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Library management system

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INTRODUCTION

The main purpose of any library management system is to facilitate the processes of the book reading and borrowing for both the reader and the librarian. A laboratory information system is a software system that takes care of initiating the reading process, borrowing books, storing readers' information, and reporting them to librarian periodical reports to provide information to the management about how to improve performance in the library.

In recent years, the library information systems have become a necessity of every library as it doesn't only elevate the capacities of the public libraries, but somehow reduces the loss of information and suitably sorting the information, just the ones caused by disorder like confusing book category or book, articles, and magazines. Mange the time of returning these reports to the librarian or readers in case of requesting them, thus enhancing the decision-making process leading to better management in a shorter period of time.

System of managing the details of books, publishers, and authors. Facilitates the borrowing process on the reader and librarian. Categories the books and magazines provide information and reports about the magazines and books and there contents

Objectives of the system:

1. Record basic information about each member like the name, phone, …. etc.

2. History of book borrowing process for each member in the library
3. Hold books in categories according to their content
4. Hold information about books and their publishers, editions, and date of publishing.
5. Mange borrowing process from dates and provide late returning books reports along with information about members who late books like addresses and phone numbers

LITERATURE REVIEW

INFINITI LIBRARY MANAGEMENT SYSTEM

The Infiniti Cloud Library Management Program is used and trusted by hundreds of school libraries to educate their pupils, promote exercise and help them improve their learning skills everywhere, at any time, and on any computer.

Using tablets, laptops, or smartphones, members of your library can access a personalized online platform where they can easily locate and access learning materials.

A successful library management program is a crucial tool to help librarians maintain and monitor their collections. Infiniti goes beyond that and seeks to involve all users of the library, teachers, and students alike.

Intelligent search and exploration inside a customized environment make the entire library collection, both digital and physical, fully available to the entire school or college population.

Automated late notification significantly decreases what can be a manually intensive and stressful task for a variety of librarians. Managing and managing delayed items is an essential component of every library, ensuring that services are as available as possible.

Infiniti can be easily modified to submit notification emails at predefined time frames and also provides an escalating option to warn parents and/or teachers that things have been delayed for a long time. This groundbreaking approach has been shown to help increase the return rate of items and reduce the expense that the replacement of out-of-date objects will expense libraries.

OLIVER V5 LIBRARY MANAGEMENT SYSTEM

Dynamic, digital, and engaging school library management software

Oliver V5 provides a rich multimedia platform for the entire school community. As a completely web-based application, it can be accessed from any mobile or tablet computer, enabling students to explore the library and learning tools 24/7 in school, at home, or on the go.

Interactive Search System for Students. The Suggested Search Lists page offers a highly customized library experience. Wide digital integration with e-Resources for direct borrowing and access inside the public search app. Predictive text search, Faceted search, and Advanced Federated search

Library News, Genres, Reading List Section. Library maps to help users find tools. Users can manage their library profile, reserve, renew, submit, and review results, plus build and share favorite lists.

Manage any resource type-physical, virtual, electronic Smart Cataloging that helps you to add new resources and copies using a barcode scanner. Report on all facets of the administration of libraries, science, and training centers, including statistics. View interactive reports dynamically using Predictive Analysis data from a real-time database. The facility to build up to seven custom authority files. Equipment and asset resource management.

ACCESSIT LIBRARY MANAGEMENT SYSTEM

Accessit is a library management program designed to serve the entire school or organization, streamline workflows and help create a linked learning environment. 1-School Libraries 2-Special Libraries 3-Academic Libraries.

Characteristics:

Flexible and configurable Fits with all forms of education, campus, and assets, embracing multilingual and multi-site settings.

