Stevens Library Database Management System

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MIS 630- Data and Knowledge Management
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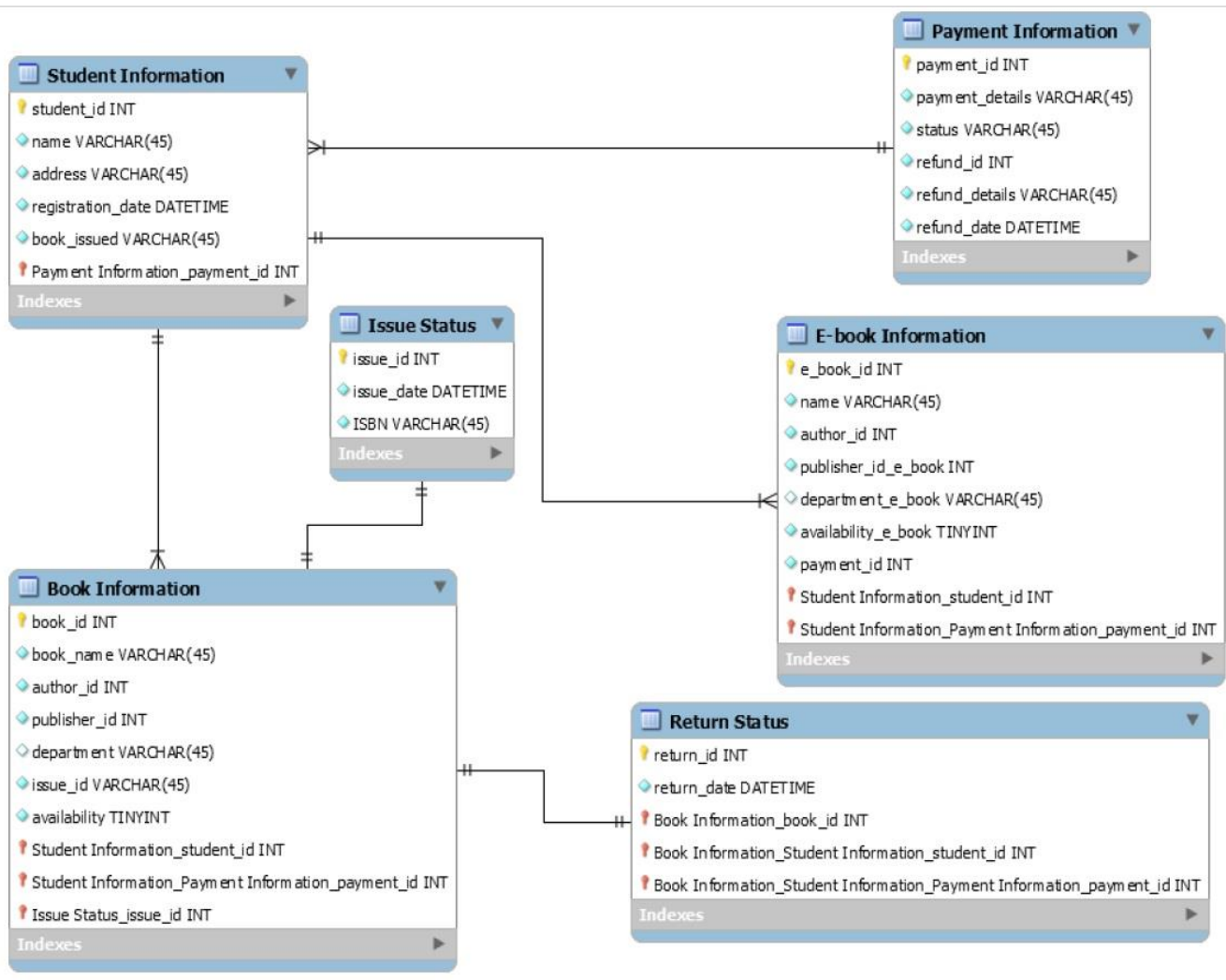# Stevens Library Database Management System

Outline:

This system will help us to keep a track of all the books available in the library, books which have been rented, knowing their status and finding if an e-book version is available to purchase.

A student / librarian will open the system to check if the particular book is available in the library or if its e-book version is available. The system will be updated if the book gets issued and it will store that student's data. It will also keep information of where the book is available in the library and update the section and department. If any ebook has to be bought it will load the payment options.

Core Functions:

- Storing the information of the books and their respective authors.
- Getting the status of the books. For example: when the book was issued or when it has to be returned.
- Storing the student information.
- Tracking where the book is available in the Library or if any E-book version is available.
- Keeping record of the purchased books and the payment made.
- Entering details related to a particular book.
- Providing membership to the members and update as and when required.
- Providing request for the return of the books.
- Updating the bills for payments.
- Checking and recording for fines.
- Secure access of confidential data (user's details).
- Maintaining Borrower's history.

