

Essentials of Database Management (Hoffer et al.)
Chapter 2 Modeling Data in the Organization

1) The logical representation of an organization's data is called a(n):

- A) database model.
- B) entity-relationship model.
- C) relationship systems design.
- D) database entity diagram.

Answer: B

Diff: 1 Page Ref: 47

Topic: The E-R Model: An Overview

AACSB: Use of Information Technology

2) The common types of entities are:

- A) strong entities.
- B) weak entities.
- C) associative entities.
- D) all of the above.

Answer: D

Diff: 2 Page Ref: 47

Topic: Introduction

AACSB: Use of Information Technology

3) In an E-R diagram, there are _____ business rule(s) for every relationship.

- A) two
- B) three
- C) one
- D) no

Answer: A

Diff: 2 Page Ref: 49

Topic: The E-R Model: An Overview

AACSB: Use of Information Technology

4) Business policies and rules govern all of the following EXCEPT:

- A) managing employees.
- B) creating data.
- C) updating data.
- D) removing data.

Answer: A

Diff: 2 Page Ref: 50

Topic: The E-R Model: An Overview

AACSB: Reflective Thinking

Subtopic: Metadata

5) Which of the following is NOT a good characteristic of a data name?

- A) Relates to business characteristics
- B) Readable
- C) Repeatable
- D) Relates to a technical characteristic of the system

Answer: D

Diff: 2 Page Ref: 51-52

Topic: Modeling the Rules of the Organization

AACSB: Analytic Skills

Subtopic: Data Names and Definitions

6) Another word for a data definition is a(n)

- A) entity.
- B) relationship.
- C) structural assertion.
- D) composite key.

Answer: C

Diff: 3 Page Ref: 71

Topic: Modeling the Rules of the Organization

AACSB: Analytic Skills

Subtopic: Data

7) Which of the following is not a suggestion by Salin regarding developing data names?

- A) Prepare a definition of the data.
- B) Keep insignificant or illegal words.
- C) Arrange the words in a meaningful, repeatable way.
- D) Assign a standard abbreviation for each word.

Answer: B

Diff: 2 Page Ref: 51

Topic: Modeling Relationships

AACSB: Analytic Skills

Subtopic: Data Names and Definitions

8) A good data definition will describe all of the characteristics of a data object EXCEPT:

- A) subtleties.
- B) examples.
- C) who determines the value of the data.
- D) who can delete the data.

Answer: D

Diff: 1 Page Ref: 52

Topic: Modeling the Rules of the Organization

AACSB: Analytic Skills

Subtopic: Data Definitions

9) Customers, cars, and parts are examples of:

- A) entities.
- B) attributes.
- C) cardinals.
- D) relationships.

Answer: A

Diff: 1 Page Ref: 53

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills, Use of Information Technology

10) Which of the following is an entity type on which a strong entity depends?

- A) Owner
- B) Member
- C) Attribute
- D) None of the above

Answer: D

Diff: 2 Page Ref: 55

Topic: Modeling Entities and Attributes

AACSB: Reflective Thinking, Use of Information Technology

Subtopic: Strong Versus Weak Entity Types

11) An entity type whose existence depends on another entity type is called a _____ entity.

- A) strong
- B) weak
- C) codependent
- D) variant

Answer: B

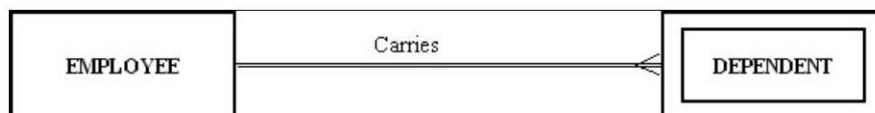
Diff: 1 Page Ref: 55

Topic: Modeling Entities and Attributes

AACSB: Reflective Thinking

Subtopic: Strong Versus Weak Entity Types

12) The following figure shows an example of:



- A) a one-to-many relationship.
- B) a strong entity and its associated weak entity.
- C) a codependent relationship.
- D) a double-walled relationship.

