Sri Lanka Institute of Information Technology

B.Sc. (Hons) in Information Technology Specializing Software Engineering

Department of Computer Science and Software Engineering

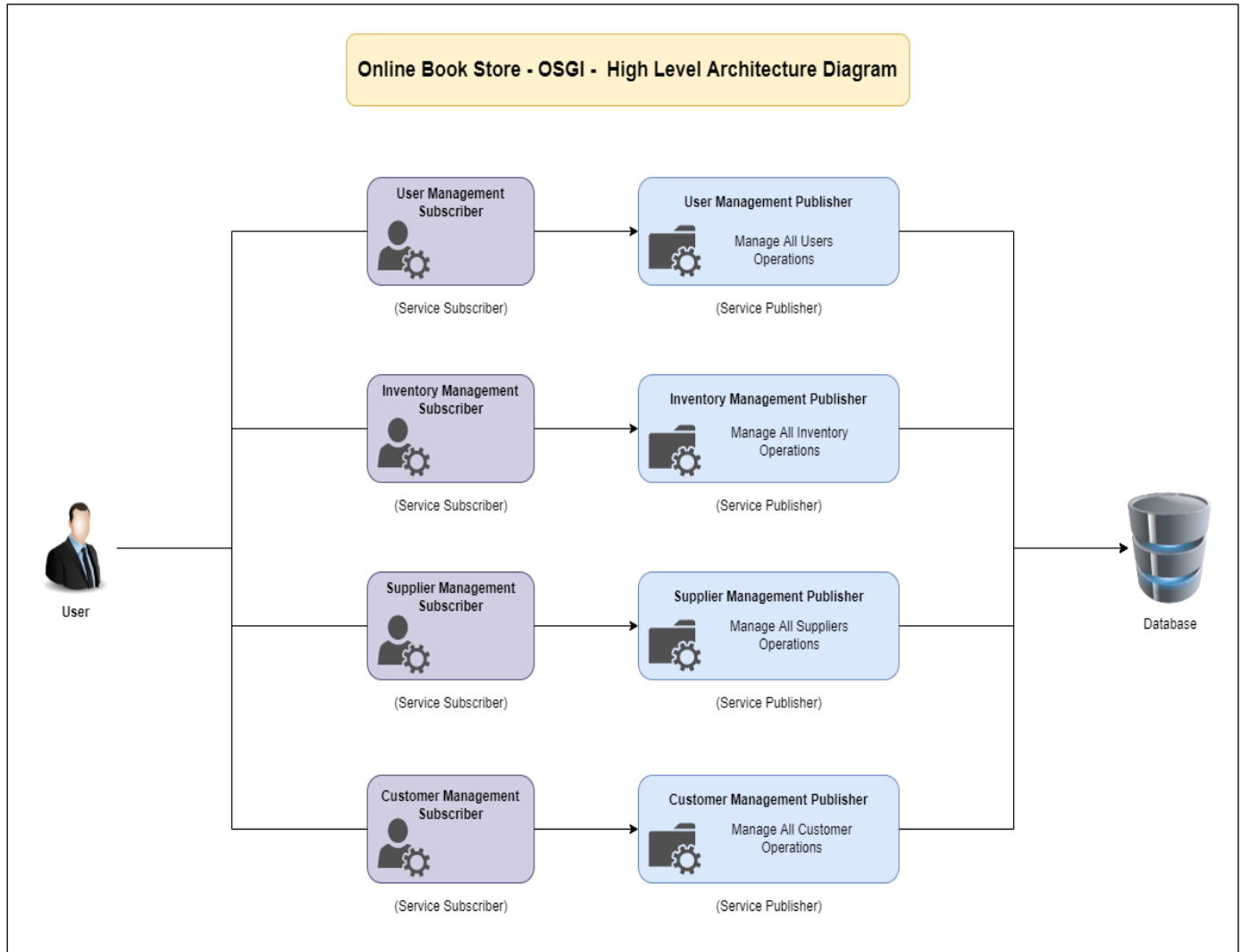**Software Architecture - SE3030**

Group Number – SE3030_WE_56

Assignment 01 - Report

Online Book Store

(OSGI)

Group Details

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Description

Online Book Store - OSGI - High Level Architecture Diagram

The solution demonstrates a Book Store scenario utilizing an OSGI Framework application built according to the microkernel architecture. Customer Management, User Management, Inventory Management, and Supplier Management are among the eight packages included in the solution. Depending on the situation, each management level acts as a publisher or a subscriber.

This solution provides functions to

- Register into the system.
- Browse and customize books.
- Order and request Books
- Supplier management
- Request wholesale order
- Report Generate

Under User Management, users are the people inside the bookstore. In the system, under user management users and employees can be added or register to the system, delete from the system and can retrieve the list of the users. According to the role, the user list report can be generated. And also the user can generate a report of deleted users.