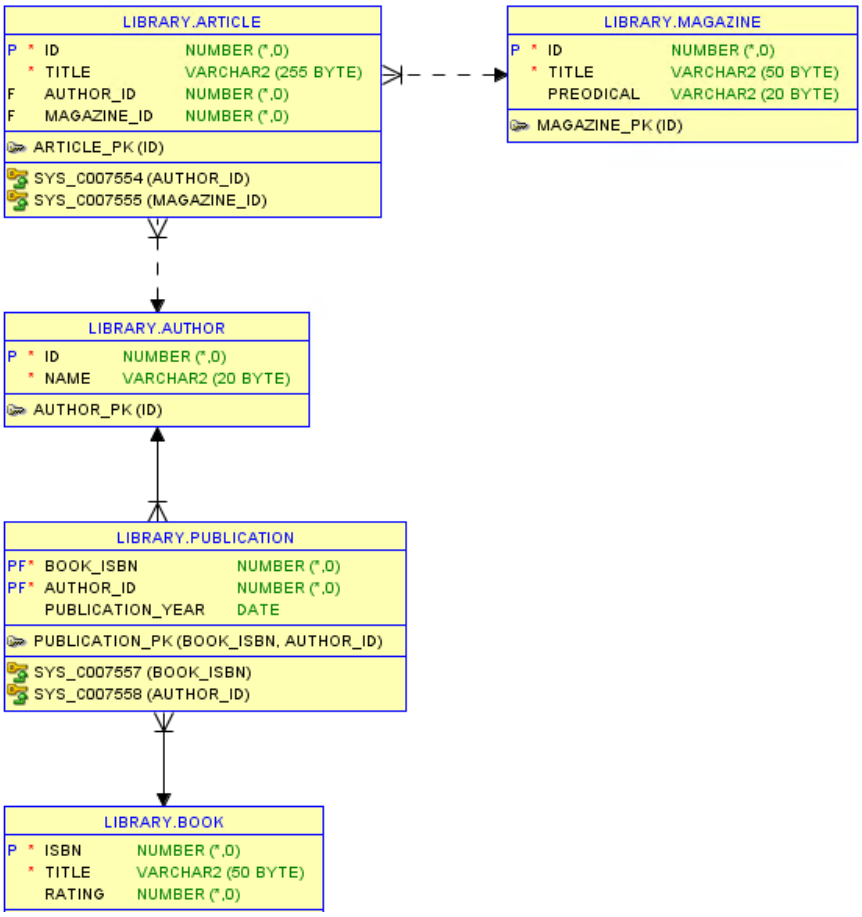
Engaging students with an enticing interface motivates the students to become involved partners in their learning and exploration.

