Menoufia University
Faculty of Electronic Engineering
Computer Science and Engineering



## Advanced Programming Languages

## Project Design Library Management System

Created By /

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**Class Name: BorrowDB** 

Method		Input Parameters	Output
createBorro	w()	Borrow borrow	int
Description	This method takes borrow data from the user and insert it		
	into the da	tabase using SQL inser	t statement and returns
	the numbe	er of rows affected and i	f there was an exception
	it will retur	n zero.	
DeleteBorro	w()	int id	int
Description	This metho	od takes the id of the bo	rrow that user wants to
	delete and	delete it from the data	base and returns the
		rows affected and if the	ere was an exception it
	will return		
getAllBorrov	w() No parameters ObservableList <borrow></borrow>		
Description	This method uses a SQL statement to return the whole		
	data of the borrow table from the database and loop on		
		set row by row to put it	•
	Borrow class and pass it to ObservableList <borrow>.</borrow>		
getBorrow()	Int id ObservableList <borrow< th=""></borrow<>		
Description		od uses a SQL statemen	
	with the id passed by user from the database and loop on		
	this result to put it on an object from the Borrow class and		
	pass it to ObservableList <borrow>.</borrow>		
getBorrow()		Date broughtDate	ObservableList <borrow></borrow>
Description	This is the overloaded version of the above method, This		
	method uses a SQL statement to return the list of borrows		
	with the broughtDate passed by user from the database		
	•	n this result row by row	
		orrow class and pass it	
	Observable	eList <borrow> at the en</borrow>	d of the loop.

**Class Name : Borrow** 

Method	<b>Input Parameters</b>	Output	Description
getBorrow_id()	void	int	Getter method
getTokenDate()	void	Date	Getter method
getBroughtDate()	void	Date	Getter method
setBorrow_id()	Int id	void	Setter method
setTokenDate()	Date tokenDate	void	Setter method
setBroughtDate()	Date broughtDate	void	Setter method

Class Name: BookDB

Method		Input Parameters	Output
createBook()		Book book	int
Description	This method takes book data from the user and insert it		
	into the database using SQL insert statement and returns		
	the number of rows affected and if there was an exception		
	it will retu	rn zero.	
DeleteBook	Book() int id int		
Description	This metho	od takes the id of the bo	ok that user wants to
	delete and delete it from the database and returns the		
	number of	rows affected and if the	ere was an exception it
	will return	zero.	
getAllBook()	AllBook() No parameters ObservableList <book></book>		
Description	This method uses a SQL statement to return the whole		
	data of the book table from the database and loop on the		
	result set row by row to put it on an object from the Book		
	class and pass it to ObservableList <book>.</book>		
getBook()		Int id	ObservableList <book></book>
Description	This method uses a SQL statement to return the book with		
	the id pass	sed by user from the dat	abase and loop on this
	result to p	ut it on an object from t	he Book class and pass it

	to Observ	ableList <book>.</book>		
getBook()	String name ObservableList <borrow></borrow>			
Description	This is the overloaded version of the above method, This			
	method uses a SQL statement to return the list of books			
	with the r	name of the book passed	d by user from the	
	database	and loop on this result r	ow by row to put it on an	
	object fro	m the Book class and pa	ass it to	
	Observab	leList <book> at the end</book>	of the loop.	
getBookByl	d()	Int id	String	
Description	This meth	od takes the id of the bo	ook (ISBN) from the user	
	and uses S	and uses SQL statement to return the name of the book		
	with that	id from the database it's	s used for showing the	
	names of	the book in the borrow	table instead of the id's	
	to make t	he project user friendly	and easy to use.	
getBookByN	Name() String Name int			
Description	This method takes the Name of the book from the user			
	and uses SQL statement to return the id(ISBN) of the book			
	with that name from the database. it's used for showing			
	the names of the book in a choice box when creating a			
	borrow instead of selecting the id of the book to make the			
	project user friendly and easy to use.			
bookNames	(s() No parameters Resultset		Resultset	
Description	This method returns all the names of books in the			
	database	and it's used to show th	em I a choice box for the	
	user to ch	oose from them when o	creating a borrow.	

