

Library Management System

Functional Requirements

- **Admin/Librarian**
 - Can add and remove new members.
 - Can add and manage books.
 - Can view & report all borrowed books.
- **Users**
 - Can search for books based on title, publication date, author, etc.
 - Can borrow or reserve a book.
- **The System**
 - Notify the user & admin about the overdue books and create a report about it.
 - Calculates the fine for overdue books on their return.

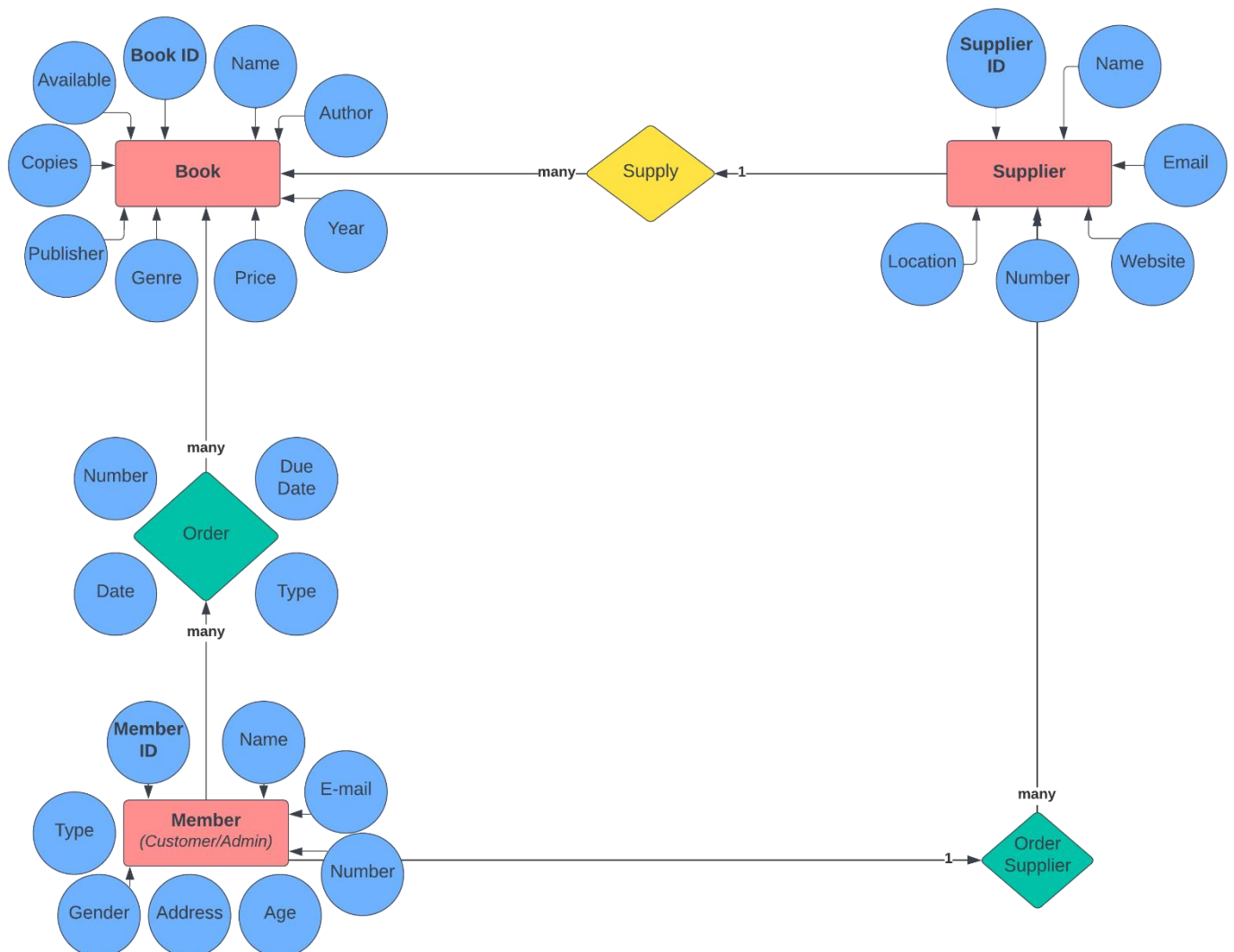
Non-Functional Requirements

- **Usability** – ensure that the system provides an interactive user-friendly interface that is easily understandable for all users.
- **Security** - ensure that only authorized users can access the system.
- **Performance** - ensure that the system can handle a large number of users and transactions.
- **Availability:** The system should be available 24/7 without issues.
- **Speed:** The system should have a response time of less than 0.5 seconds for most transactions.
- **Maintainability:** The system should be easy to maintain and update. The system should update the booking information in real-time.