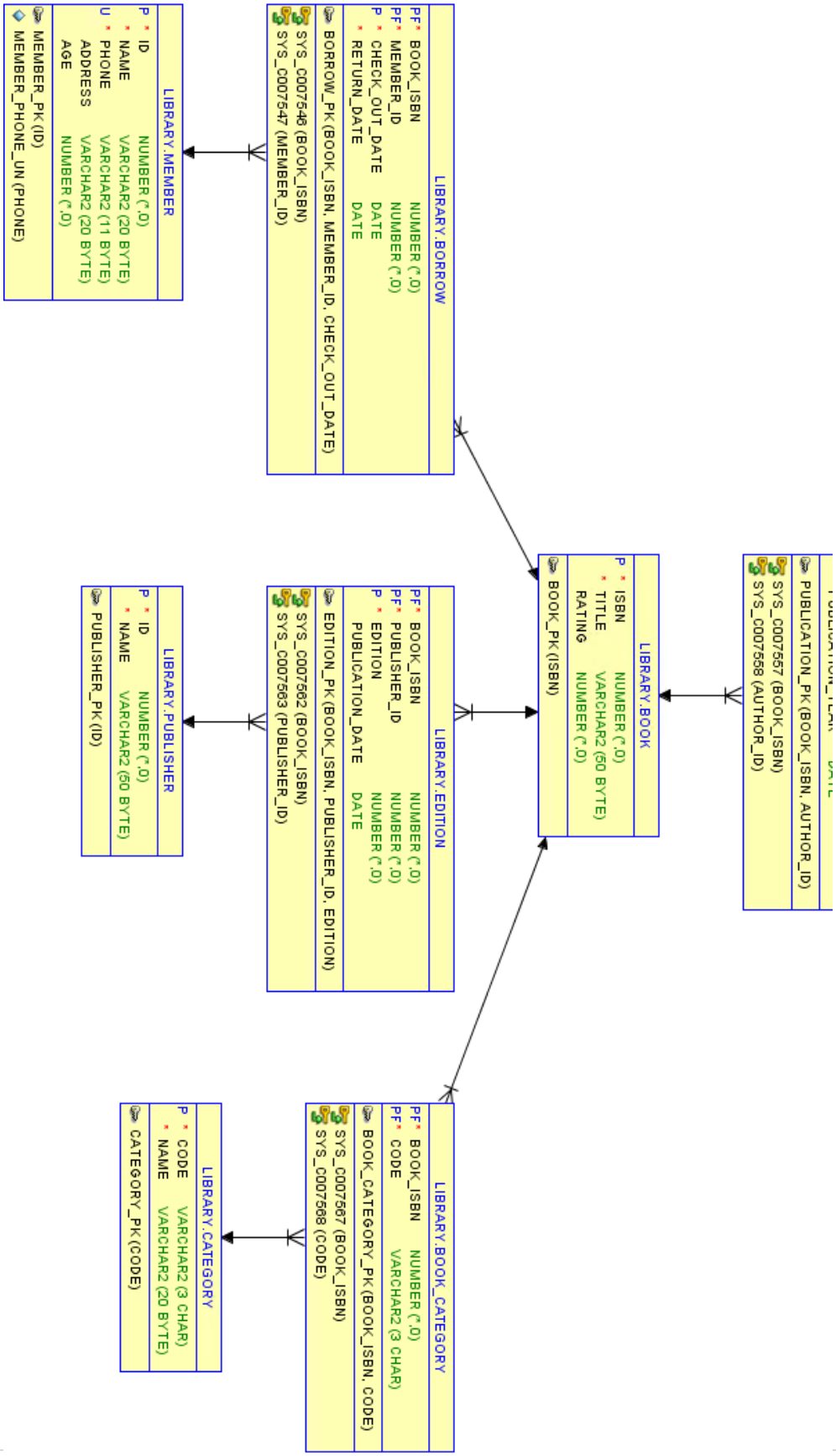
Teachers and students may use a single search to review both local and online content. Results may also be obtained from other pages, such as public libraries, directories, and electronic repositories. The program works smoothly with your online accounts and allows Single Sign-On – which saves signatures in and out of each service individually.

Provide users with access to eBooks, PDFs, paper records, newsletters, directories, downloadable multimedia material, subscriptions, video, audio, videos, and more with a single scan. As well as having access to their accounts, students can update, rent, buy, read, and write comments and make quotes.

PROPOSED DESIGN

ENTITY RELATIONSHIP DIAGRAM:




LIBRARY.BORROW
PF* BOOK_ISBN NUMBER (*,0)
PF* MEMBER_ID NUMBER (*,0)
P * CHECK_OUT_DATE DATE
* RETURN_DATE DATE
BORROW_PK (BOOK_ISBN, MEMBER_ID, CHECK_OUT_DATE)
SYS_C007546 (BOOK_ISBN)
SYS_C007547 (MEMBER_ID)
LIBRARY.MEMBER
P * ID NUMBER (*,0)
* NAME VARCHAR2 (20 BYTE)
U * PHONE VARCHAR2 (11 BYTE)
ADDRESS VARCHAR2 (20 BYTE)
AGE NUMBER (*,0)
MEMBER_PK (ID)
MEMBER_PHONE_UN (PHONE)
LIBRARY.BOOK
P * ISBN NUMBER (*,0)
* TITLE VARCHAR2 (50 BYTE)
RATING NUMBER (*,0)
BOOK_PK (ISBN)
PUBLICATION_PK (BOOK_ISBN, AUTHOR_ID)
SYS_C007557 (BOOK_ISBN)
SYS_C007558 (AUTHOR_ID)
LIBRARY.EDITION
PF* BOOK_ISBN NUMBER (*,0)
PF* PUBLISHER_ID NUMBER (*,0)
P * EDITION NUMBER (*,0)
PUBLICATION_DATE DATE
EDITION_PK (BOOK_ISBN, PUBLISHER_ID, EDITION)
SYS_C007562 (BOOK_ISBN)
SYS_C007563 (PUBLISHER_ID)
LIBRARY.PUBLISHER
P * ID NUMBER (*,0)
* NAME VARCHAR2 (50 BYTE)
PUBLISHER_PK (ID)
LIBRARY.BOOK_CATEGORY
PF* BOOK_ISBN NUMBER (*,0)
PF* CODE VARCHAR2 (3 CHAR)
BOOK_CATEGORY_PK (BOOK_ISBN, CODE)
SYS_C007567 (BOOK_ISBN)
SYS_C007568 (CODE)
LIBRARY.CATEGORY
P * CODE VARCHAR2 (3 CHAR)
* NAME VARCHAR2 (20 BYTE)
CATEGORY_PK (CODE)

