



اَوَّلُ سَبِيلٍ يَكُونُ لَكَ مَبَارَا
UNIVERSITI
TEKNOLOGI
MARA

Cawangan Kedah
Kampus Sungai Petani

**SCHOOL OF INFORMATION SCIENCE,
COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS
UNIVERSITI TEKNOLOGI MARA**

CDIM144 - DIPLOMA IN LIBRARY INFORMATICS

IML208 PROGRAMMING FOR LIBRARIES

**INDIVIDUAL ASSIGNMENT:
ONLINE BOOKSHOP SYSTEM**

**PREPARED BY
NUR SYAIZATUL AQMA BINTI MOHAMAD (2023885638)**

KCDIM1443E

**PREPARED FOR
SIR MOHD FIRDAUS BIN MOHD HELMI**

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NUR SYAIZATUL AQMA BT MOHAMAD (2023885638)

GROUP CDIM1443E

**IM144 – DIPLOMA IN LIBRARY INFORMATICS
SCHOOL OF COMPUTING, INFORMATICS, AND MATHEMATICS
UNIVERSITI TEKNOLOGI MARA (UiTM)
KEDAH BRANCH**



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Name : NUR SYAIZATUL AQMA BINTI MOHAMAD

Matric Number : 2023885638

Course Code : IML208

Programme Code :-

Faculty / Campus : UiTM Kampus Sungai Petani

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Project Name: Online bookshop system

File name: onlinebookshop.py

1.0 INTRODUCTION

Online bookshop system is a system that allows users to buy and search for books they wanted.

2.0 PROMPT DATA

Prompt Data:

- i. Name
- ii. Phone number
- iii. Email address
- iv. Add a new book
- v. Delete book

3.0 FUNCTION

Function:

- i. Create data

```
C: > Users > ASUS > Downloads > registrationbook.py > main
1  #onlinebookshopsystem
2
3  import re
4
5  # Function to validate the email format
6  def validate_email(email):
7      # Regular expression for basic email validation
8      email_regex = r'^[a-zA-Z0-9_+.-]+@[a-zA-Z0-9-]+\.[a-zA-Z0-9-]+\.$'
9      if re.match(email_regex, email):
10         return True
11     else:
12         return False
13
14 # Function to validate phone number format (basic validation for length and digits)
15 def validate_phone_number(phone):
16     if phone.isdigit() and len(phone) == 10:
17         return True
18     else:
19         return False
20
21 # Prompt user for details
22 def get_user_data():
23     print("Please enter the following details:")
24
25     # Getting Name
26     name = input("Enter your name: ").strip()
27
28     # Getting and validating phone number
29     phone = input("Enter your phone number (10 digits): ").strip()
30     while not validate_phone_number(phone):
31         print("Invalid phone number. Please enter a 10-digit number.")
32         phone = input("Enter your phone number (10 digits): ").strip()
33
34     # Getting and validating email
35     email = input("Enter your email address: ").strip()
36     while not validate_email(email):
37         print("Invalid email format. Please enter a valid email address.")
```

```

34 # Getting and validating email
35 email = input("Enter your email address: ").strip()
36 while not validate_email(email):
37     print("Invalid email format. Please enter a valid email address.")
38     email = input("Enter your email address: ").strip()
39
40 # Display entered details
41 print("\nThank you for entering your details!")
42 print(f"Name: {name}")
43 print(f"Phone Number: {phone}")
44 print(f"Email Address: {email}")
45
46 # Call the function to prompt user for input
47 get_user_data()
48
49 #bookscart
50 def display_books(books):
51     """Display all the books in the list."""
52     if len(books) == 0:
53         print("No books available.")
54         return
55     print("\nList of Books:")
56     for idx, book in enumerate(books, start=1):
57         print(f"{idx}. Title: {book['title']}, Author: {book['author']}, Price: ${book['price']:.2f}")
58
59 def add_book(books):
60     """Prompt the user to add a new book."""
61     print("\nEnter the details of the new book:")
62
63     # Get book information from user input
64     title = input("Title: ").strip()
65     author = input("Author: ").strip()

