# Module 3.2 – Normalized Tables

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**Course: CSD-310 – Database Systems**

**Assignment: Module 3.2 – Normalized Tables**

For this assignment, I separated the provided fields into the following tables and normalized them into 3NF. Tables are in 3NF because all contain only related attributes, and all non-key fields are fully functionally dependent on a primary key. Created a junction table (Book Author) to manage the many-to-many relationship between Books and Authors.

## Publisher Table

|  |  |  |  |
| --- | --- | --- | --- |
| publisher\_ID | publisher\_name | publisher\_address | publisher\_email |
| 1001 | Pearson | 123 Main St | contact@pearson.com |
| 1002 | McGraw Hill | 78 East Ave | info@mcgrawhill.com |

## Book Table

|  |  |  |  |
| --- | --- | --- | --- |
| book\_isbn | book\_name | book\_price | publisher\_ID |
| 978-1234567890 | Database Design | 59.99 | 1001 |
| 978-9876543210 | Learning SQL | 49.50 | 1002 |

## Author Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| author\_ID | author\_first\_name | author\_last\_name | author\_phone | author\_email | author\_address |
| 201 | Sarah | Johnson | 206-555-1234 | sjohnson@email.com | 90 Oak St |
| 202 | Mark | Lee | 425-555-6789 | mlee@email.com | 45 Pine Rd |

## Book\_Author Table

|  |  |
| --- | --- |
| book\_isbn | author\_ID |
| 978-1234567890 | 201 |
| 978-9876543210 | 202 |

## Explanation of Design

I separated each into their own table to eliminate redundancy and partial dependencies. The publisher\_ID in the Book table is a foreign key that identifies the book's publisher. The Book\_Author table eliminated the many-to-many relationship between books and authors. Each non-key column is dependent on the primary key which complies with 3NF standards. This reformatting will increase data integrity and will be simpler to make updates without the chance of anomalies or duplication.