IMPLEMENTATION OF DATABASE USING ORACLE 19C ENGINE:

```
-- book table
CREATE TABLE book (
    isbn INTEGER PRIMARY KEY,
    title VARCHAR(20) NOT NULL,
    rating INTEGER
);
DESCRIBE book;

-- member table
CREATE TABLE member (
    id INTEGER PRIMARY KEY,
    name VARCHAR(20) NOT NULL,
    phone VARCHAR(11) UNIQUE NOT NULL,
    address VARCHAR(20) DEFAULT 'LA',
    age INTEGER
);
DESCRIBE member;

-- borrow table
CREATE TABLE borrow (
    book_isbn INTEGER,
    member_id INTEGER,
    check_out_date DATE DEFAULT sysdate NOT NULL,
    return_date DATE NOT NULL,
    FOREIGN KEY(book_isbn) REFERENCES book(isbn),
    FOREIGN KEY(member_id) REFERENCES member(id),
    PRIMARY KEY (book_isbn, member_id, check_out_date)
);
DESCRIBE borrow;
```

```sql
-- magazine table
CREATE TABLE magazine (
    id INTEGER PRIMARY KEY,
    title VARCHAR(20) NOT NULL,
    preodical VARCHAR(20)
);
DESCRIBE magazine;

-- author table
CREATE TABLE author (
    id INTEGER PRIMARY KEY,
    name VARCHAR(20) NOT NULL
);
DESCRIBE author;

-- article table
CREATE TABLE article (
    id INTEGER PRIMARY KEY,
    title VARCHAR(20) NOT NULL,
    author_id INTEGER,
    magazine_id INTEGER,
    FOREIGN KEY(author_id) REFERENCES author(id),
    FOREIGN KEY(magazine_id) REFERENCES magazine(id)
);
DESCRIBE article;
```

```
-- publication table
CREATE TABLE publication (
    book_isbn INTEGER,
    author_id INTEGER,
    publication_year DATE,
    FOREIGN KEY(book_isbn) REFERENCES book(isbn),
    FOREIGN KEY(author_id) REFERENCES author(id),
    PRIMARY KEY (book_isbn, author_id)
);
DESCRIBE publication;

-- publisher table
CREATE TABLE publisher (
    id INTEGER PRIMARY KEY,
    name VARCHAR(20) NOT NULL
);
DESCRIBE publisher;

-- edition table
CREATE TABLE edition (
    book_isbn INTEGER,
    publisher_id INTEGER,
    edition INTEGER,
    publication_date DATE,
    FOREIGN KEY(book_isbn) REFERENCES book(isbn),
    FOREIGN KEY(publisher_id) REFERENCES publisher(id),
    PRIMARY KEY (book_isbn, publisher_id, edition)
);
DESCRIBE edition;

-- category
CREATE TABLE category (
    code VARCHAR2(3 CHAR) PRIMARY KEY,
    name VARCHAR(20) NOT NULL
);
DESCRIBE category;

-- book category
CREATE TABLE book_category (
    book_isbn INTEGER,
    code VARCHAR2(3 CHAR),
    FOREIGN KEY(book_isbn) REFERENCES book(isbn),
    FOREIGN KEY(code) REFERENCES category(code),
    PRIMARY KEY (book_isbn, code)
);
DESCRIBE book_category;
```