Software requirements

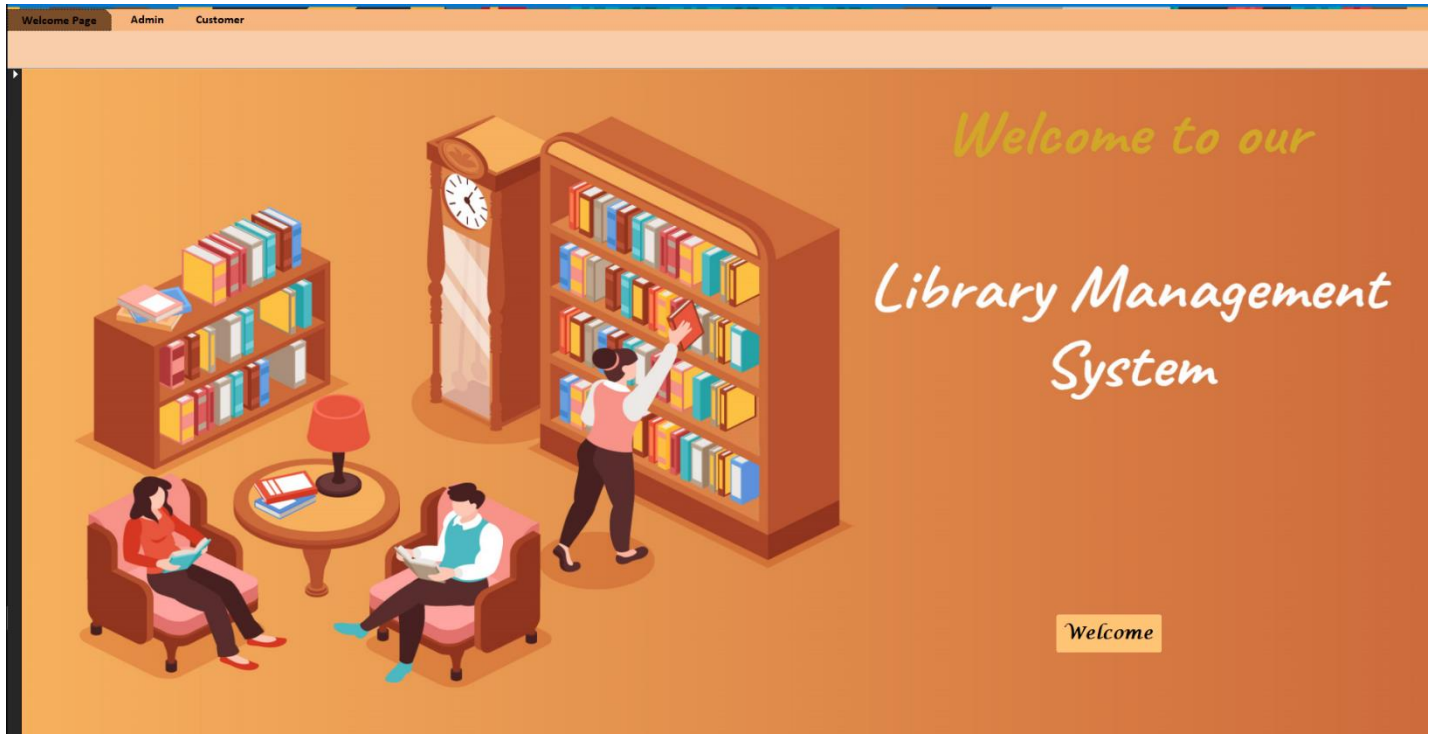
- **OS** - The system can run on Windows/Linux/Mac OS.
- **DB** - A database management system such as Access to store the data of new members & books.

ERD



System Screenshots


Welcome Page



Customer Page


Welcome Page Admin **Customer**

Available Books

 **Available Books** Sunday, May 21, 2023 3:14:02 PM

| Book Name | Author | Book Year | Pages | Book Price | Genre | Publisher | Copies |
|------------------------|---------------|-----------|-------|------------|---------|---------------|--------|
| Fifty Shades Of Grey | E L James | 2011 | 514 | \$26.00 | Romance | Vintage Books | 10 |
| The Lord of the Rings | J R R Tolkien | 1954 | 1222 | \$55.00 | Fiction | HarperCollins | 15 |
| Harry Potter | J K Rowling | 2001 | 350 | \$30.00 | Fiction | Pinguin | 7 |
| The Fault in our Stars | John Green | 2012 | 315 | \$26.00 | Romance | Penguin | 10 |

