

Group Project Phase 1 – Group 8

- Group Members:
 - Adrian Abella Acosta
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 - Gabriel Cordero
 - David Martinez Camarero
 - Joan Pinto

Object-Oriented Design

Top-Level Objects	Communicates with	Incoming Messages	Outgoing Messages
frmLogin	frmMainMenu, BookStoreDataAccess, Validator	Username, Password, Login, Exit	ValidateInput(), AuthenticateUser(), ShowMainMenu()
frmMainMenu	frmTitlesMaintenance, frmAuthorsMaintenance, frmPublishersMaintenance, frmStoresMaintenance, frmEmployeesMaintenance, frmCustomerOrder, frmSalesReport	Menu selection	Show selected menu item
frmTitlesMaintenance	frmMainMenu, frmAddNewTitle, frmEditSelectedTitle, BookStoreDataAccess	SearchTitle(), SelectTitle(), AddTitle(), EditTitle(), DeleteTitle()	GetTitles(), LoadTitleDetails(), ShowAddForm(), ShowEditForm()
frmAddNewTitle	frmTitlesMaintenance, BookStoreDataAccess, Validator	Title data, Save, Cancel	ValidateInput(), SaveTitle()

frmEditSelectedTitle	frmTitlesMaintenance, BookStoreDataAccess, Validator	Title data, Save, Cancel	LoadTitle(), ValidateInput(), UpdateTitle()
frmAuthorsMaintenance	frmMainMenu, frmAddNewAuthor, frmEditSelectedAuthor, BookStoreDataAccess, Validator	SearchAuthor(), SelectAuthor(), AddAuthor(), EditAuthor(), DeleteAuthor()	GetAuthors(), LoadAuthorDetails(), ShowAddForm(), ShowEditForm()
frmAddNewAuthor	frmAuthorsMaintenance, BookStoreDataAccess, Validator	Author data, Save, Cancel	ValidateInput(), SaveAuthor()
frmEditSelectedAuthor	frmAuthorsMaintenance, BookStoreDataAccess, Validator	Author data, Save, Cancel	LoadAuthor(), ValidateInput(), UpdateAuthor()
frmPublishersMaintenance	frmMainMenu, frmAddNewPublisher, frmEditSelectedPublisher, BookStoreDataAccess, Validator	SearchPublisher(), SelectPublisher(), AddPublisher(), EditPublisher(), DeletePublisher()	GetPublishers(), LoadPublisherDetails(), ShowAddForm(), ShowEditForm()
frmAddNewPublisher	frmPublishersMaintenance, BookStoreDataAccess, Validator	Publisher data, Save, Cancel	ValidateInput(), SavePublisher()
frmEditSelectedPublisher	frmPublishersMaintenance, BookStoreDataAccess, Validator	Publisher data, Save, Cancel	LoadPublisher(), ValidateInput(), UpdatePublisher()
frmStoresMaintenance	frmMainMenu, frmAddNewStore, frmEditSelectedStore, BookStoreDataAccess, Validator	SearchStore(), SelectStore(), AddStore(), EditStore(), DeleteStore()	GetStores(), LoadStoreDetails(), ShowAddForm(), ShowEditForm()

frmAddNewStore	frmStoresMaintenance, BookStoreDataAccess, Validator	Store data, Save, Cancel	ValidateInput(), SaveStore()
frmEditSelectedStore	frmStoresMaintenance, BookStoreDataAccess, Validator	Store data, Save, Cancel	LoadStore(), ValidateInput(), UpdateStore()
frmEmployeesMaintenance	frmMainMenu, frmAddNewEmployee, frmEditSelectedEmployee, BookStoreDataAccess, Validator	SearchEmployee(), SelectEmployee(), AddEmployee(), EditEmployee(), DeleteEmployee()	GetEmployees(), LoadEmployeeDetails(), ShowAddForm(), ShowEditForm()
frmAddNewEmployee	frmEmployeesMaintenance, BookStoreDataAccess, Validator	Employee data, Save, Cancel	ValidateInput(), SaveEmployee()
frmEditSelectedEmployee	frmEmployeesMaintenance, BookStoreDataAccess, Validator	Employee data, Save, Cancel	LoadEmployee(), ValidateInput(), UpdateEmployee()
frmCustomerOrder	frmMainMenu, frmOrderSummary, BookStoreDataAccess, Validator	Store selection, Employee selection, Customer name, order date, Search, AddToCart, Update, RemoveItem, CommitOrder, CancelOrder	GetStores(), GetEmployees(), SearchTitles(), CalculateSubtotal(), CalculateTax(), CalculateTotal(), CreateOrder(), ShowSummary()
frmOrderSummary	frmCustomerOrder, BookStoreDataAccess	Order details	DisplayInvoice(), PrintExport(), Close()
frmSalesReport	frmMainMenu, BookStoreDataAccess	Sales details, Date range	GenerateReport(), GetSalesData(), CalculateTotalValue(), ExportToFile(), Close()