INSERTING DATA AND MODIFYING SOME TABLES QUERIES:

```
--modify title field in article and inserting an article
ALTER TABLE article MODIFY title VARCHAR2(255);
INSERT INTO article (id,title,author_id,magazine_id) VALUES (1,'Name and territory of the Union',18,19);
--inserting an author
INSERT INTO AUTHOR (id,name) VALUES (1,'Madeson Powers');
--modify title field in book and inserting a book
ALTER TABLE book MODIFY title VARCHAR2(50);
INSERT INTO book (isbn,title) VALUES (92788360392,'The Lord of the Rings_JRR Tolkien');
--inserting a book category
INSERT INTO BOOK_CATEGORY (BOOK_ISBN,CODE) VALUES (92788360392,'TC1');
--inserting a borrow
INSERT INTO borrow (CHECK_OUT_DATE,RETURN_DATE,MEMBER_ID,BOOK_ISBN) VALUES ('10-Jun-2019','24-Apr-2021',70,98289868232);
--inserting a category
INSERT INTO CATEGORY (CODE,name) VALUES ('EY3','Human Resources');
--inserting an edition
INSERT INTO edition (EDITION,PUBLISHER_ID,PUBLICATION_DATE,BOOK_ISBN) VALUES (5,6,'26-Nov-1982','92788360392');
--modify magazine title field and inserting a magaize
ALTER TABLE MAGAZINE MODIFY title VARCHAR2(50);
INSERT INTO MAGAZINE (id,title,PREODICAL) VALUES (1,'Accumsan Interdum Libero Company','Mounthly');
--inserting member
INSERT INTO member (id,name,phone,address,age) VALUES (1,'Mousfa Eldarwish','01808669293','Qalub, Qalubia',31);
--inserting publication
INSERT INTO PUBLICATION (PUBLICATION_YEAR,AUTHOR_ID,BOOK_ISBN) VALUES ('31-Jan-2021',19,92788360392);
--modify publisher name field and inserting a publisher
ALTER TABLE publisher MODIFY name VARCHAR2(50);
INSERT INTO PUBLISHER (id,name) VALUES (1,'Arbordale Publishing');
```

SAMPLE OF DATA

Article table:

	ID	TITLE	AUTHOR_ID	MAGAZINE_ID
1	1	Name and territory of the Union	18	19
2	2	Formation of new states and alteration of areas, boundaries or names of existing states	55	25
3	3	Laws inconsistent with or in derogation of the Fundamental Rights	8	7
4	4	Equality before the law	14	27
5	5	Equality of opportunity in matters of public employment	54	53
6	6	Abolition of untouchability	14	54
7	7	Protection of certain rights regarding freedom of speech, etc	58	20
8	8	Protection of life and personal liberty	3	10
9	9	Right to elementary education	1	36
10	10	Freedom of conscience and free profession, practice and propagation of religion	13	60

Author table:

ID	NAME
1	Madeson Powers
2	Zephania Vaughan
3	Cailin Mccoy
4	Virginia Sullivan
5	Justin Peters
6	Ashton Dominguez
7	Wayne Watson
8	Alika Horton
9	Ashton Mcneil
10	Xantha Morin

Book table:

ISBN	TITLE	RATING
92788360392	The Lord of the Rings_JRR Tolkien	(null)
92788361392	Pride and Prejudice_Jane Austen	(null)
92788362392	His Dark Materials_Philip Pullman	(null)
96088368232	War and Peace_Leo Tolstoy	(null)
97188368232	Gone with the Wind_Margaret Mitchell	(null)
98285068232	Middlemarch_George Eliot	(null)
98285118232	A Prayer For Owen Meany_John Irving	(null)
98285168232	The Grapes Of Wrath_John Steinbeck	(null)
98286418232	Harry Potter and the Goblet of Fire_JK Rowling	(null)
98286468232	To Kill a Mockingbird_Harper Lee	(null)

Book category table:

BOOK_ISBN	CODE
92788360392	TC1
92788361392	EY3
92788362392	PO9
96088368232	NW6
97188368232	QR7
98285068232	HL4
98285118232	PL5
98285168232	IA1
98286418232	RI8
98286468232	DN1

Barrow table:

BOOK_ISBN	MEMBER_ID	CHECK_OUT_DATE	RETURN_DATE
98289868232	70	10-JUN-2019	24-APR-2021
98289818232	16	16-DEC-2020	14-SEP-2019
98289718232	68	22-MAY-2019	28-JUL-2020
98289668232	58	29-MAY-2019	17-JAN-2020
98289618232	68	22-JUN-2019	03-JUL-2020
98289568232	57	12-MAY-2019	05-NOV-2020
98289518232	68	17-FEB-2021	16-FEB-2020
98289468232	46	28-JUL-2019	08-DEC-2019
98289418232	22	13-JAN-2021	13-JUN-2019
98289368232	39	15-DEC-2019	23-DEC-2020

Category table:

CODE	NAME
TC1	Payroll
EY3	Human Resources
PO9	Human Resources
NW6	Asset Management
QR7	Media Relations
HL4	Public Relations
PL5	Public Relations
IA1	Public Relations
RI8	Customer Service
DN1	Media Relations

Edition table:

BOOK_ISBN	PUBLISHER_ID	EDITION	PUBLICATION_DATE
92788360392	6	5	26-NOV-1982
92788361392	9	6	06-FEB-1991
92788362392	15	10	16-MAY-1996
96088368232	20	4	06-SEP-2011
97188368232	29	6	02-JAN-1960
98285068232	8	2	27-APR-1967
98285118232	29	10	29-JAN-2015
98285168232	24	2	02-JUN-1952
98286418232	14	2	23-JUN-1973
98286468232	21	4	30-DEC-1985

Magazine table:

ID	TITLE	PREODICAL
2	Est Mollis Non LLC	Mounthly
4	Nibh Inc.	Annual
5	Sem Elit Foundation	Annual
8	Nascetur LLP	Annual
10	Massa Mauris PC	Weekly
12	Et Euismod Et LLC	Annual
13	Nullam LLC	Weekly
17	Rhoncus Consulting	Weekly
18	Eu Odio Consulting	Weekly
19	Sodales LLP	Mounthly

Member table:

ID	NAME	PHONE	ADDRESS	AGE
1	Mousfa Eldarwish	01808669293	Qalub, Qalubia	31
2	Nada Ahmed	01969840964	Qalub, Qalubia	23
3	Mohammed Essam	01634511949	Abuqer, Alex	22
4	Abd Manaf Abd Rabbo	01573406954	Abuqer, Alex	35
5	Mohammed Essam	01486870912	Abuqer, Alex	15
6	Ali Ahmed	01443727825	Fasel, Giza	33
7	Mohammad Abdelsalam	01871923242	Qalub, Qalubia	29
8	Mohammad Abdelsalam	01921663884	Fasel, Giza	26
9	Menna Moustafa	01325419273	Qalub, Qalubia	22
10	Abbad Abdel Fattah	01403643838	Qalub, Qalubia	34

publication table:

BOOK_ISBN	AUTHOR_ID	PUBLICATION_YEAR
92788360392	19	31-JAN-2021
92788361392	38	30-SEP-2020
92788362392	66	28-NOV-2019
96088368232	53	01-APR-2020
97188368232	43	02-NOV-2020
98285068232	94	20-FEB-2020
98285118232	88	13-MAR-2020
98285168232	98	04-MAR-2020
98286418232	63	04-MAY-2021
98286468232	24	02-NOV-2020

publisher table:

ID	NAME
2	Arcade Publishing
3	Atlantic Books
4	Atlas Press
5	ATOM Books
6	Boundless
7	Bowes and Bowes
8	Boydell and Brewer
9	Broadside Lotus Press
10	Breslov Research Institute
11	Cisco Press

REPORTS THAT THE PROPOSED SYSTEM PROVIDES:

Get the name of member with the book he/she borrowed:

```
SELECT member.name, book.title as borrowed_book
FROM book, borrow, member
WHERE book.isbn = borrow.book_isbn AND borrow.member_id = member.id;
```