Answer: B

Diff: 2 Page Ref: 55

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills

Subtopic: Strong Versus Weak Entity Types

13) A(n) _____ is the relationship between a weak entity type and its owner.

- A) member chain
- B) identifying relationship
- C) jump path
- D) chain link

Answer: B

Diff: 2 Page Ref: 55

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills, Reflective Thinking

Subtopic: Strong Versus Weak Entity Types

14) An entity type name should be all of the following EXCEPT:

- A) concise.
- B) specific to the organization.
- C) as short as possible.
- D) a singular noun.

Answer: C

Diff: 2 Page Ref: 55-56

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills, Reflective Thinking

Subtopic: Naming and Defining Entity Types

15) A property or characteristic of an entity type that is of interest to the organization is called a(n):

- A) attribute.
- B) coexisting entity.
- C) relationship.
- D) cross-function.

Answer: A

Diff: 1 Page Ref: 57

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Attributes

16) An attribute that must have a value for every entity (or relationship) instance is a(n):

- A) composite attribute.
- B) required attribute.
- C) optional attribute.
- D) multivalued attribute.

Answer: B

Diff: 1 Page Ref: 57

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills

Subtopic: Attributes

17) A person's name, birthday, and social security number are all examples of:

- A) attributes.
- B) entities.
- C) relationships.
- D) descriptors.

Answer: A

Diff: 2 Page Ref: 57

Topic: Modeling Entities and Attributes

AACSB: Reflective Thinking

Subtopic: Attributes

18) An attribute that can be broken down into smaller parts is called a(n) _____ attribute.

- A) associative
- B) simple
- C) composite
- D) complex

Answer: C

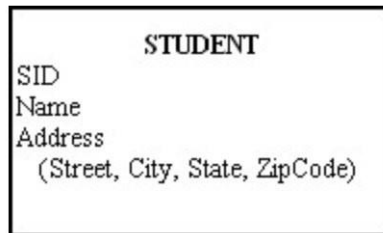
Diff: 1 Page Ref: 58

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Attributes

19) The following figure shows an example of:



- A) a composite attribute.
- B) a relational attribute.
- C) a derived attribute.
- D) a multivalued attribute.

Answer: A

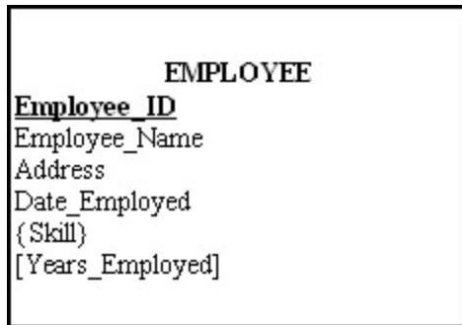
Diff: 2 Page Ref: 58

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Attributes

20) In the figure below, which attribute is multivalued?



- A) Years_Employed
- B) Employee_ID
- C) Skill
- D) Address

Answer: C

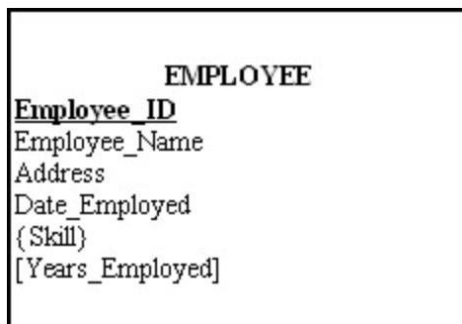
Diff: 2 Page Ref: 59-60

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Attributes

21) In the figure below, which attribute is derived?



- A) Years_Employed
- B) Employee_ID
- C) Skill
- D) Address

Answer: A

Diff: 2 Page Ref: 59

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Attributes

22) An attribute that can be calculated from related attribute values is called a(n) _____ attribute.

- A) simple
- B) composite
- C) multivalued
- D) derived

Answer: D

Diff: 1 Page Ref: 51

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Attributes

23) The total quiz points for a student for an entire semester is a(n) _____ attribute.