[Print](#)



Admin Page

Member Form

Welcome PageAdminCustomer

MemberBookSupplierEdit OrderSupplier OrderSupplier Order ReportAvailable BooksUnavailable BooksSalesAdmin MembersCustomer MembersMale MembersFemale Members

Member Form

Member ID1

First NameMichaelLast NameScott

Number01012345678Emailmichaelscott@gmail.com


Date of Birth01-Apr-70AddressCalifornia, USA

GenderMaleTypeAdmin

Notes

| Order ID | Book ID | Order Date | Type | Due Date | Notes |
|----------|---------|------------|----------|----------|-------|
| 7 | 4 | 21-May-23 | Purchase | | |
| * (New) | | | | | |

Record: 1 of 1No FilterSearch



Book Form

Welcome PageAdminCustomer

MemberBookSupplierEdit OrderSupplier OrderSupplier Order ReportAvailable BooksUnavailable BooksSalesAdmin MembersCustomer MembersMale MembersFemale Members

Book Form

Book ID1

Book NameCrush IT

Book Year2009

Book Price\$20.00

PublisherHarperCollins

Available☐

DescriptionDo you have a hobby you wish you could indulge in all day? Now is the perfect time to take that passion and make a living doing what you love. Marketer Gary Vaynerchuk shows you how to use the power of the Internet to turn your real interests into real businesses.

Supplier ID1

AuthorGary Vee

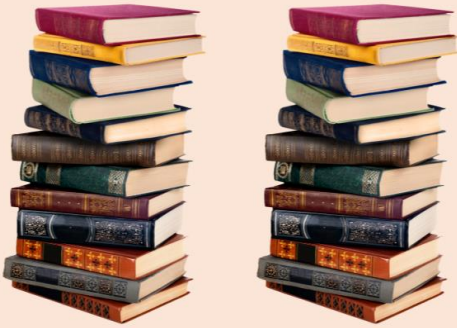
Pages162

GenreSelf-Development

Copies0

| Order ID | Member ID | Order Date | Type | Due Date | Notes |
|----------|-----------|------------|------|----------|-------|
| * (New) | | | | | |

Record: 1 of 1No FilterSearch



Supplier

Welcome Page

Admin

Customer

Member

Book

Supplier

Edit Order

Supplier Order

Supplier Order Report

Available Books

Unavailable Books

Sales

Admin Members

Customer Members

Male Members

Female Members

Supplier Form

Supplier ID

1

Supplier Name

Ingram

Number

0120255011

Website

www.ingramcontent.com

Email

ingram@gmail.com

Location

USA

Notes

Generally regarded as the largest book distributor in the world, Ingram specializes in print books and reaches more than 39,000 stores. Ingram is also one of the largest and best-known wholesalers in the world.

| Book ID | Book Name | Author | Book Year | Pages | Book Price |
|---------|------------------------|---------------|-----------|-------|------------|
| 1 | Crush it | Gary Vee | 2009 | 162 | \$20.00 |
| 3 | The Lord of the Rings | J R R Tolkien | 1954 | 1,222 | \$55.00 |
| 4 | Harry Potter | J K Rowling | 2001 | 350 | \$30.00 |
| 5 | The Fault in our Stars | John Green | 2012 | 215 | \$26.00 |

Record: 1 of 4

Edit Order

Welcome Page

Admin

Customer

Member

Book

Supplier

Edit Order

Supplier Order

Supplier Order Report

Available Books

Unavailable Books

Sales

Admin Members

Customer Members

Male Members

Female Members

Edit Order

First Name

Will

Last Name

Smith

Email

willsmith@gmail.com

Number

01135790125

Date of Birth

05-Jul-92

Address

San Diego, USA

Gender

Male

Member Type

Customer

Book Name

The Lord of the Rings

Author

J R R Tolkien

Book Year

1954

Pages

1222

Book Price

\$55.00

Genre

Fiction

Publisher

HarperCollins

Supplier Name

Ingram

Order Date

02-May-23

[Customer Order].Type

Purchase

Due Date

Supplier Order

Welcome PageAdminCustomer

MemberBookSupplierEdit OrderSupplier OrderSupplier Order ReportAvailable BooksUnavailable BooksSalesAdmin MembersCustomer MembersMale MembersFemale Members

