\Xerox-main\Xerox-main\backend> python .\backend.py
Enter Username: admin
Enter Password: admin123

Welcome Admin!

--- ADMIN PANEL ---
1. View Products
2. Increase Quantity
3. Decrease Quantity
4. Adjust Price
5. Add Product
6. Logout
Choose => 1

ID: 1 | Men's Summer Cotton Shirt | Qty: 35 | Price: 22.99
ID: 2 | Women's Floral Summer Dress | Qty: 18 | Price: 28.5
ID: 3 | Kids Printed Summer T-Shirt | Qty: 42 | Price: 9.99
ID: 4 | Men's Summer Shorts | Qty: 27 | Price: 17.0
ID: 5 | Women's Sleeveless Tank Top | Qty: 49 | Price: 12.99
ID: 6 | Kids Summer Shorts | Qty: 31 | Price: 11.5
ID: 7 | Men's Winter Fleece Jacket | Qty: 14 | Price: 39.99
ID: 8 | Women's Woolen Sweater | Qty: 22 | Price: 32.0
ID: 9 | Kid Hooded Winter Hoodie | Qty: 19 | Price: 19.99
ID: 10 | Men's Thermal Innerwear Set | Qty: 26 | Price: 25.99
ID: 11 | Women's Winter Puffer Jacket | Qty: 12 | Price: 55.5
ID: 12 | Kids Winter Beanie Cap | Qty: 60 | Price: 8.5
ID: 13 | Men's Lightweight Summer Polo | Qty: 33 | Price: 16.75
ID: 14 | Women's Winter Scarf | Qty: 45 | Price: 14.0
ID: 15 | Kids Summer Sandals | Qty: 29 | Price: 13.99
ID: 16 | Men's Summer Linen Shirt | Qty: 40 | Price: 24.99
ID: 17 | Women's Summer Maxi Dress | Qty: 28 | Price: 34.5
ID: 18 | Kids Summer Cap | Qty: 55 | Price: 6.99
ID: 19 | Men's Winter Leather Gloves | Qty: 25 | Price: 18.99
ID: 20 | Women's Winter Thermal Leggings | Qty: 30 | Price: 21.5
ID: 21 | Kids Winter Mittens | Qty: 60 | Price: 7.5
ID: 22 | Men's Summer Sports Shorts | Qty: 35 | Price: 15.99
```



This screenshot shows the continuation of the terminal session from the previous one. The user has chosen option 2 to increase the quantity of a product. They enter the product ID (34) and the quantity to add (50). The script then confirms that the quantity has been updated.

```
PS F:\Xerox-main\Xerox-main\backend> python .\backend.py
ID: 34 | T-Shirt | Qty: 0 | Price: 20.0

--- ADMIN PANEL ---
1. View Products
2. Increase Quantity
3. Decrease Quantity
4. Adjust Price
5. Add Product
6. Logout
Choose => 2

Enter Product ID => 34
Enter quantity to add => 50
Quantity updated

--- ADMIN PANEL ---
1. View Products
2. Increase Quantity
3. Decrease Quantity
4. Adjust Price
5. Add Product
6. Logout
Choose => 2

Enter Product ID => 34
Enter quantity to add => 50
Quantity updated
```

18.2 Customer

The screenshot shows a VS Code interface with the 'TERMINAL' tab selected. The terminal window displays the output of a Python script named 'backend.py'. It starts with a login prompt for 'Username' and 'Password'. After logging in, it greets the customer and lists 20 items from a product catalog, each with a unique ID, name, and price.