- A) derived
- B) mixed
- C) stored
- D) addressed

Answer: A

Diff: 1 Page Ref: 51

Topic: Modeling Entities and Attributes

AACSB: Reflective Thinking

Subtopic: Attributes

24) Which of the following criteria should be considered when selecting an identifier?

- A) Choose an identifier that is stable.
- B) Choose an identifier that will not be null.
- C) Choose an identifier that doesn't have large composite attributes.
- D) All of the above.

Answer: D

Diff: 1 Page Ref: 60

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Identifier Attribute

25) An attribute that uniquely identifies an entity and consists of a composite attribute is called a(n):

- A) composite attribute.
- B) composite identifier.
- C) identifying attribute.
- D) relationship identifier.

Answer: B

Diff: 1 Page Ref: 60

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Identifier Attribute

26) An entity that associates the instances of one or more entity types and contains attributes specific to the relationships is called a(n):

- A) associative entity.
- B) connecting entity.
- C) intersectional entity.
- D) all of the above.

Answer: A

Diff: 1 Page Ref: 65

Topic: Modeling Relationships

AACSB: Use of Information Technology

Subtopic: Basic Concepts and Definitions in Relationships

27) Which of the following conditions should exist if an associative entity is to be created?

- A) All the relationships for the participating entities are many-to-many.
- B) The new associative entity has independent meaning.
- C) The new associative entity participates in independent relationships.
- D) All of the above.

Answer: D

Diff: 2 Page Ref: 65

Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Associative Entities

28) The number of entity types that participate in a relationship is called the:

- A) number.
- B) identifying characteristic.
- C) degree.
- D) counter.

Answer: C

Diff: 1 Page Ref: 66

Topic: Modeling Relationships

AACSB: Use of Information Technology

Subtopic: Degree of a Relationship

29) A relationship between the instances of a single entity type is called a(n) _____ relationship.

- A) ternary
- B) primary
- C) binary
- D) unary

Answer: D

Diff: 2 Page Ref: 67

Topic: Modeling Relationships

AACSB: Use of Information Technology

Subtopic: Degree of a Relationship

30) A student can attend five classes, each with a different professor. Each professor has 30 students. The relationship of students to professors is a _____ relationship.

