ISTE-230 Introduction to Database & Data Modeling

## Homework # 2 – Interpret, Transpose, and Implement a Single Entity E-R Diagram in MySQL

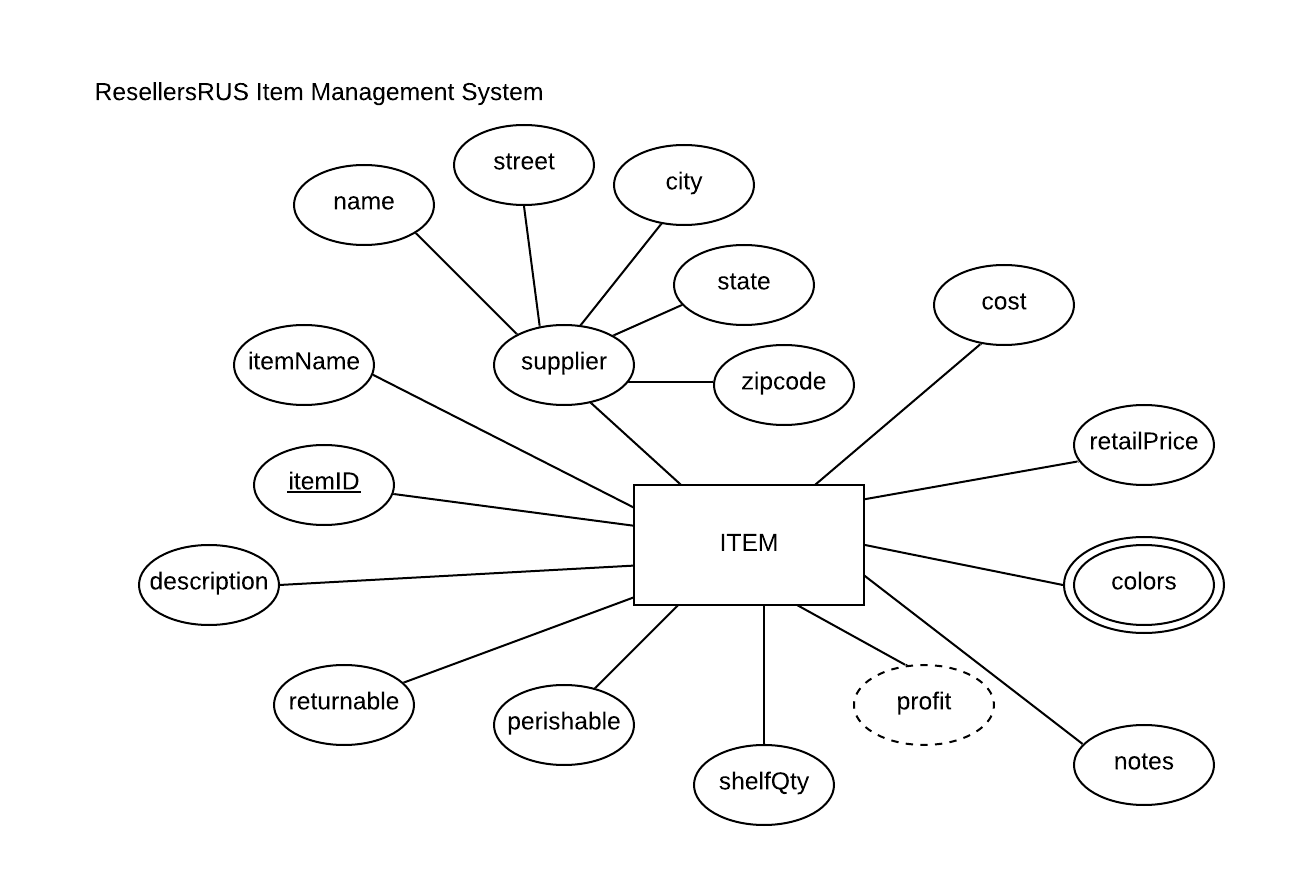
DUE:

**Name: Miftahul Huq**

**All assignments will be graded with regard to the coding standards that were discussed in class, which can be found in the Standards Content area.**

**Submit this document to the Homework #2 assignment folder, edited to include your answers AND the script file created for Part 3.**

