# Data Warehousing & Mining using MongoDB

Final year Project by Koustuv Sinha & Hitesh Agarwal, Institute of Engineering & Management, under the guidance of Prof. Ee-Kian Wong

## Assignment 1: Library Management System

Our first assignment enables us to learn more about the NoSQL system of MongoDB, which will enable us to proceed further in our Project.

This is a simple Library Management System, having the following entities:

Book, Author, Publisher – core classes

## Problems encountered

Many to Many Relationship Management: Book and Author class has many to many relationship. A Book class points to multiple Authors, as well as an Author class points to multiple Books. The problem lies that, what is the optimal way of saving both the classes, so that this relationship is maintained.

Answer: We have made an integer array in both class, containing the id’s of the other classes. Book has an Integer array containing Author Id’s and vice versa.

Transaction ACID Property handling: MongoDB doesn’t support transaction controls like “Rollback” or “Commit” as in Relational Database. So, to ensure atomicity and concurrency, we have to devise a unique way to handle database transactions.