CS 2500 AA 2020 Fall - Exam 1, Part 2

List whether each table is in either zero, first, second, or third normal form. For those that are not in third normal form, list specifically which fields are causing the failure ad which type of issue. 5 points each.

1. Track book, one or more authors, and proportion of profit each author is to receive.

|  |  |  |
| --- | --- | --- |
| BookID | AuthorID | ProceedsPercent |
| 9781456906513 | 4330 | 50% |
| 9781456906513 | 6601 | 50% |

1NF-Partial Dependency

1. Pratol person information including which vehicle has been assigned.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PatrolPersonID | LastName | FirstName | VechicleID | VehicleColor |
| 2301 | Williams | James | 154 | White |

3NF

1. Pratol person information including email addresses.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| PatrolID | LastName | FirstName | Eamil1 | Email2 | Email3 |
| 2301 | Williams | James | JDWilliams@yahoo.com | JimWilliams@att.net |  |

0NF-Repeating Values

1. Track one or more book authors that contributed to a book.

|  |  |  |
| --- | --- | --- |
| BookID | AuthorID | BookPages |
| 9781456906513 | 4330 | 312 |

1NF-Partial Dependency

Recycling Drop-Off Tracking Database

You are to create an information system for the county recycling system. The county needs a database to manage several recycling drop-off locations throughout the county. The drop-off locations accept various recycling materials and each location must have an attendant on site during hours of operation.

The recycling materials include things like aluminum, steel cans, cardboard, and clear glass to name a few. The system is to keep the name and a description of each material.

The system needs to keep track each recycling drop-off location where contributors bring in their recycling during open hours. The system also needs to track which materials are accepted at which drop-off locations as not all locations accept the same materials. In addition, there is a need to record the weekly weight of each material that is accepted.

The system is to track the attendants that work at each drop-off location. Each location has one or more attendants that work that location at different times throughout the week. An attendant is to work only at one location.

Create an Entity Relationship Diagram of the database system including attributes, and indications of all primary keys and foreign keys. For the relationships, include cardinality. Do not include modality (participation). 38 points