- A) one-to-one
- B) many-to-many
- C) one-to-many
- D) strong

Answer: B

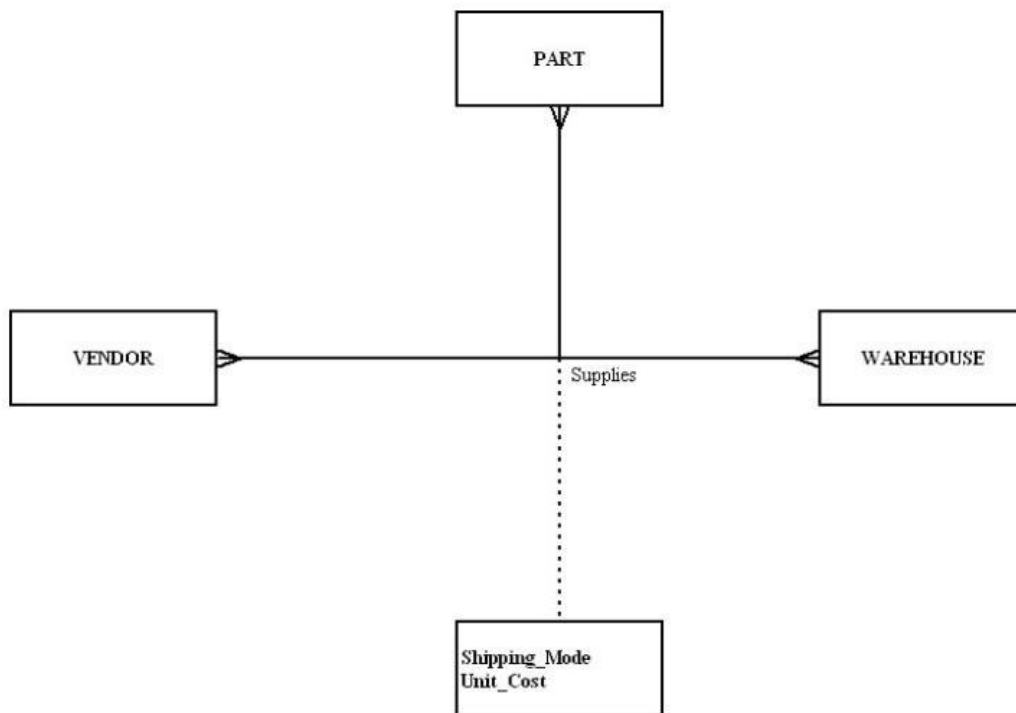
Diff: 3 Page Ref: 67-68

Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Degree of a Relationship

31) In the following diagram, what type of relationship is depicted?



- A) Unary
- B) Binary
- C) Ternary
- D) Quad

Answer: C

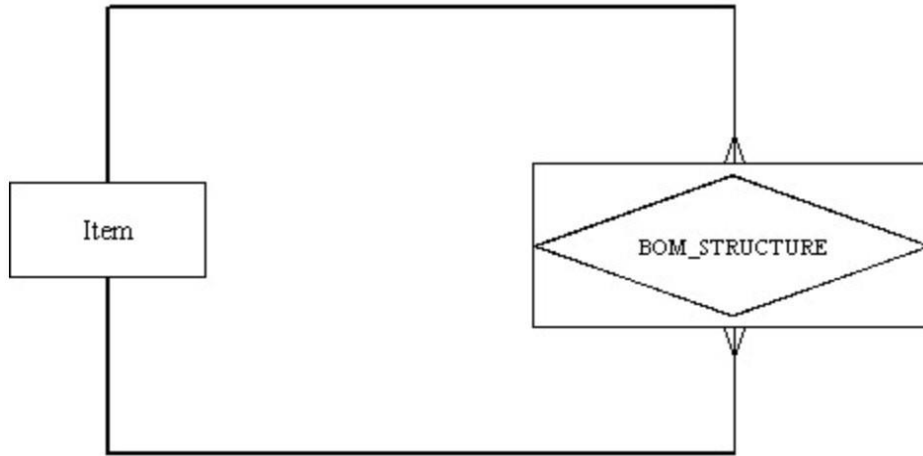
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Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Degree of a Relationship

32) In the following diagram, which is true?



- A) It depicts a unary relationship.
- B) It depicts a many-to-many relationship.
- C) There is an associative entity.
- D) All of the above.

Answer: D

Diff: 3 Page Ref: 68

Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Degree of a Relationship

33) A simultaneous relationship among the instances of three entity types is called a _____ relationship.

- A) ternary
- B) tertiary
- C) primary
- D) binary

Answer: A

Diff: 1 Page Ref: 68

Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Degree of a Relationship

34) A _____ specifies the number of instances of one entity that can be associated with each instance of another entity.

- A) degree
- B) cardinality constraint
- C) counter constraint
- D) limit

Answer: B

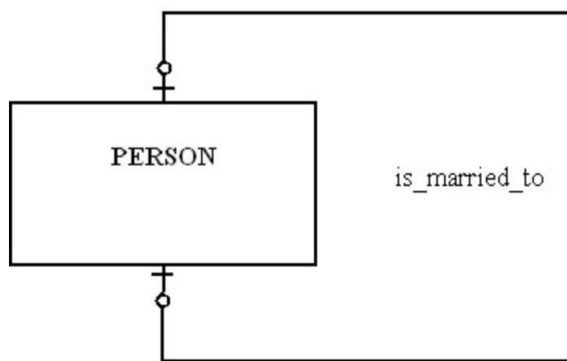
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Topic: Modeling Relationships

AACSB: Use of Information Technology

Subtopic: Cardinality Constraints

35) In the figure shown below, which of the following is true?