```
PS F:\Xerox-main\Xerox-main\backend> python .\backend.py
PS F:\Xerox-main\Xerox-main\backend> python .\backend.py
Enter Username: user
Enter Password: i am user

Welcome Customer!
1 | Men's Summer Cotton Shirt | 22.99 USD
2 | Women's Floral Summer Dress | 28.5 USD
3 | Kids Printed Summer T-Shirt | 9.99 USD
4 | Men's Summer Shorts | 17.0 USD
5 | Women's Sleeveless Tank Top | 12.99 USD
6 | Kids Summer Shorts | 11.5 USD
7 | Men's Winter Fleece Jacket | 39.99 USD
8 | Women's Woolen Sweater | 32.0 USD
9 | Kids Hooded Winter Hoodie | 19.99 USD
10 | Men's Thermal Innerwear Set | 25.99 USD
11 | Women's Winter Puffer Jacket | 55.5 USD
12 | Kids Winter Beanie Cap | 8.5 USD
13 | Men's Lightweight Summer Polo | 16.75 USD
14 | Women's Winter Scarf | 14.0 USD
15 | Kids Summer Sandals | 13.99 USD
16 | Men's Summer Linen Shirt | 24.99 USD
17 | Women's Summer Maxi Dress | 34.5 USD
18 | Kids Summer Cap | 6.99 USD
19 | Men's Winter Leather Gloves | 18.99 USD
20 | Women's Winter Thermal Leggings | 21.5 USD
```

18.3 Cart

The screenshot shows a terminal window displaying a shopping cart interaction. The user enters '34' as the product ID to add to the cart. They are prompted for the quantity of 'T-Shirt' to add, with a maximum of 50 available. They choose to add 10 units. The system then lists the 13 items currently in the cart, each with its ID, name, and price.

```
Enter Product ID to add => 34
How many 'T-Shirt' do you want to add? Available: 50 => 10
Added 10 x 'T-Shirt' to cart
Checkout? (Y/N) => n
1 | Men's Summer Cotton Shirt | 22.99 USD
2 | Women's Floral Summer Dress | 28.5 USD
3 | Kids Printed Summer T-Shirt | 9.99 USD
4 | Men's Summer Shorts | 17.0 USD
5 | Women's Sleeveless Tank Top | 12.99 USD
6 | Kids Summer Shorts | 11.5 USD
7 | Men's Winter Fleece Jacket | 39.99 USD
8 | Women's Woolen Sweater | 32.0 USD
9 | Kids Hooded Winter Hoodie | 19.99 USD
10 | Men's Thermal Innerwear Set | 25.99 USD
11 | Women's Winter Puffer Jacket | 55.5 USD
12 | Kids Winter Beanie Cap | 8.5 USD
13 | Men's Lightweight Summer Polo | 16.75 USD
```

18.4 Check out

```
27 | Kids Winter Snow Boots | 29.99 USD
28 | Men's Summer Sleeveless Vest | 11.99 USD
29 | Women's Summer Sun Hat | 10.5 USD
30 | Kids Winter Pajama Set | 17.99 USD
31 | T-Shirt | 20.0 USD
32 | Leather Jacket | 200.0 USD
33 | Denim Jeans | 100.0 USD
34 | T-Shirt | 20.0 USD
Add product to cart? (Y/N) => 32
Invalid input
Add product to cart? (Y/N) => y
Enter Product ID to add => 32
How many 'Leather Jacket' do you want to add? Available: 50 => 2
Added 2 x 'Leather Jacket' to cart
Checkout? (Y/N) => y

--- CART ITEMS ---
34 | T-Shirt | Price: 20.0 USD | Quantity: 10 | Sub Total: 200.0 USD
32 | Leather Jacket | Price: 200.0 USD | Quantity: 2 | Sub Total: 400.0 USD