Author	BookStoreContext	Property assignments	Property getters
Discount	BookStoreContext	Property assignments	Property getters
Employee	BookStoreContext	Property assignments	Property getters
Job	BookStoreContext	Property assignments	Property getters
PubInfo	BookStoreContext	Property assignments	Property getters
Publisher	BookStoreContext	Property assignments	Property getters
Roysched	BookStoreContext	Property assignments	Property getters
Sale	BookStoreContext	Property assignments	Property getters
Store	BookStoreContext	Property assignments	Property getters
Title	BookStoreContext	Property assignments	Property getters
Titleauthor	BookStoreContext	Property assignments	Property getters
Titleview	BookStoreContext	Property assignments	Property getters
BookStoreContext	Database, all entity classes	DbSet queries, SaveChanges()	DbSet properties, entity instances, Database connection
BookStoreDataAccess	BookStoreContext, all entity classes	CRUD methods	Entity objects, collections, operation results
Validator	All input forms	ValidateInput()	Boolean results, error messages

Login

Username:

Password:

Select an Option to manage data or create an order

Customer Order (Shopping Cart)

Maintenance – Titles

Maintenance - Authors

Maintenance - Publishers

Maintenance - Stores

Maintenance - Employees

Reports

Exit



Search by Title

title_id	title	type	pub_id	price	Details:
BU1032	The Busy Manager's	Business	0877	19.99	<u>title id:</u> BU1032 <u>title:</u> The Busy Manager's <u>type:</u> Business <u>pub id:</u> 0877 <u>price:</u> 19.99 <u>advance:</u> 5000 <u>royalty:</u> 10 <u>ytd sales:</u> 3200 <u>notes:</u> Popular intro to business analytics <u>pubdate:</u> 2019-03-15
PS7777	Psychology of Online Learning	Psychology	0736	24.50	
PC8888	Programming with C# for Beginners	Popular_Comp	1389	39.95	

Add a New Title

Edit Selected Title

Delete Selected Title

Add New Title

— □ ×

title_id:

TC2201

title:

The Cloud Architecture

type:

Technical ▾

pub_id:

1622

price:

49.99

advance:

12000

royalty:

14

▴ ▾

ytd_sales:

2750


▴ ▾

notes:

Covers AWS, Azure, and GCP fundamentals

pubdate:

2022/05/20



Save

Cancel

Edit Selected Title

title_id: TC2201

title: The Busy Manager's Guide to Data

type: Business

pub_id: 0877

price: 19.99

advance: 5000

royalty: 10

ytd_sales: 3200

notes: Popular intro to business analytics.

pubdate: 2019/03/15

Save Cancel



Search by Author

au_id	au_lname	au_fname	phone	address	Details: <u>au_id</u> : 172-32-1176 <u>au_lname</u> : Carson <u>au_fname</u> : Cheryl <u>phone</u> : 415 555-1212 <u>address</u> : 150 River St <u>city</u> : San Francisco <u>state</u> : CA <u>zip</u> : 94016 <u>contract</u> : 1
172-32-1176	Carson	Cheryl	415 555-1212	150 River St	
213-46-8915	O'Neil	Patrick	716 555-6423	2100 Elm Drive	
89-27-1751	Watkins	Marie	212 555-9007	89 Madison Ave	

Add a New Author

Edit Selected Author

Delete Selected Author

● Add New Author

au_id: 341-98-5521

au_lname: Delgado

au_fname: Laura

phone: 305 555-8832

address: 742 Coral Way

city: Miami

state: FL

zip: 33132

contract: ☒ text

Save Cancel

Edit Selected Author

au_id:

172-32-1176

au_lname:

Carson

au_fname:

Cheryl

phone:

415 555-1212

address:

150 River St

city:

San Francisco

state:

CA

zip:

94016

contract:

☒ text

Save

Cancel

search

Search by Publisher

pub_id	pub_name	city	state	country	<div><div>Details:</div><div><div>pub id: 0736</div><div>pub name: New Age Books</div><div>city: Boston</div><div>state: MA</div><div>country: USA</div></div></div>
0736	New Age Books	Boston	MA	USA	
0877	Binnet & Hardley	Chicago	IL	USA	
1622	Scoot Life Press	Seattle	WA	USA	

Add a New Publisher

Edit Selected Publisher

Delete Selected Publisher

Add New Publisher

pub_id:

2210

pub_name:

Horizon Academic Publishing

city:

Denver

state:

CO

country:

USA

Save

Cancel

Edit Selected Publisher

pub_id:

0736

pub_name:

New Age Books

city:

Boston

state:

MA

country:

USA

Save

Cancel



stor_id	stor_name	store_address	city	state	<u>Details:</u> <u>store id:</u> 6380 <u>store name:</u> Book World - Downtown <u>store address:</u> 120 Market Street <u>city:</u> San Francisco <u>state:</u> CA <u>zip:</u> 94105
6380	Book World – Dwontown	120 Market Street	San Francisco	CA	
8042	Pages & Coffee Books	455 Sunset Blvd	Los Angeles	CA	
9921	Riverbank Bookstore	87 Riverside Ave	Chicago	IL	

Add New Store

stor_id:

5578

store_name:

Maple Leaf Books

store_address:

240 Greenway

city:

Seattle

state:

WA

zip:

98101

Save

Cancel

Edit Selected Store

stor_id:

6380

store_name:

Book World - Downtown

store_address:

120 Market Street

city:

San Francisco

state:

CA

zip:

94105

Save

Cancel



Search by Employee

emp_id	fname	minit	lname	job_id	<u>Details:</u>	
A123	Robert	J	Thompson	8	emp_id: A123 fname: Robert minit: J lname: Thompson job_id: 8 job_lvl: 10 pub_id: 0877 hire_date: 2018-06-15	▲
B204	Melissa	A	Rivera	3		
C355	Daniel	K	Hughes	5		
						▼

Add a New Employee

Edit Selected Employee

Delete Selected Employee

Add New Employee

emp_id:

D497

fname:

Sofia

minit:

M

lname:

Delgado

job_id:

2

job_lvl:

25

pub_id:

2210

hire_date:

2021/12/05

Save

Cancel

Store: Book World - Downtown ▾

Employee: Melissa Rivera ▾

Customer Name: Jhon Martinez

Order Date: 2025/08/11 Search Title: 

title_id	title	price
BU1032	The Busy Manager's Guide to Data	19.99
PS7777	Psychology of Online Learning	24.50
PC8888	Programming with C# for Beginners	39.95

Quantity of Selected Item:  

Shopping Cart:

title_id	title	qty	price	discount	line total
PC8888	Programming with C# for Beginners	2	39.95	0.05	75.90

Subtotal: Tax: Total:

Order Summary / Invoice

Order Number:

INV-20251118-001

Store:

Book World - Downtown

Employee:

Melissa Rivera

Customer:

Jhon Martinez

Order Date:

11/18/2025

Title	Qty	Unit Price	Discount	Line Total
Programming with C# for Beginners	2	39.93	5%	75.90
The Busy Manager's Guide	1	19.99	0%	19.99

Subtotal:

95.89

Tax:


6.71

Total:

102.60

Print/Export

Close

Start Date: 2025/11/18 End Date: 2025/11/21 Generate Report

ord_num	ord_date	title_id	title	qty	total value
INV-20251118-1	11/18/2025	PC888	Programming with C# for Beginners	2	75.90
INV-20251118-2	11/18/2025	BU1032	The Busy Manager's Guide to Data	1	19.99
INV-20251119-1	11/19/2025	PS7777	Psychology of Online Learning	3	73.50

Total Value of Sold Products: 219.38

Export to FileExport to FileClose