

CS432: Assignment5

Total Marks: 25

Due Date: 11:59 PM, 02 April 2021

Submission guidelines: Kindly name your submission as ‘RollNumber_Name.pdf’. Submissions with the incorrect format will not be accepted. Late submissions will be penalized 20% per day. Please upload your scanned submissions here: [link](#).

1 E/R Diagram

Q: You have solved the following question during your quiz 1. Since some of you were encountering ER diagrams for the first time, many responses were incorrect and inconsistent with formal ER design principles. PostMidsem, we covered several additional aspects in the form of extended ER features. This assignment tries to solve the same quiz problem with few additions. Design an E/R diagram using the following specification document received from an online retailer like Amazon. It MUST have the following features:

1. The company has data about products, users, and reviews.
2. Users can be buyers, sellers, or both.
3. Each product has some common attributes like ID (key), name, price, avg. product rating, etc.
4. Products can have several categories like electronics, books, appliances, etc. Each category contains specific attributes.
5. A user has a name, email (key), etc.
6. Customers buy one or many products, and a product can be bought by many customers; each purchase has a date, amount, address, etc.
7. Each review has a review ID, content, date and time, etc.
8. Each seller has ID, description, rating, etc.
9. Each customer can have zero or more reviews. Reviews must have been written by some customers.
10. A seller sells at least one product. The average seller rating can be computed from the avg. product rating.

11. You can think about more additional features and add them accordingly in the above ER diagram. State them clearly.

You will be awarded marks based on the correctness of constraints (cardinality and participation), relationships (you need to think about them very carefully), and attribute types (each attribute type is represented using a very different notation). Marks distribution is as follows:

- Entities: 5 (For specifying correct entity sets, attribute types)
- Relationships: 5 (For specifying correct relationship sets, descriptive attributes)
- Cardinality constraints: 3
- Participation constraints: 2
- Extended ER features and constraints: 8 Marks
- At least two additional features proposed by you: 2 marks (Full marks if they are correct and follow all properties described above)

Please state all your assumptions clearly.