```

```

C:\Users\ASUS\Downloads> registrationbook.py & display_books
59 def add_book(books):
60
61     # Validate and get the year of publication
62     while True:
63         try:
64             year = int(input("Year of publication: ").strip())
65             if year > 0:
66                 break
67             else:
68                 print("Please enter a valid positive number for the year.")
69         except ValueError:
70             print("Invalid input. Please enter a valid year.")
71
72     genre = input("Genre: ").strip()
73
74     # Validate and get the price of the book
75     while True:
76         try:
77             price = float(input("Price: $").strip())
78             if price >= 0:
79                 break
80             else:
81                 print("Price cannot be negative. Please enter a valid price.")
82         except ValueError:
83             print("Invalid input. Please enter a valid price (e.g., 19.99).")
84
85     # Create a dictionary to represent the book and append it to the list
86     book = {
87         'title': title,
88         'author': author,
89         'year': year,
90         'genre': genre,
91         'price': price
92     }
93     books.append(book)
94     print(f"\nBook '{title}' added successfully!")
95
96

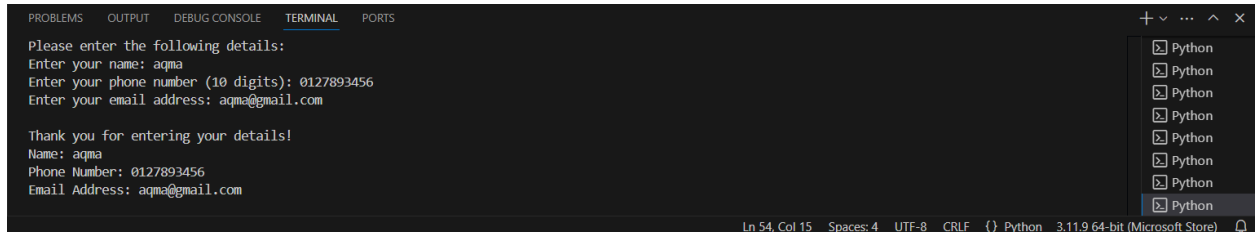
```

```

102 # Function to delete a book by title
103 def delete_book(books, title):
104     # Try to find and remove the book by title
105     for idx, book in enumerate(books):
106         if book['title'].lower() == title.lower():
107             del books[idx]
108             print(f"Book '{title}' has been deleted.")
109             return True
110     print(f"No book found with the title '{title}'.")
111     return False

```

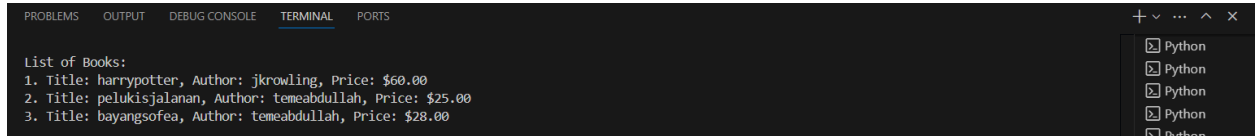
ii. Read data



A screenshot of a terminal window with tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, and PORTS. The TERMINAL tab is active. The program prompts the user to enter details: name, phone number, and email address. The user enters 'aqma', '0127893456', and 'aqma@gmail.com'. The program then displays the entered details and thanks the user.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Please enter the following details:
Enter your name: aqma
Enter your phone number (10 digits): 0127893456
Enter your email address: aqma@gmail.com

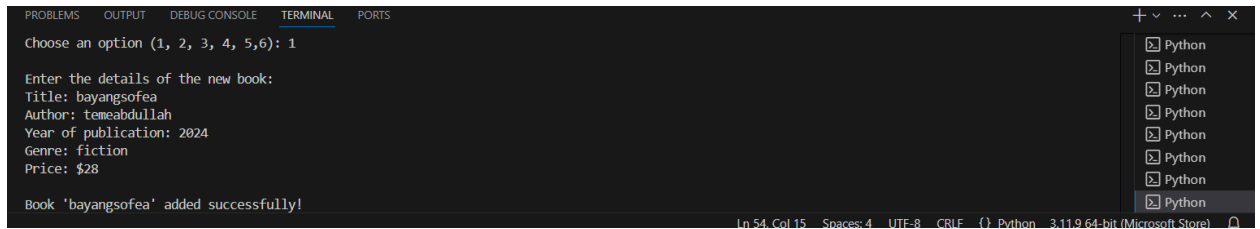
Thank you for entering your details!
Name: aqma
Phone Number: 0127893456
Email Address: aqma@gmail.com
Ln 54, Col 15 Spaces: 4 UTF-8 CRLF {} Python 3.11.9 64-bit (Microsoft Store)
```



A screenshot of a terminal window showing a list of books. The program displays the title, author, and price for three books: 'harrypotter', 'pelukisjalan', and 'bayangsofea'.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
List of Books:
1. Title: harrypotter, Author: jkrowling, Price: $60.00
2. Title: pelukisjalan, Author: temeabdullah, Price: $25.00
3. Title: bayangsofea, Author: temeabdullah, Price: $28.00
Ln 54, Col 15 Spaces: 4 UTF-8 CRLF {} Python 3.11.9 64-bit (Microsoft Store)
```