**Class Name: Book** 

Method	<b>Input Parameters</b>	Output	Description
getISBN()	void	int	Getter method

getName()	void	String	Getter method
getPageCount()	void	int	Getter method
setISBN()	Int ISBN	void	Setter method
setName()	String name	void	Setter method
setPageCount()	Int pageCount	void	Setter method

## **Class Name: StudentDB**

Method		<b>Input Parameters</b>	Output	
createStudent()		Student student	int	
Description	This meth	od takes student data	from the user and insert	
	it into the database using SQL insert statement and			
	returns th	e number of rows affec	cted and if there was an	
	exception	it will return zero.		
DeleteStude	ent()	int id	int	
Description	This meth	od takes the id of the s	tudent that user wants to	
	delete and	d delete it from the data	abase and returns the	
	number o	number of rows affected and if there was an exception it		
	will return zero.			
getAllStude	dents() No parameters ObservableList <stude< th=""><th>ObservableList<student></student></th></stude<>		ObservableList <student></student>	
Description	This method uses a SQL statement to return the whole			
	data of the student table from the database and loop on			
	the result set row by row to put it on an object from the			
	student c	student class and pass it to ObservableList <student>.</student>		
getStudent(	)	Int id	ObservableList <student></student>	
Description	This method uses a SQL statement to return the student		nt to return the student	
	with the id passed by user from the database and loop on			
	this result to put it on an object from the student class			
	and pass it to ObservableList <book>.</book>			
getStudent()		String name	ObservableList <borrow></borrow>	
Description	This is the	overloaded version of	the above method, This	
	method u	ses a SQL statement to	return the list of students	

with the name of the student passed by user from the database and loop on this result row by row to put it on an object from the student class and pass it to ObservableList <student> at the end of the loop.  getStudentById() Int id String  Description This method takes the id of the student from the user and uses SQL statement to return the name of the student with that id from the database it's used for showing the names of the student in the borrow table instead of the id's to make the project user friendly and easy to use.  getStudentByName() String Name int  Description This method takes the Name of the student from the user and uses SQL statement to return the id of the student with that name from the database. it's used for showing the names of the student in a choice box when creating a borrow instead of selecting the id of the student to make the project user friendly and easy to use.  studentNames() No parameters Resultset  Description This method returns all the names of students in the database and it's used to show them I a choice box for the user to choose from them when creating a borrow.  getTypeById() Int id String</student>
object from the student class and pass it to ObservableList <student> at the end of the loop.  getStudentById()  Description  This method takes the id of the student from the user and uses SQL statement to return the name of the student with that id from the database it's used for showing the names of the student in the borrow table instead of the id's to make the project user friendly and easy to use.  getStudentByName()  String Name  Int  Description  This method takes the Name of the student from the user and uses SQL statement to return the id of the student with that name from the database. it's used for showing the names of the student in a choice box when creating a borrow instead of selecting the id of the student to make the project user friendly and easy to use.  studentNames()  No parameters  Resultset  Description  This method returns all the names of students in the database and it's used to show them I a choice box for the user to choose from them when creating a borrow.</student>
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names of the student in the borrow table instead of the id's to make the project user friendly and easy to use.  getStudentByName() String Name int  Description This method takes the Name of the student from the user and uses SQL statement to return the id of the student with that name from the database. it's used for showing the names of the student in a choice box when creating a borrow instead of selecting the id of the student to make the project user friendly and easy to use.  StudentNames() No parameters Resultset  Description This method returns all the names of students in the database and it's used to show them I a choice box for the user to choose from them when creating a borrow.
id's to make the project user friendly and easy to use.    getStudentByName()   String Name   int
getStudentByName()String NameintDescriptionThis method takes the Name of the student from the user and uses SQL statement to return the id of the student with that name from the database. it's used for showing the names of the student in a choice box when creating a borrow instead of selecting the id of the student to make the project user friendly and easy to use.studentNames()No parametersResultsetDescriptionThis method returns all the names of students in the database and it's used to show them I a choice box for the user to choose from them when creating a borrow.
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user to choose from them when creating a borrow.
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getTyneRyld() Int id String
get ype by id()
Description This method takes the id of the Type from the user and
uses SQL statement to return the name of the types with
that id from the database it's used for showing the names
of the types in the book table instead of the id's to make
the project user friendly and easy to use.
getTypeByName() String Name int
Description This method takes the Name of the type from the user
and uses SQL statement to return the id of the type with
that name from the database. it's used for showing the
names of the type in a choice box when creating a book