In the Customer Management, when customer accessing the system for the first time he or she will be asked to register to the system. Customers can be added and delete from the system. Once customers visit to the system, customers can view the available book list. Customers can order and request books through the system. Customer can retrieve the list of ordered and requested books and can generate reports also.

Inventory Management manages the books available in the book store. New books can be added to the system, unwanted books can be deleted and can view the available book list in the book store. Also a report can be generated from the book list available in inventory.

Supplier Management manages the book suppliers to the book store. Supplier can register to the system. In here also, the book suppliers can be added, delete and the supplier list can be viewed. And also one supplier can be viewed by supplier Id. Supplier can add and delete wholesale orders of the system. All the wholesale orders can be retrieved as a list from the system. And also one wholesale order can be retrieved through wholesale order id. Supplier can generate reports on supplier list and the list of wholesale orders.

 The notion of information hiding in bundle level is achieved, according to the used architecture, by not disclosing any service of the User, Inventory, and Supplier Services bundle to the customer. Since the user, the user's inventory and supplier information will be unique to the book store.

Manifest implementation

- ## User Management Subscriber

  Manifest-Version: 1.0
  Bundle-ManifestVersion: 2
  Bundle-Name: UserManagementSubscriber
  Bundle-SymbolicName: UserManagementSubscriber
  Bundle-Version: 1.0.0.qualifier
  Bundle-Activator: usermanagementsubscriber.Activator
  Bundle-RequiredExecutionEnvironment: JavaSE-1.8
  Automatic-Module-Name: UserManagementSubscriber
  Import-Package: org.osgi.framework;version="1.3.0"
  Bundle-ActivationPolicy: lazy
  Require-Bundle: UserManagementPublisher;bundle-version="1.0.0"

  - **Imported Packages**

    org.osgi.framework

- ## User Management Publisher

  Manifest-Version: 1.0
  Bundle-ManifestVersion: 2
  Bundle-Name: UserManagementPublisher
  Bundle-SymbolicName: UserManagementPublisher
  Bundle-Version: 1.0.0.qualifier
  Bundle-Activator: usermanagementpublisher.Activator
  Bundle-RequiredExecutionEnvironment: JavaSE-1.8
  Automatic-Module-Name: UserManagementPublisher
  Import-Package: org.osgi.framework;version="1.3.0",bookstoredbcontext
  Bundle-ActivationPolicy: lazy
  Export-Package: usermanagementpublisher

  - **Imported Packages**

    bookstoredbcontext
    org.osgi.framework

  - **Exported Packages**

    usermanagementpublisher

Supplier Management Subscriber

Manifest-Version: 1.0
Bundle-ManifestVersion: 2
Bundle-Name: SupplierManagementSubscriber
Bundle-SymbolicName: SupplierManagementSubscriber
Bundle-Version: 1.0.0.qualifier
Bundle-Activator: suppliermanagementsubscriber.Activator
Bundle-RequiredExecutionEnvironment: JavaSE-1.8
Automatic-Module-Name: SupplierManagementSubscriber
Import-Package: org.osgi.framework;version="1.3.0"
Bundle-ActivationPolicy: lazy
Require-Bundle: CustomerManagementPublisher;bundle-version="1.0.0"

- **Imported Packages**

  org.osgi.framework

Supplier Management Publisher

Manifest-Version: 1.0
Bundle-ManifestVersion: 2
Bundle-Name: SupplierManagementPublisher
Bundle-SymbolicName: SupplierManagementPublisher
Bundle-Version: 1.0.0.qualifier
Bundle-Activator: suppliermanagementpublisher.Activator
Bundle-RequiredExecutionEnvironment: JavaSE-1.8
Automatic-Module-Name: SupplierManagementPublisher
Import-Package: bookstoredbcontext,
org.osgi.framework;version="1.3.0"
Bundle-ActivationPolicy: lazy
Export-Package: SupplierManagementPublisher

- **Imported Packages**

  Bookstoredbcontext
  org.osgi.framework

- **Exported Packages**

  SupplierManagementPublisher

- # Inventory Management Subscriber

  Manifest-Version: 1.0
  Bundle-ManifestVersion: 2
  Bundle-Name: InventoryManagementSubscriber
  Bundle-SymbolicName: InventoryManagementSubscriber
  Bundle-Version: 1.0.0.qualifier
  Bundle-Activator: inventorymanagementsubscriber.Activator
  Bundle-RequiredExecutionEnvironment: JavaSE-1.8
  Automatic-Module-Name: InventoryManagementSubscriber
  Import-Package: org.osgi.framework;version="1.3.0"
  Bundle-ActivationPolicy: lazy
  Require-Bundle: InventoryManagementPublisher;bundle-version="1.0.0"