iii. Update data



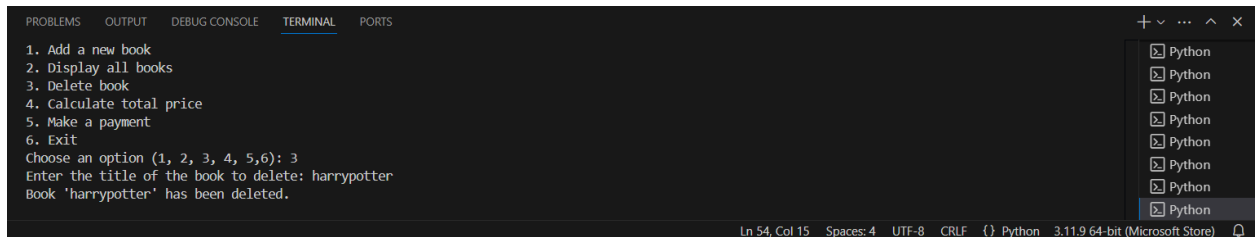
A screenshot of a terminal window showing a program that updates book data. The program prompts the user to choose an option (1, 2, 3, 4, 5, 6). The user chooses option 1. The program then prompts the user to enter the details of the new book: title, author, year of publication, genre, and price. The user enters 'bayangsofea', 'temeabdullah', '2024', 'fiction', and '\$28'. The program then displays the updated book details and confirms the update.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Choose an option (1, 2, 3, 4, 5, 6): 1

Enter the details of the new book:
Title: bayangsofea
Author: temeabdullah
Year of publication: 2024
Genre: fiction
Price: $28

Book 'bayangsofea' added successfully!
Ln 54, Col 15 Spaces: 4 UTF-8 CRLF {} Python 3.11.9 64-bit (Microsoft Store)
```

iv. Delete existing data



A screenshot of a terminal window showing a program that deletes book data. The program prompts the user to choose an option (1, 2, 3, 4, 5, 6). The user chooses option 3. The program then prompts the user to enter the title of the book to delete. The user enters 'harrypotter'. The program then displays the updated list of books and confirms the deletion.

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
1. Add a new book
2. Display all books
3. Delete book
4. Calculate total price
5. Make a payment
6. Exit
Choose an option (1, 2, 3, 4, 5, 6): 3
Enter the title of the book to delete: harrypotter
Book 'harrypotter' has been deleted.
Ln 54, Col 15 Spaces: 4 UTF-8 CRLF {} Python 3.11.9 64-bit (Microsoft Store)
```


4.0 CONDITIONAL STATEMENT

Conditional Statement: Yes

If, elif, & else

```
C:\Users > ASUS > Downloads > registrationbook.py > display_books
144
145 def main():
146     books = [] # List to store book data
147
148     while True:
149         print("\nBook Collection System")
150         print("1. Add a new book")
151         print("2. Display all books")
152         print("3. Delete book")
153         print("4. Calculate total price")
154         print("5. Make a payment")
155         print("6. Exit")
156
157         choice = input("Choose an option (1, 2, 3, 4, 5,6): ").strip()
158
159         if choice == '1':
160             add_book(books)
161         elif choice == '2':
162             display_books(books)
163         elif choice == "3":
164             title_to_delete = input("Enter the title of the book to delete: ")
165             delete_book(books, title_to_delete)
166         elif choice == '4':
167             total_price = calculate_total_price(books)
168         elif choice == '5':
169             if len(books) == 0:
170                 print("No books to process payment for. Please add books first.")
171             else:
172                 total_price = calculate_total_price(books)
173                 process_payment(total_price)
174         elif choice == '6':
175             print("Exiting the system. Goodbye!")
176             break
177         else:
178             print("Invalid option, please choose again.")
179
```

5.0 GUI

GUI: No

6.0 STRENGTH

Strength:

1. **Track list of books in cart:** any new books that are added into the cart can be traced by display the list of books.
2. **Remove any unwanted books:** user can remove any books from their cart and view the latest list.
3. **Auto calculation:** Prices of the books will be automatically calculated to make it easier for users to make payments.
4. **Easy to search book:** Any books user wants, they can fill the title, author, year publication and genre.
5. **Easy to make payment:** user can choose to pay through online banking or at physical bookstore by cash.

5.0 KAIZEN (Room for improvement)

1. **High security:** improve the security of registration by putting passwords especially for membership users.
2. **Make more payment option:** add more payment options to make it easier for users to make a payment
3. **Add log out system:** After purchasing users can choose to log out their account to protect their personal data.
4. **Add discount section:** user can fill and use any discount that was offered before making the payment to get cheaper prices.