	NAME	BORROWED_BOOK
1	Abbas Abd al-Uzza	The Lord of the Rings_JRR Tolkien
2	Mahoumd Mohammad	Pride and Prejudice_Jane Austen
3	Mohammed Essam	His Dark Materials_Philip Pullman
4	Nour Mohammed	War and Peace_Leo Tolstoy
5	Amal Hady	Gone with the Wind_Margaret Mitchell
6	Abd Manaf Abd Rabbo	Middlemarch_George Eliot
7	Mousfa Eldarwish	A Prayer For Owen Meany_John Irving
8	Menna Moustafa	The Grapes Of Wrath_John Steinbeck
9	Khaled Mahmoud	Harry Potter and the Goblet of Fire_JK Rowling
10	Yassmeen Fathy	To Kill a Mockingbird_Harper Lee

Get books borrowed by a specific member using his name:

```
SELECT member.name, book.title as borrowed_book
FROM book, borrow, member
WHERE book.isbn = borrow.book_isbn AND borrow.member_id = member.id AND member.name = 'Abbas Abd al-Uzza';
```

NAME	BORROWED_BOOK
Abbas Abd al-Uzza	The Lord of the Rings_JRR Tolkien
Abbas Abd al-Uzza	Dune_Frank Herbert
Abbas Abd al-Uzza	Anne Of Green Gables_LM Montgomery
Abbas Abd al-Uzza	The Great Gatsby_F Scott Fitzgerald
Abbas Abd al-Uzza	The Shell Seekers_Rosamunde Pilcher
Abbas Abd al-Uzza	Memoirs Of A Geisha_Arthur Golden

Get the number of books in each category:

```
SELECT category.name, COUNT(book.isbn)
FROM book, book_category, category
WHERE book.isbn = book_category.book_isbn AND book_category.code = category.code group by category.name;
```

NAME	COUNT(BOOK.ISBN)
Advertising	6
Asset Management	4
Media Relations	5
Customer Relations	6
Tech Support	5
Sales and Marketing	4
Legal Department	7
Customer Service	4
Quality Assurance	3
Payroll	3
Public Relations	4
Human Resources	8
Finances	4
Accounting	3

Get the count of books written by each author:

```
SELECT name AS Author_name, COUNT(book.isbn)
FROM book, publication, author
WHERE book.isbn = publication.book_isbn AND publication.author_id = author.id
GROUP BY author.name;
```

Justina Chambers	1
Preston Donaldson	2
Jared Mcintyre	1
Haviva Glover	2
Melissa Kirk	1
Halee Wise	1
Octavia Lester	1
Jana Noel	1
Aquila Solomon	3
Anastasia Irwin	1

Get the name of the author of a specific title:

```
SELECT NAME
FROM book, publication, author
WHERE author.id = publication.author_id AND publication.book_isbn = book.isbn
AND book.title = 'Pride and Prejudice_Jane Austen'
```

NAME
Gay Woodward

Get all details about books:

```
SELECT book.title, book.isbn, author.name AS Author, category.name AS Category, publisher.name AS Publisher
       , edition AS Edition, publication.publication_year AS date_of_publication
FROM book, publication, author, category, book_category, edition, publisher
WHERE author.id = publication.author_id AND publication.book_isbn = book.isbn
      AND book.isbn = book_category.book_isbn AND book_category.code = category.code
      AND book.isbn = edition.book_isbn AND edition.publisher_id = publisher.id
```