  - **Imported Packages**
      org.osgi.framework

- # Inventory Management Publisher

  Manifest-Version: 1.0
  Bundle-ManifestVersion: 2
  Bundle-Name: InventoryManagementPublisher
  Bundle-SymbolicName: InventoryManagementPublisher
  Bundle-Version: 1.0.0.qualifier
  Bundle-Activator: inventorymanagementpublisher.Activator
  Bundle-RequiredExecutionEnvironment: JavaSE-1.8
  Automatic-Module-Name: InventoryManagementPublisher
  Import-Package: bookstoredbcontext,
  org.osgi.framework;version="1.3.0"
  Bundle-ActivationPolicy: lazy
  Export-Package: inventorymanagementpublisher

  - **Imported Packages**
      Bookstoredbcontext
      org.osgi.framework

  - **Exported Packages**
      inventorymanagementpublisher

- # Customer Management Subscriber

  Manifest-Version: 1.0
  Bundle-ManifestVersion: 2
  Bundle-Name: CustomerManagementSubscriber
  Bundle-SymbolicName: CustomerManagementSubscriber
  Bundle-Version: 1.0.0.qualifier
  Bundle-Activator: customermanagementsubscriber.Activator
  Bundle-RequiredExecutionEnvironment: JavaSE-1.8
  Automatic-Module-Name: CustomerManagementSubscriber
  Import-Package: org.osgi.framework;version="1.3.0"
  Bundle-ActivationPolicy: lazy
  Require-Bundle: CustomerManagementPublisher;bundle-version="1.0.0"

- **Imported Packages**

  org.osgi.framework

- # Customer Management Publisher

  Manifest-Version: 1.0
  Bundle-ManifestVersion: 2
  Bundle-Name: CustomerManagementPublisher
  Bundle-SymbolicName: CustomerManagementPublisher
  Bundle-Version: 1.0.0.qualifier
  Bundle-Activator: customermanagementpublisher.Activator
  Bundle-RequiredExecutionEnvironment: JavaSE-1.8
  Automatic-Module-Name: CustomerManagementPublisher
  Import-Package: bookstoredbcontext,
  org.osgi.framework;version="1.3.0"
  Bundle-ActivationPolicy: lazy
  Export-Package: customermanagementpublisher

- **Imported Packages**

  bookstoredbcontext
  org.osgi.framework

- **Exported Packages**

  customermanagementpublisher

Sample screenshots of behavior and outputs.

User Management

User Dashboard

```
==============User Dashboard===============
1 => User Registration
2 => Get All User Details
3 => Delete User
4 => Employee Registration
5 => Genarate User Detail Report
Please Select Your Option
```

User Registration

```
==============User Management Dashboard==============
1 => Add Customer
2 => Get All User Details
3 => Delete User
4 => Employee Registration
5 => Genarate User Detail Report
Please Select Your Option
1
Enter Your First Name :
Malsha
Enter Your Last Name :
Geethmi
Enter Your Email :
masha@gmail.com
Enter Your Address :
Gampha
Enter Your Mobile Number :
0703375581
Enter Your Password :
1qaz2wsx@
User Registration Has Been Successfully

Do you want to add another customer(y/n)
```

User List Console

```
=============User Management Dashboard=============
1 => Add Customer
2 => Get All User Details
3 => Delete User
4 => Employee Registration
5 => Genarate User Detail Report
Please Select Your Option
2


=============================User Details=========================================
        UserId        First Name      Last Name         Email           Address     Mobile Number

=================================================================================================
           9             Sachin          Aminda   sachinaminda@gmail.com      kaduwela      0112487086
-------------------------------------------------------------------------------------------------
          11              Ashen       Dunusinghe   avdunusinghe@gmail.com       Colombo      0703375581
-------------------------------------------------------------------------------------------------
          13             Sharli            June      sharlijune@gmail.com       Negambo       078553321
-------------------------------------------------------------------------------------------------
```

User List Report Generate

```
===============User Management Dashboard===============
1 => Add Customer
2 => Get All User Details
3 => Delete User
4 => Employee Registration
5 => Genarate User Detail Report
Please Select Your Option
5
=======================================================
Customer Role Id => 1   :
Employee Role Id => 2   :
Please Enter User Role Id
1
Report genaration has been successfully
```