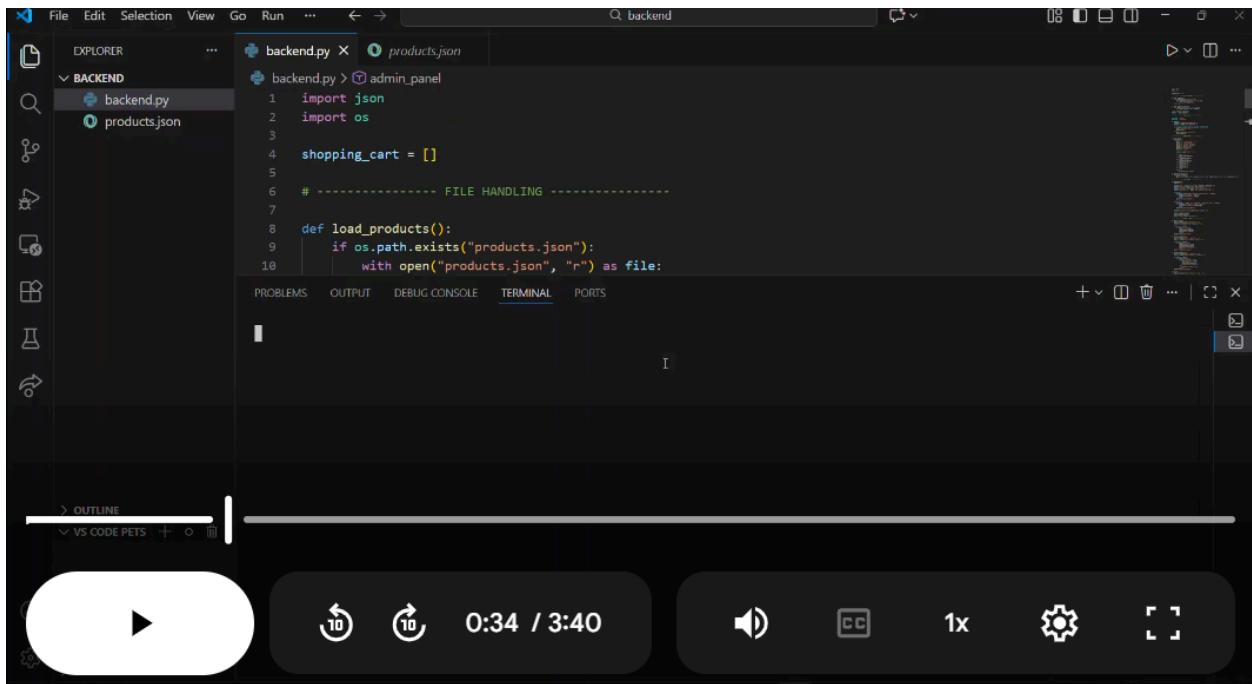
Total Bill: 600.0 USD
Thank you for shopping!
PS F:\Xerox-main\Xerox-main\backend>
```

18.5 Quantity of product id 31 updated in Admin Panel

```
ID: 17 | Women's Summer Maxi Dress | Qty: 20 | Price: 34.5
ID: 18 | Kids Summer Cap | Qty: 55 | Price: 6.99
ID: 19 | Men's Winter Leather Gloves | Qty: 25 | Price: 18.99
ID: 20 | Women's Winter Thermal Leggings | Qty: 30 | Price: 21.5
ID: 21 | Kids Winter Mittens | Qty: 60 | Price: 7.5
ID: 22 | Men's Summer Sports Shorts | Qty: 35 | Price: 15.99
ID: 23 | Women's Summer Crop Top | Qty: 45 | Price: 14.75
ID: 24 | Kids Summer Flip Flops | Qty: 70 | Price: 5.99
ID: 25 | Men's Winter Wool Coat | Qty: 9 | Price: 79.99
ID: 26 | Women's Winter Knitted Gloves | Qty: 50 | Price: 9.99
ID: 27 | Kids Winter Snow Boots | Qty: 13 | Price: 29.99
ID: 28 | Men's Summer Sleeveless Vest | Qty: 60 | Price: 11.99
ID: 29 | Women's Summer Sun Hat | Qty: 28 | Price: 10.5
ID: 30 | Kids Winter Pajama Set | Qty: 25 | Price: 17.99
ID: 31 | T-Shirt | Qty: 24 | Price: 20.0
ID: 32 | Leather Jacket | Qty: 48 | Price: 200.0
ID: 33 | Denim Jeans | Qty: 50 | Price: 100.0
ID: 34 | T-Shirt | Qty: 40 | Price: 20.0

--- ADMIN PANEL ---
1. View Products
2. Increase Quantity
3. Decrease Quantity
4. Adjust Price
5. Add Product
6. Logout
Choose =>
```

19. Output Flow Video



[Click ME for Video](#)