	instead of selecting the id of the type to make the project user friendly and easy to use.			
typesNames	es() No parameters Resultset			
Description	This method returns all the names of types in the			
	database and it's used to show them I a choice box for the			
	user to choose from them when creating a book.			

**Class Name: Student** 

Method	<b>Input Parameters</b>	Output	Description
getStudent_id()	void	int	Getter method
getDateOfBirht()	void	Date	Getter method
getGender()	void	String	Getter method
getClassroom()	void	int	Getter method
SetStudent_id()	Int id	void	Setter method
setDateOfBirht()	Date DOB	void	Setter method
setGender()	String gender	void	Setter method
setClassroom()	Int classroom	void	Setter method

Class Name: AuthorDB

Method		Input Parameters	Output
createAuthor()		Author author	int
Description	This method takes author data from the user and inse		m the user and insert it
	into the da	atabase using SQL insert	statement and returns
	the numb	er of rows affected and i	f there was an exception
	it will return zero.		
DeleteAuthor()		int id int	
Description	This meth	od takes the id of the au	thor that user wants to

	doloto and	dalata it from the data	shace and returns the	
	delete and delete it from the database and returns the			
	number of rows affected and if there was an exception it			
	will return zero.			
getAllAutho	r()	No parameters	ObservableList <author></author>	
Description	This meth	od uses a SQL statemen	t to return the whole	
	data of the	e author table from the	e database and loop on	
	the result	set row by row to put it	on an object from the	
	Author cla	ass and pass it to Obser	vableList <author>.</author>	
getAuthor()		Int id	ObservableList <author></author>	
Description	This meth	od uses a SQL statemen	t to return the author	
	with the id	d passed by user from th	ne database and loop on	
	this result to put it on an object from the Author class and			
	pass it to ObservableList <author>.</author>			
getAuthor()	String name ObservableList <author></author>			
Description	This is the	overloaded version of t	the above method, This	
	method uses a SQL statement to return the list of authors			
	with the name of the author passed by user from the			
	database and loop on this result row by row to put it on an			
	object from the Author class and pass it to			
	ObservableList <author> at the end of the loop.</author>			
getAuthorBy	ithorById() Int id String		String	
Description				
	uses SQL statement to return the name of the author with			
	that id fro	m the database it's used	d for showing the names	
	of the aut	hor in the book table in	nstead of the id's to	
	make the	project user friendly and	d easy to use.	
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**Class Name: Author** 

Method	<b>Input Parameters</b>	Output	Description
getAuthor_id()	void	int	Getter method
setAuthor_id ()	Int author_id	void	Setter method

Class Name: Type

Method	<b>Input Parameters</b>	Output	Description	
getType_id()	void	int	Getter method	
getName()	void	String	Getter method	
setAuthor_id ()	Int author_id	void	Setter method	
setName()	String name	void	Setter method	

**Class Name: FullName** 

Method	Input Parameters	Output	Description
getName()	void	String Getter method	
getSurName()	void	String	Getter method
setName ()	String name	void	Setter method
setSurName()	String surName	void	Setter method