User List Report Output

```
userList - Notepad
File  Edit  Format  View  Help
================================== User Details Report ===========================================
        UserId        First Name      Last Name         Email           Address     Mobile Number

=================================================================================================
           9             Sachin          Aminda   sachinaminda@gmail.com      kaduwela      0112487086
-------------------------------------------------------------------------------------------------
          11              Ashen       Dunusinghe   avdunusinghe@gmail.com       Colombo      0703375581
-------------------------------------------------------------------------------------------------
          13             Sharli            June      sharlijune@gmail.com       Negambo       078553321
-------------------------------------------------------------------------------------------------
```

Delete User

```
==============User Management Dashboard===============
1 => Add Customer
2 => Get All User Details
3 => Delete User
4 => Employee Registration
5 => Genarate User Detail Report
Please Select Your Option
3

Please enter User id : 11
Delete user has been successfully..

Do you want to delete another customer(y/n)
```
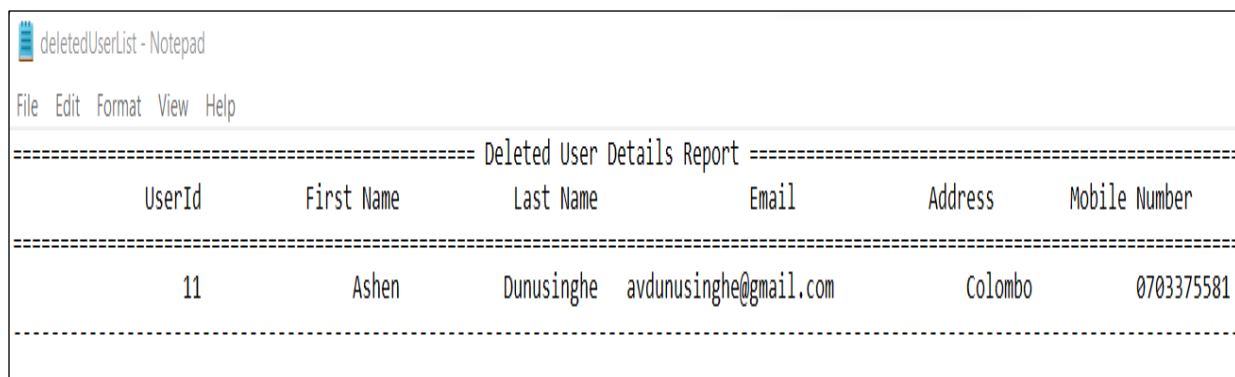
Retrieve Deleted User Report

```
==============User Management Dashboard===============
1 => Add Customer
2 => Get All User Details
3 => Delete User
4 => Employee Registration
5 => Genarate User Detail Report
6 => Get Deleted User Details
Please Select Your Option
6
=========================================================
Customer Role Id => 1  :
Employee Role Id => 2  :
Please Enter User Role Id
1

=======================================Deleted User Details===================================================
         UserId          First Name          Last Name          Email          Address          Mobile Number

=============================================================================================================
          11             Ashen               Dunusinghe    avdunusinghe@gmail.com       Colombo         0703375581
-------------------------------------------------------------------------------------------------------------
=============================================================================================================
if you want to genarate Report all deleted users (Y/N)
```

Deleted User Report Output

```
deletedUserList - Notepad
File  Edit  Format  View  Help

=================================================== Deleted User Details Report ====================================================
         UserId          First Name          Last Name          Email          Address          Mobile Number

==================================================================================================================================
          11             Ashen               Dunusinghe    avdunusinghe@gmail.com       Colombo         0703375581
----------------------------------------------------------------------------------------------------------------------------------
```

Employee Registration

```
===============User Management Dashboard===============
1 => Add Customer
2 => Get All User Details
3 => Delete User
4 => Employee Registration
5 => Genarate User Detail Report
Please Select Your Option
4
Enter Employee First Name :
Ashen
Enter Employee Last Name :
vimanaga
Enter Employee Email :
ashen@bookstore@gmail.com
Enter Employee Address :
colombo
Enter Employee Mobile Number :
0703375581
Employee Registration Has Been Successfully

Do you want to add another Employee(y/n)
```

Employee Report Generation

```
===============User Management Dashboard===============
1 => Add Customer
2 => Get All User Details
3 => Delete User
4 => Employee Registration
5 => Genarate User Detail Report
Please Select Your Option
5
=======================================================
Customer Role Id => 1  :
Employee Role Id => 2  :
Please Enter User Role Id
2
Report genaration has been successfully
```

Employee List Report output


```
userList - Notepad
File  Edit  Format  View  Help
=========================================== Employee Details Report ===========================================
        UserId        First Name       Last Name            Email          Address      Mobile Number
================================================================================================================
            10         Chanukshi          gamage    chanukshi@gmail.com   bandarawela      0112584441
        -------------------------------------------------------------------------------------------------------
            12            Malsha         Geethmi      malsha@gmail.com         Gampha       0708556681
        -------------------------------------------------------------------------------------------------------
            14            Harsha         Prabath      harsha@gmail.com        kaduwela      0112478442
        -------------------------------------------------------------------------------------------------------
```