ER Diagram:

Student Information
- 🔑 student_id INT
- ◇ name VARCHAR(45)
- ◇ address VARCHAR(45)
- ◇ registration_date DATETIME
- ◇ book_issued VARCHAR(45)
- ❗ Payment Information_payment_id INT
- Indexes ▶

Payment Information ▼
- 🔑 payment_id INT
- ◇ payment_details VARCHAR(45)
- ◇ status VARCHAR(45)
- ◇ refund_id INT
- ◇ refund_details VARCHAR(45)
- ◇ refund_date DATETIME
- Indexes ▶

Issue Status ▼
- 🔑 issue_id INT
- ◇ issue_date DATETIME
- ◇ ISBN VARCHAR(45)
- Indexes ▶

E-book Information ▼
- 🔑 e_book_id INT
- ◇ name VARCHAR(45)
- ◇ author_id INT
- ◇ publisher_id_e_book INT
- ◇ department_e_book VARCHAR(45)
- ◇ availability_e_book TINYINT
- ◇ payment_id INT
- ❗ Student Information_student_id INT
- ❗ Student Information_Payment Information_payment_id INT
- Indexes ▶

Book Information ▼
- 🔑 book_id INT
- ◇ book_name VARCHAR(45)
- ◇ author_id INT
- ◇ publisher_id INT
- ◇ department VARCHAR(45)
- ◇ issue_id VARCHAR(45)
- ◇ availability TINYINT
- ❗ Student Information_student_id INT
- ❗ Student Information_Payment Information_payment_id INT
- ❗ Issue Status_issue_id INT
- Indexes ▶

Return Status ▼
- 🔑 return_id INT
- ◇ return_date DATETIME
- ❗ Book Information_book_id INT
- ❗ Book Information_Student Information_student_id INT
- ❗ Book Information_Student Information_Payment Information_payment_id INT
- Indexes ▶

Primary Database Table:

Show All or Limit 0 50 Refresh

	first_name	middle_name	last_name	id	gender	department	degree	registration_date	book_issued
	Evanse	Raj	Mehta	29542	Male	MIS	Grad	2018-01-23	1
	Peter	John	Desriveire	24022	Male	MIS	Grad	2017-07-20	0
	Shreyas	Subash	Sawant	23243	Male	CEM	Undergrad	2017-08-12	0
	Shreyas	(NULL)	Menon	28332	Male	MIS	Grad	2017-07-16	1
	Siddhesh	(NULL)	Powar	26939	Male	MIS	Grad	2018-02-19	1
	Stacy	Pete	Kimberly	24965	Female	BIA	phD	2018-01-19	1
	Rey	David	Bautista	29694	Female	CS	Undergrad	2017-11-20	1
	Angelina	Joseph	Raul	20403	Female	MIS	Grad	2017-11-25	0
	Paul	George	Smith	20530	Male	CEM	Grad	2017-10-06	1
	Maria	James	Rodriguez	29400	Female	BIA	Grad	2017-09-03	0
	Mary	Dwayne	Smith	20400	Female	ELC	Undergrad	2018-01-05	1
	Selena	Martin	Hernandez	25044	Female	CS	phD	2018-02-04	0
	Janice	(NULL)	Lobo	26045	Female	BIA	Grad	2018-02-26	1
	Joe	Keiron	Stark	20750	Male	MIS	Grad	2017-09-28	0
	Elvin	Kevin	Butler	20405	Male	CS	Undergrad	2017-09-27	1
	Ankush	(NULL)	Bhande	20503	Male	CEM	Grad	2018-08-05	1
	Marcus	Chris	Sammy	25545	Male	MIS	Grad	2017-08-27	1

```sql
create table `student_info` (
    `first_name` varchar (765),
    `middle_name` varchar (765),
    `last_name` varchar (765),
    `id` double ,
    `gender` varchar (765),
    `department` varchar (765),
    `degree` varchar (765),
    `registration_date` date ,
    `book_issued` tinyint (1)
);
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Evanse','Raj','Mehta','29542','Male','MIS','Grad'
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Peter','John','Desriveire','24022','Male','MIS','
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Shreyas','Subash','Sawant','23243','Male','CEM','
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Shreyas',NULL,'Menon','28332','Male','MIS','Grad'
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Siddhesh',NULL,'Powar','26939','Male','MIS','Grad
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Stacy','Pete','Kimberly','24965','Female','BIA','
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Rey','David','Bautista','29694','Female','CS','Un
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Angelina','Joseph','Raul','20403','Female','MIS',
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Paul','George','Smith','20530','Male','CEM','Grad
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Maria ','James','Rodriguez','29400','Female','BIA
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Mary','Dwayne','Smith','20400','Female','ELC','Un
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Selena','Martin','Hernandez','25044','Female','CS
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Janice',NULL,'Lobo','26045','Female','BIA','Grad'
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Joe','Keiron','Stark','20750','Male','MIS','Grad'
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Elvin','Kevin','Butler','20405','Male','CS','Unde
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Ankush',NULL,'Bhande','20503','Male','CEM','Grad'
insert into `student_info` (`first_name`, `middle_name`, `last_name`, `id`, `gender`, `department`, `degree`, `registration_date`, `book_issued`) values('Marcus','Chris','Sammy','25545','Male','MIS','Gra
```