TITLE	ISBN	AUTHOR	CATEGORY	PUBLISHER	EDITION	DATE_OF_PUBLICATION
The Lord of the Rings_JRR Tolkien	92788360392	Indira Dennis	Payroll	Boundless	5	31-JAN-2021
Pride and Prejudice_Jane Austen	92788361392	Gay Woodward	Human Resources	Broadside Lotus Press	6	30-SEP-2020
His Dark Materials_Philip Pullman	92788362392	Iliana Browning	Human Resources	Dobson Books	10	28-NOV-2019
War and Peace_Leo Tolstoy	96088368232	Zachery Miles	Asset Management	Ewha Womans University Press	4	01-APR-2020
Gone with the Wind_Margaret Mitchell	97188368232	Justina Chambers	Media Relations	Indiana University Press	6	02-NOV-2020
Middlemarch_George Eliot	98285068232	Brittany Whitney	Public Relations	Boydell and Brewer	2	20-FEB-2020
A Prayer For Owen Meany_John Irving	98285118232	Wade Medina	Public Relations	Indiana University Press	10	13-MAR-2020
The Grapes Of Wrath_John Steinbeck	98285168232	Odysseus Munoz	Public Relations	Four Courts Press	2	04-MAR-2020
Harry Potter and the Goblet of Fire_JK Rowling	98286418232	Teagan Blevins	Customer Service	DNA Publications	2	04-MAY-2021
To Kill a Mockingbird_Harper Lee	98286468232	Aquila Solomon	Media Relations	Exact Change	4	02-NOV-2020
Winnie the Pooh_AA Milne	98286518232	Wade Medina	Sales and Marketing	Arbordale Publishing	9	02-FEB-2021
Nineteen Eighty-Four_George Orwell	98286568232	Preston Donaldson	Payroll	Dodd, Mead and Co.	4	06-NOV-2020
The Lion_the Witch and the Wardrobe_CS Lewis	98286618232	Sheila Bentley	Customer Relations	Dorchester Publishing	3	21-AUG-2020
Jane Eyre Charlotte Bronte	98286668232	Moses Whitehead	Advertising	DNA Publications	3	22-JAN-2020

Members whom late book return along with their phone number, address, and duration:

```
SELECT name, phone, address, title, return_date, ROUND(SYSDATE - borrow.return_date,0) AS late_duration_IN_DAYS
FROM member, borrow, book
WHERE borrow.member_id = member.id AND borrow.book_isbn = book.isbn AND
      borrow.return_date < SYSDATE + 1
```

NAME	PHONE	ADDRESS	TITLE	RETURN_DATE	LATE_DURATION_IN_DAYS
Mahoumd Mohammad	01154964624	Abuqer, Alex	Pride and Prejudice_Jane Austen	16-OCT-2019	206
Mohammed Essam	01486870912	Abuqer, Alex	His Dark Materials_Philip Pullman	01-SEP-2019	251
Nour Mohammed	01448227721	Qalub, Qalubia	War and Peace_Leo Tolstoy	19-FEB-2020	80
Abd Manaf Abd Rabbo	01930037797	Shoubra, Cairo	Middlemarch_George Eliot	16-OCT-2019	206
Menna Moustafa	01219951734	Shoubra, Cairo	The Grapes Of Wrath_John Steinbeck	14-AUG-2019	269
Khaled Mahmoud	01230862130	Qalub, Qalubia	Harry Potter and the Goblet of Fire_JK Rowling	28-MAR-2020	42
Hoda Abdelfatah	01858733514	Fasel, Giza	Nineteen Eighty-Four_George Orwell	02-OCT-2019	220
Ali Ahmed	01443727825	Fasel, Giza	Catch-_Joseph Heller	08-MAR-2020	62
Nour Mohammed	01182303795	Qalub, Qalubia	Wuthering Heights_Emily Bronte	28-JAN-2020	102
Sarah Salah	01935737294	Fasel, Giza	Birdsong_Sebastian Faulks	20-JAN-2020	110
Menna Moustafa	01561603526	Fasel, Giza	Rebecca_Daphne du Maurier	11-JAN-2020	119
Mohammed Essam	01903927598	Abuqer, Alex	The Wind in the Willows_Kenneth Grahame	14-JUN-2019	330
Sarah Salah	01935737294	Fasel, Giza	Little Women_Louisa May Alcott	19-JAN-2020	111
Menna Moustafa	01561603526	Fasel, Giza	The Pillars Of The Earth_Ken Follett	03-SEP-2019	249
Mohammed Ashraf	01760375339	Shoubra, Cairo	David Copperfield_Charles Dickens	20-JUL-2019	294

CONCLUSIONS

The system achieves its objective to facilitate the barrowing books process and the library ordering books. Digitalizing all the data and save it on an information system instead of the traditional way of using paper notebooks which makes the process of searching for anything very hard and takes a lot of space to store these notebooks. System also facilitate the data storing for future use it can be exploited to make a recommendation expert system that recommend users books to read according to their borrowing history.

References

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