Add Admin-Customer

```
1
Enter Your First Name :
Ashen
Enter Your Last Name :
Dunusinghe
Enter Your Email :
avdunusinghe@gmail.com
Enter Your Address :
Colombo
Enter Your Mobile Number :
0703375581
Enter Your Password :
1qaz2wsx@
User Registration Has Been Successfully

Do you want to add another customer(y/n)
```

Supplier Management

Supplier Dashboard

```
==============Supplier Dashboard==============


1 => Supplier Registration
2 => Get All Supplier Details
3 => Delete Supplier
4 => Get Supplier by Id
5 =>  WholeSale Order of Books
6 => Get wholesale order list
7 => Delete Wholesale Order
8 => Get Wholesale Order by Id
9 => Get Supplier Report
10 => Get WholesaleOrder Report
Please Select Your Option
```

Supplier Registration

```
==============Supplier Dashboard==============

1 => Supplier Registration
2 => Get All Supplier Details
3 => Delete Supplier
4 => Get Supplier by Id
5 =>  WholeSale Order of Books
6 => Get wholesale order list
7 => Delete Wholesale Order
8 => Get Wholesale Order by Id
Please Select Your Option
1
Enter Your First Name :
Chanukshi
Enter Your Last Name :
Gamage
Enter Your Email :
chanukshi@gmail.com
Enter Your NIC :
986102221V
Enter Your Address :
Bandarawela
Enter Your Mobile Number :
0764084406
Enter Your Company Name :
Atlas
Enter Your Password :
Chanu1998
Supplier Registration Has Been Successfully

Do you want to add another supplier(y/n)
```

Supplier List Output Console

```
Please Select Your Option
2

=================================================== Supplier  Details ===================================================

        SupplierId      First Name      Last Name           Email            NIC          Address      Mobile Number      CompanyName
-----------------------------------------------------------------------------------------------------------------------------------
            1           Chanukshi        Gamage      chanukshi@gmail.com    986102221V    Bandarawela    0764084406         Atlas
-----------------------------------------------------------------------------------------------------------------------------------
            2            Garuka          Mihiran       garuka@gmail.com     981234251V      Galle        0769704510         Promate
-----------------------------------------------------------------------------------------------------------------------------------
            3            Ashen          Dunusinghe      ashen@gmail.com     200021234V      Delgoda      0712343212         Ritchard
-----------------------------------------------------------------------------------------------------------------------------------
            4            Sachin         Ranasinghe     sachin@gmail.com     982570590V      Horana       0712838354         IMate
-----------------------------------------------------------------------------------------------------------------------------------
            5           Tharukshi        Gamage      tharukshi@gmail.com   2002123432V    Kinigama       0701777686         Sammanee
-----------------------------------------------------------------------------------------------------------------------------------
            6            Hiruni         Nawanjana      hiruni@gmail.com    2000123421V    Nittabuwa      0715155043         Rathna
-----------------------------------------------------------------------------------------------------------------------------------
```

Supplier Retrieve By Id

```
Please Select Your Option
4
Enter Supplier Id :
2
            2            Garuka          Mihiran       garuka@gmail.com     981234251V      Galle        0769704510         Promate
```

Supplier Delete

```
Please Select Your Option
3

Please enter Supplier id : 6
Delete supplier has been successfully..

Do you want to delete another supplier(y/n) n
```

Supplier Generate Report

```
Please Select Your Option
9
Report genaration has been successfully
```

Supplier Report Output

suplierList - Notepad

File Edit Format View Help

```
==================================================== Supplier Details Report =====================================================
     SupplierId          First Name          Last Name               Email              NIC          Address      Mobile Number        CompanyName
=================================================================================================================================
          1              Chanukshi            Gamage      chanukshi@gmail.com       986102221V      Bandarawela      0764084406              Atlas
     ----------------------------------------------------------------------------------------------------------------------------
          2                Garuka            Mihiran        garuka@gmail.com        981234251V           Galle      0769704510            Promate
     ----------------------------------------------------------------------------------------------------------------------------
          3                 Ashen          Dunusinghe        ashen@gmail.com        200021234V          Delgoda      0712343212           Ritchard
     ----------------------------------------------------------------------------------------------------------------------------
          4                Sachin           Ranasinghe      sachin@gmail.com        982570590V           Horana      0712838354              IMate
     ----------------------------------------------------------------------------------------------------------------------------
          5              Tharukshi            Gamage      tharukshi@gmail.com      2002123432V         Kinigama      0701777686            Sammanee
     ----------------------------------------------------------------------------------------------------------------------------
```

