

1.

Item ID	Color	Unit Price
IT001	Red	\$16.56
IT001	Blue	\$16.56
IT002	Yellow	\$17.48
IT003	Green	\$19.76
IT004	Blue	\$20.00

2.

Supplier ID	Store ID
SP001	S1
SP001	S3
SP002	S1
SP003	2
SP004	S3

Store ID	Location
S1	New York
S2	Rhode Island
S3	Vermont

3.

Book ID	Category ID	Price
1	1	\$27.99
2	2	\$17.99
3	1	\$20.99
4	3	\$40.99
5	2	\$19.99

Category ID	Category Desc
1	Cooking
2	Travel
3	Computers

Exercise 2: Normalize Academic Database ERD

You need to identify misplaced attributes and explain which normalization rule they violate.

In the FACULTY entity, the attributes Login Date and Login Time are likely misplaced as they refer to login events rather than being intrinsic to a faculty member. These could be separated into a different table for login events. This violates the 1NF, as they contain data that could repeat (multiple login times).

In the STUDENT entity, Number of Working Days, Number of Days Off, and Eligibility for Exam could depend on academic progress.

Exercise 3

Normalization:

Split into Users, Messages, and Servers tables. "Server ID" is repeated and should be separated out.