1-) You are given a database schema representing a fictional online bookstore. Your task is to normalize the given schema using the principles of database normalization. For each step of normalization, provide a brief explanation of the normalization rule being applied and the resulting modified schema.

Schema:

The initial schema is as follows:

Table: Books

BookID	Title	Author	Year
1	Book A	Author X	2005
2	Book B	Author Y	2010
3	Book C	Author X	2018

Table: Customers

CustomerID	Name	Email
1	John Doe	john@example.com
2	Jane Smith	jane@example.com

Table: Orders

OrderID	CustomerID	BookID
1	1	1
2	1	2
3	2	1

Normalization Steps:

Perform the following normalization steps on the given schema:

Step 1: First Normal Form (1NF)

Explain the 1NF rule and modify the schema to comply with it.

Step 2: Second Normal Form (2NF)

Explain the 2NF rule and modify the schema to comply with it.

Step 3: Third Normal Form (3NF)

Explain the 3NF rule and modify the schema to comply with it.

2-) Consider the following table, which represents customer orders:

OrderID | CustomerName | Product | Quantity | OrderDate

Describe the potential problems or anomalies that can occur with this table structure and explain which normal form(s) it violates. Normalize the table and present the resulting normalized table(s) in the appropriate normal form(s) and provide a brief explanation for each normalization step.

3-) Given the following unnormalized table structure for a university course enrollment system:

StudentID | StudentName | Major | Course1 | Course2 | Course3 | ... | CourseN

Identify the normalization problems in this structure and explain which normal form(s) it violates. Normalize the table and present the resulting normalized table(s) in the appropriate normal form(s) and provide a brief explanation for each normalization step.