WholeSaleOrder Registration

```
==============Supplier Dashboard===============


1 => Supplier Registration
2 => Get All Supplier Details
3 => Delete Supplier
4 => Get Supplier by Id
5 =>  WholeSale Order of Books
6 => Get wholesale order list
7 => Delete Wholesale Order
8 => Get Wholesale Order by Id
9 => Get Supplier Report
10 => Get WholesaleOrder Report
Please Select Your Option
5
Please enter Number of Books
200
Please enter book name
Singled rule
Please enter Company name
Atlas
WholeSaleOrder has been successfully

Do you want to add another wholesale Order(y/n)
```

WholeSaleOrder List Output Console

```
Please Select Your Option
6

=================================================== WholeSale Order  Details ===================================================

   WholesaleOrderId          No Of Books          Book Name          Supplier Company

--------------------------------------------------------------------------------------------------------------------------------
                  1                  100          Single ruled                  Atlas
--------------------------------------------------------------------------------------------------------------------------------
                  2                   50          Doubled rule                  Atlas
--------------------------------------------------------------------------------------------------------------------------------
                  3                  100          Singled rule                Promate
--------------------------------------------------------------------------------------------------------------------------------
                  4                  150          Squared rule                ProMate
--------------------------------------------------------------------------------------------------------------------------------
                  5                  200          Drawing Book                  Atlas
--------------------------------------------------------------------------------------------------------------------------------

```

WholeSaleOrder Delete

```
Please Select Your Option
7

Please enter WholeSale Order id : 5
Delete wholesale order has been successfully..

Do you want to delete another wholesale order(y/n) n
```

WholeSaleOrder Retrieve by Id

```
Please Select Your Option
8
Enter WholeSaleOrder Id :
4
                  4                  150          Squared rule                ProMate
```

WholeSaleOrder Report Generate

```
1 => Supplier Registration
2 => Get All Supplier Details
3 => Delete Supplier
4 => Get Supplier by Id
5 =>  WholeSale Order of Books
6 => Get wholesale order list
7 => Delete Wholesale Order
8 => Get Wholesale Order by Id
9 => Get Supplier Report
10 => Get WholesaleOrder Report
Please Select Your Option
10
WholeSaleOrder Report genaration has been successfully
```

WholeSaleOrder Report Output

wholesaleOrderList - Notepad

File Edit Format View Help

```
=========================================== WholeSaleOrder Details Report ==================================================

        WholesaleOrderId          No Of Books              Book Name        Supplier Company
============================================================================================================================

                1                   100             Single ruled              Atlas
----------------------------------------------------------------------------------------------------------------------------
                2                    50             Doubled rule              Atlas
----------------------------------------------------------------------------------------------------------------------------
                3                   100             Singled rule              Promate
----------------------------------------------------------------------------------------------------------------------------
                4                   150             Squared rule              ProMate
----------------------------------------------------------------------------------------------------------------------------
```

Inventory Management

Inventory Dashboard

```
==============Inventory Management Dashboard==============
1 => Save Book
2 => Get All Book Details
3 => Delete Book
4 => Get Book By Id
5 => Genarate Book Details Report
Please Select Your Option
```

Book Registration

```
==============Inventory Dashboard==============
1 => Save Book
2 => Get All Book Details
3 => Delete Book
4 => Get Book By Id
Please Select Your Option
1
Enter Book Name
Village by the sea
Enter Book Author :
Anita desai
Enter Book ISBN Number :
123421234
Enter Book Price:
800
Book has been Successfully...
```

Delete Book

```
==============Inventory Management Dashboard===============
1 => Save Book
2 => Get All Book Details
3 => Delete Book
4 => Get Book By Id
5 => Genarate Book Details Report
Please Select Your Option
3

Please enter Book id : 9
Book has been delete successfully..
```