**Part 1 - 20 points**



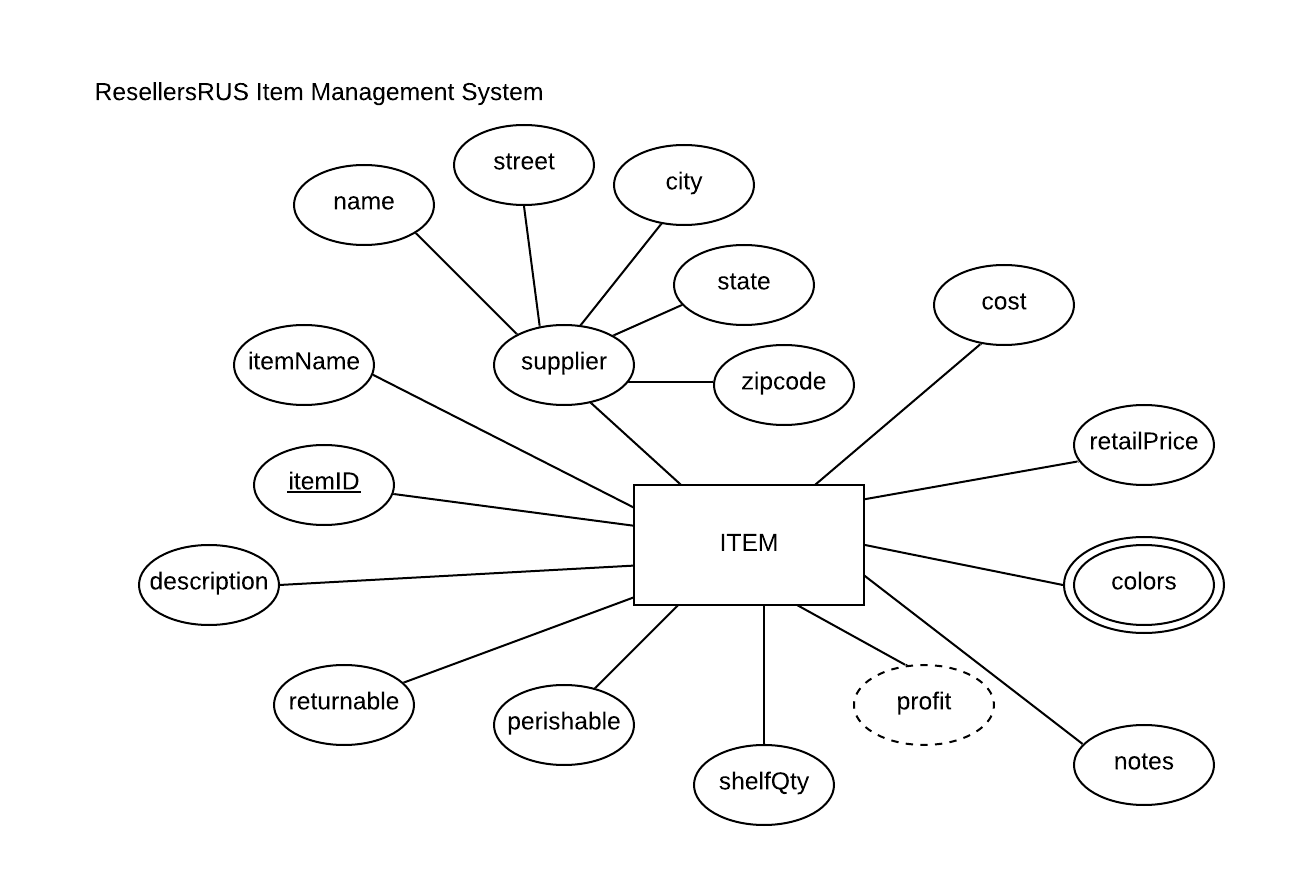
For the table below, please classify each attribute specified based on the E-R diagram above. Please place the best answer for each column that best describes the attribute.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute** | **Composite**  **or**  **Simple** | **Single-valued**  **or**  **Multi-valued** | **Stored**  **or**  **Derived** | **Identifier ?**  **(Yes or no)** |
| profit | Simple | Single-valued | Derived | no |
| street | Simple | Single-valued | Stored | no |
| itemID | Simple | Single-valued | Stored | Yes |
| supplier | Composite | Single-valued | Stored | no |
| colors | Simple | Multi-valued | Stored | no |

**Part 2 - 19 points**

Using relational structure notation, transpose the E-R diagram below into a relational schema. You do not need to normalize the relation.

*NOTE:* The transposed ITEM relation includes a 'colors' attribute, therefore it would not pass the 1NF (the criteria for a relation). Although the ITEM relation is not in 1NF, there is an approach that we will learn next week.



**Your Answer (relational schema):**

**ITEM(**itemID, itemName, name, street, city, state, zipcode, cost, retailPrice, colors, notes, profit, shelfQty, perishable, returnable, description**)**

ITEM

|  |
| --- |
| **itemID** |
| itemName  name  street  city  state  zipcode  cost  retailPrice  colors  notes  profit  shelfQty  perishable  returnable  description |

**Part 3 - 61 points**

Create a script that includes the statements that will create a database called ‘HW2’ that includes a table for ITEM, based the relation above in Part 2 and the specifications in the table below. Use ONLY the data types discussed so far (CHAR, VARCHAR, INT, and DATE).

|  |  |
| --- | --- |
| **Attribute(s)** | **Data type description** |
| itemID; itemName; name; street; city; colors | Variable-length string up to 25 characters |
| state | Fixed-length string of 2 characters |
| zipcode | A string that could accommodate either of the formats below: ‘#####-####’ or ‘#####’ |
| cost; retailPrice | Variable-length string up to 10 characters |
| notes; description | Variable-length string up to 255 characters |
| returnable; perishable | Will store one character |
| shelfQty | A whole number between 0 and 50000 |