Order from Supplier

Supplier ID1

Admin ID1

Book NameHarry Potter

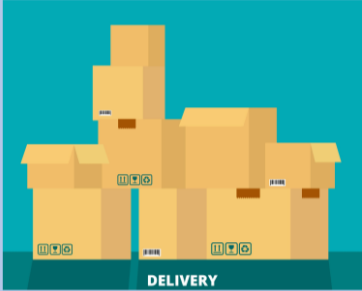
Quantity30

Order Date16-May-23

Due Date31-May-23

Cost\$100.00

Notes



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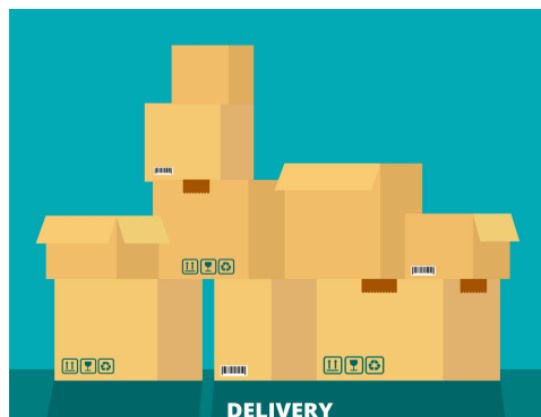
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Reports

Supplier Order Report

| Welcome PageAdminCustomer | | | | | | | | | | |
|---|----------|------------------|-----------------|-------------|---------------|-----------------------|----------|----------|------------|-----------|
| MemberBookSupplierEdit OrderSupplier OrderSupplier Order ReportAvailable BooksUnavailable BooksSalesAdmin Members | | | | | | | | | | |
| Order from a Supplier Report | | | | | | | | | | |
| Sunday, May 21, 2023 3:10:02 PM | | | | | | | | | | |
| Order ID | Admin ID | Admin First Name | Admin Last Name | Supplier ID | Supplier Name | Book Name | Quantity | Cost | Order Date | Due Date |
| 1 | 1 | Michael | Scott | 1 | Ingram | Harry Potter | 30 | \$100.00 | 16-May-23 | 31-May-23 |
| 2 | 1 | Michael | Scott | 1 | Ingram | The Lord of the Rings | 100 | \$300.00 | 15-May-23 | 31-May-23 |
| 3 | 1 | Michael | Scott | 1 | Ingram | Fifty Shades of Grey | 50 | \$200.00 | 20-May-23 | 27-May-23 |
| | | | | | | | | \$600.00 | Print | |



Sales Report

Welcome Page
Admin
Customer

Member
Book
Supplier
Edit Order
Supplier Order
Supplier Order Report
Available Books
Unavailable Books
Sales
Admin Member

Sales Report
Sunday, May 21, 2023 3:11:38 PM

| First Name | Last Name | Email | Number | Date of Birth | Address | Gender | Book Name | Author | Book Year | Pages | Book Price | Genre | Publisher |
|------------|-----------|-------------------------|-------------|---------------|-----------------|--------|------------------------|---------------|-----------|-------|------------|---------|---------------|
| Will | Smith | willsmith@gmail.com | 01135790125 | 05-Jul-92 | San Diego, USA | Male | The Lord of the Rings | J R R Tolkien | 1954 | 1222 | \$55.00 | Fiction | HarperCollins |
| Sofia | Vergara | sofiavergara@gmail.com | 01224683456 | 01-May-80 | Madrid, Spain | Female | Fifty Shades Of Grey | E L James | 2011 | 514 | \$26.00 | Romance | Vintage Books |
| Jacob | Grey | jacobgrey@gmail.com | 01234567894 | 11-May-95 | Venice, Italy | Male | Harry Potter | J K Rowling | 2001 | 350 | \$30.00 | Fiction | Penguin |
| Maria | Medhat | mariamedhat@gmail.com | 01323456789 | 17-Apr-08 | Paris, France | Female | The Fault in our Stars | John Green | 2012 | 315 | \$26.00 | Romance | Penguin |
| DR Zeina | Ryan | zeinarian@gmail.com | 01023456789 | 12-Apr-23 | Italy | Female | Harry Potter | J K Rowling | 2001 | 350 | \$30.00 | Fiction | Penguin |
| Mohammed | Alaa | mohammedalaa@gmail.com | 01234567890 | 30-May-97 | Italy | Male | The Fault in our Stars | John Green | 2012 | 315 | \$26.00 | Romance | Penguin |
| Michael | Scott | michaelscott@gmail.com | 01012345678 | 01-Apr-70 | California, USA | Male | Harry Potter | J K Rowling | 2001 | 350 | \$30.00 | Fiction | Penguin |
| Dr Osama | Hanafi | drosamahanafi@gmail.com | 01033456789 | 03-May-23 | Italy | Male | Harry Potter | J K Rowling | 2001 | 350 | \$30.00 | Fiction | Penguin |