Retrieve Book details

```
==============Inventory Management Dashboard==============
1 => Save Book
2 => Get All Book Details
3 => Delete Book
4 => Get Book By Id
5 => Genarate Book Details Report
Please Select Your Option
2

==================================Books Details==================================
        BookId              Name        Isbn Number           Author            price

--------------------------------------------------------------------------------
             5         Asp.net Core              1     Ashen Dunusinghe           1000
--------------------------------------------------------------------------------
```
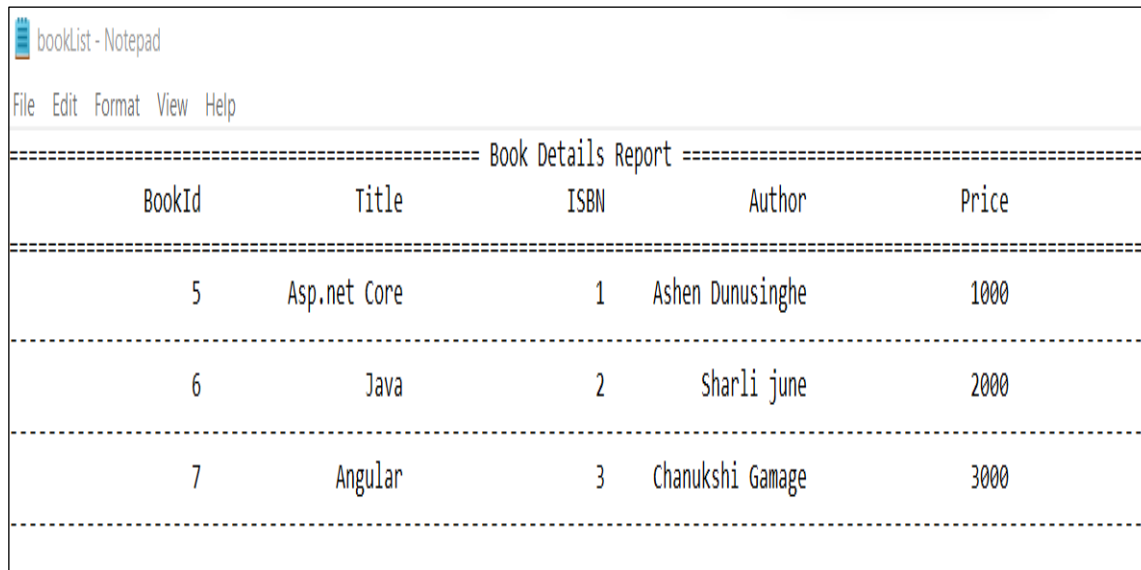
Retrieve Book details by Id

```
==============Inventory Management Dashboard===============
1 => Save Book
2 => Get All Book Details
3 => Delete Book
4 => Get Book By Id
5 => Genarate Book Details Report
Please Select Your Option
4
Enter Book Id :
6
============Book Details============
BookId        :6
Book Name     :Java
ISBN Number   :2
Price         :2000
===================================
```

Book details Report generate

```
=============Inventory Management Dashboard=============
1 => Save Book
2 => Get All Book Details
3 => Delete Book
4 => Get Book By Id
5 => Genarate Book Details Report
Please Select Your Option
5
Report genaration has been successfully
```

Book details report Output

bookList - Notepad

File Edit Format View Help

```
=================================== Book Details Report ===================================
        BookId              Title             ISBN            Author              Price
==========================================================================================

            5          Asp.net Core             1      Ashen Dunusinghe           1000
        ----------------------------------------------------------------------------------

            6               Java                 2          Sharli june            2000
        ----------------------------------------------------------------------------------

            7             Angular                3      Chanukshi Gamage           3000
        ----------------------------------------------------------------------------------
```

Customer Management

Customer Dashboard

```
===============User Dashboard===============
1 => Customer Registration
2 => Request Book
3 => Get All Book Details
4 => Order Book
5 => Delete Customer
6 => Get Request Book Details
7 => Generate Request Book Details
8 => Generate Order Book Details
Please Select Your Option
```

Customer Registration

```
===============User Dashboard===============
1 => Customer Registration
2 => Request Book
3 => Get All Book Details
4 => Order Book
5 => Delete Customer
6 => Get Request Book Details
7 => Generate Request Book Details
8 => Generate Order Book Details
Please Select Your Option
1
Enter Your First Name :
Harsha
Enter Your Last Name :
Prabath
Enter Your Email :
harsha@gmail.com
Enter Your Address :
Kaduwela
Enter Your Mobile Number :
0716587253
Enter Your Password :
harsha1999
Registration Has Been Successfully
```

Delete Customer

```
===============User Dashboard===============
1 => Customer Registration
2 => Request Book
3 => Get All Book Details
4 => Order Book
5 => Delete Customer
6 => Get Request Book Details
7 => Generate Request Book Details
8 => Generate Order Book Details
Please Select Your Option
5

Please enter Customer id : 10
Delete user has been successfully..

Do you want to delete another customer(y/n)
|
```

Request Book

```
===============User Dashboard===============
1 => Customer Registration
2 => Request Book
3 => Get All Book Details
4 => Order Book
5 => Delete Customer
6 => Get Request Book Details
7 => Generate Request Book Details
8 => Generate Order Book Details
Please Select Your Option
2
Please enter book name
Jane Eyre
Please enter author name
Charlotte Bronte
Please enter messeage
Wish to read this.
Request book has been successfully

Do you want to reqest another book(y/n)  n
|
```

Retrieve Requested Book Details

```
===============User Dashboard===============
1 => Customer Registration
2 => Request Book
3 => Get All Book Details
4 => Order Book
5 => Delete Customer
6 => Get Request Book Details
7 => Generate Request Book Details
8 => Generate Order Book Details
Please Select Your Option
6
|
==============================Request Books Details==============================
         Id          Book Name           Author            Message

         --------------------------------------------------------------------
         1            Twilight      Stephenie Meyer It's very interesting story and request all parts of the novel.
         --------------------------------------------------------------------
         2        The Great Gatsby  F.Scott Fitzgerald Want this book within 3 days.
         --------------------------------------------------------------------
         3          Harry Potter      J.K. Rowling   Wish to read this.
         --------------------------------------------------------------------
         4          Harry Potter      J.K. Rowling    Wish to read this
         --------------------------------------------------------------------
         5           Jane Eyre      Charlotte Bronte   Wish to read this.
         --------------------------------------------------------------------
```

Customer Order Book

```
===============User Dashboard===============
1 => Customer Registration
2 => Request Book
3 => Get All Book Details
4 => Order Book
5 => Delete Customer
6 => Get Request Book Details
7 => Generate Request Book Details
8 => Generate Order Book Details
Please Select Your Option
4
Please enter book name
The Lord of the Rings
Please enter your address
Nittambuwa
 Order has been successfully

Do you want to reqest another book(y/n)  n
|
```

Get Book Details

```
===============User Dashboard===============
1 => Customer Registration
2 => Request Book
3 => Get All Book Details
4 => Order Book
5 => Delete Customer
6 => Get Request Book Details
7 => Generate Request Book Details
8 => Generate Order Book Details
Please Select Your Option
3
|
=================================Books Details=================================
        BookId              Title        Isbn Number            Author           price

-------------------------------------------------------------------------------------
            5      The Great Gatsby            1    F.Scott Fitzgerald            950
-------------------------------------------------------------------------------------
            6 The Lord of the Rings           2         J.R.R. Tolkien           850
-------------------------------------------------------------------------------------
            7 Nineteen Eighty-Four            3         Georgy Orwell            790
-------------------------------------------------------------------------------------
            8 The Catcher in the Rye          4         J.D. Salinger            890
-------------------------------------------------------------------------------------
```

Order report generate

```
===============User Dashboard===============
1 => Customer Registration
2 => Request Book
3 => Get All Book Details
4 => Order Book
5 => Delete Customer
6 => Get Request Book Details
7 => Generate Request Book Details
8 => Generate Order Book Details
Please Select Your Option
8
Order Book Report genaration has been successfully
```

Order Report output

```
================================================ Order Book Details Report ================================================

        Book Id                 Book Name                   Address
================================================================================================================================

           1              Harry Potter                  Gampaha
--------------------------------------------------------------------------------------------------------------------------------
           2         The Lord of the Rings            Nittambuwa
--------------------------------------------------------------------------------------------------------------------------------
```

Request report generate

```
==============User Dashboard==============
1 => Customer Registration
2 => Request Book
3 => Get All Book Details
4 => Order Book
5 => Delete Customer
6 => Get Request Book Details
7 => Generate Request Book Details
8 => Generate Order Book Details
Please Select Your Option
7
Request Book Report genaration has been successfully
```

Request report output

```
====================================================== Request Book Details Report ======================================================

        Book Id               Book Name                    Author                    Message
========================================================================================================================================

           1                  Twilight          Stephenie Meyer It's very interesting story and request all parts of the novel.
----------------------------------------------------------------------------------------------------------------------------------------
           2            The Great Gatsby      F.Scott Fitzgerald Want this book within 3 days.
----------------------------------------------------------------------------------------------------------------------------------------
           3              Harry Potter            J.K. Rowling      Wish to read this.
----------------------------------------------------------------------------------------------------------------------------------------
           4              Harry Potter            J.K. Rowling      Wish to read this
----------------------------------------------------------------------------------------------------------------------------------------
           5                 Jane Eyre         Charlotte Bronte     Wish to read this.
----------------------------------------------------------------------------------------------------------------------------------------
```

Contribution

Registration No	Name	Implemented Bundles
IT20053314	Gamage J.G.A.C.H	SupplierManagementPublisher SupplierManagementSubscriber
IT20025526	Dunusinghe A.V	UserManagementPublisher UserManagementSubscriber
IT20022006	Nawanjana M.H	CustomerManagementPublisher CustomerManagementSubscriber
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