\$253.00
Print

Unavailable Books

Welcome Page
Admin
Customer

Member
Book
Supplier
Edit Order
Supplier Order
Supplier Order Report
Available Books
Unavailable Books

Unavailable Books
Sunday, May 21, 2023 3:18:01 PM


| Book Name | Author | Book Year | Pages | Book Price | Genre | Publisher | Copies |
|-----------|----------|-----------|-------|------------|------------------|---------------|--------|
| Crush it | Gary Vee | 2009 | 162 | \$20.00 | Self-Development | HarperCollins | 0 |

Print

Admin Report

Welcome PageAdminCustomer


MemberBookSupplierEdit OrderSupplier OrderSupplier Order ReportAvailable BooksUnavailable Books

 **Admin Members** Sunday, May 21, 2023 3:19:39 PM

| First Name | Last Name | Email | Number | Date of Birth | Address | Gender |
|------------|-----------|------------------------|-------------|---------------|-----------------|--------|
| Michael | Scott | michaelscott@gmail.com | 01012345678 | 01-Apr-70 | California, USA | Male |

1


Print



Customer Report

Welcome PageAdminCustomer


MemberBookSupplierEdit OrderSupplier OrderSupplier Order ReportAvailable BooksUnavailable Books

 **Customer Members** Sunday, May 21, 2023 3:21:21 PM

| First Name | Last Name | Email | Number | Date of Birth | Address | Gender |
|------------|-----------|-------------------------|-------------|---------------|----------------|--------|
| Dr Osama | Hanafi | drosamahanafi@gmail.com | 01033456789 | 03-May-23 | Italy | Male |
| Sofia | Vergara | sofiavergara@gmail.com | 01224683456 | 01-May-80 | Madrid, Spain | Female |
| Will | Smith | willsmith@gmail.com | 01135790125 | 05-Jul-92 | San Diego, USA | Male |
| Jacob | Grey | jacobgrey@gmail.com | 01234567894 | 11-May-95 | Venice, Italy | Male |
| Maria | Medhat | mariamedhat@gmail.com | 01323456789 | 17-Apr-08 | Paris, France | Female |
| DR Zeina | Ryan | zeinarian@gmail.com | 01023456789 | 12-Apr-23 | Italy | Female |
| Mohammed | Alaa | mohammedalaa@gmail.com | 01234567890 | 30-May-97 | Italy | Male |

7

Print



Male Members Report

| Welcome Page Admin Customer | | | | | | |
|-----------------------------|-----------|-------------------------|-------------|----------------|---------------------------------|-----------------------------|
| Member | Book | Supplier | Edit Order | Supplier Order | Supplier Order Report | Available Books Unavailable |
| Male Members | | | | | Sunday, May 21, 2023 3:22:17 PM | |
| First Name | Last Name | Email | Number | Date of Birth | Address | Type |
| Dr Osama | Hanafi | drosamahanafi@gmail.com | 01033456789 | 03-May-23 | Italy | Customer |
| Michael | Scott | michaelscott@gmail.com | 01012345678 | 01-Apr-70 | California, USA | Admin |
| Will | Smith | willsmith@gmail.com | 01135790125 | 05-Jul-92 | San Diego, USA | Customer |
| Jacob | Grey | jacobgrey@gmail.com | 01234567894 | 11-May-95 | Venice, Italy | Customer |
| Mohammed | Alaa | mohammedalaa@gmail.com | 01234567890 | 30-May-97 | Italy | Customer |
| 5 | | | | | | |
| Print | | | | | | |



Female Members Report

| Welcome Page Admin Customer | | | | | | |
|-----------------------------|-----------|------------------------|-------------|----------------|---------------------------------|-----------------------------|
| Member | Book | Supplier | Edit Order | Supplier Order | Supplier Order Report | Available Books Unavailable |
| Female Members | | | | | Sunday, May 21, 2023 3:23:32 PM | |
| First Name | Last Name | Email | Number | Date of Birth | Address | Type |
| Sofia | Vergara | sofiavergara@gmail.com | 01224683456 | 01-May-80 | Madrid, Spain | Customer |
| Maria | Medhat | mariamedhat@gmail.com | 01323456789 | 17-Apr-08 | Paris, France | Customer |
| DR Zeina | Ryan | zeinarian@gmail.com | 01023456789 | 12-Apr-23 | Italy | Customer |
| 3 | | | | | | |
| Print | | | | | | |