- A) A person can marry at most one person.
- B) A person has to be married.
- C) A person can marry more than one person, but that person can only be married to one person.
- D) A person can marry more than one person.

Answer: A

Diff: 2 Page Ref: 71-72

Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Cardinality Constraints

36) A relationship where the minimum and maximum cardinality are both one is a(n) _____ relationship.

- A) optional
- B) unidirectional
- C) mandatory link
- D) mandatory one

Answer: D

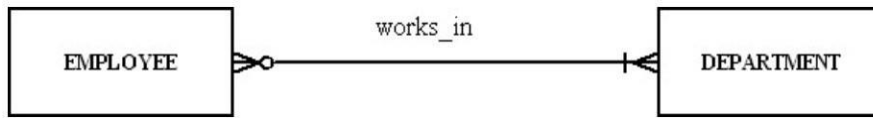
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Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Cardinality Constraints

37) For the relationship represented in the figure below, which of the following is true?



- A) An employee can work in more than one department but does not have to work for any department.
- B) A department must have at least one employee.
- C) A department can have more than one employee.
- D) An employee has to work for more than one department.

Answer: C

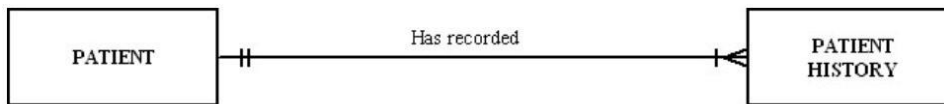
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Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Cardinality Constraints

38) In the following diagram, which of the answers below is true?



- A) Each patient has one or more patient histories.
- B) Each patient has one and only one visit.
- C) Each patient history belongs to one and only one patient.
- D) Both A and C

Answer: D

Diff: 2 Page Ref: 73

Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Cardinality Constraints

39) A value that indicates the date or time of a data value is called a:

- A) value stamp.
- B) time stamp.
- C) checkpoint.
- D) check counter.

Answer: B

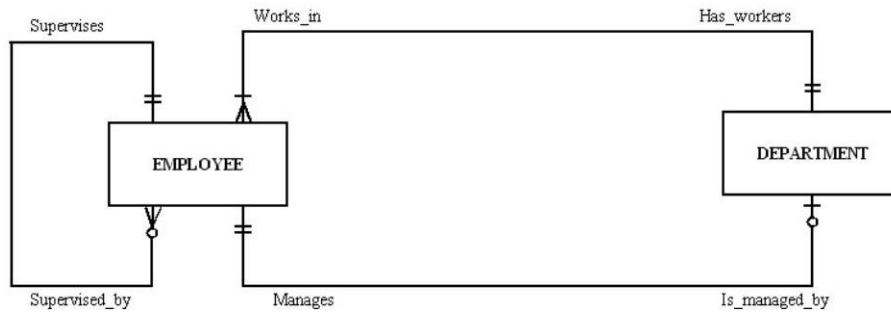
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Topic: Modeling Relationships

AACSB: Use of Information Technology

Subtopic: Modeling Time-Dependent Data

40) In the following diagram, which answer is true?



- A) Each employee can supervise one to many employees.
- B) Each employee can manage many departments.
- C) Each employee works in more than one department.
- D) All of the above.

Answer: A

Diff: 3 Page Ref: 75-76

Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Multiple Relationships

41) A mutually exclusive relationship is one in which:

- A) an entity instance can participate in many different relationships.
- B) an entity instance can participate in only one of several alternative relationships.
- C) an entity instance can not participate in a relationship with another entity instance.
- D) none of the above.

Answer: B

Diff: 3 Page Ref: 77

Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Naming and Defining Relationships

42) Most systems developers believe that data modeling is the least important part of the systems development process.

Answer: FALSE

Diff: 2 Page Ref: 46

Topic: Introduction

AACSB: Reflective Thinking

43) The E-R model is used to construct a conceptual model.

Answer: TRUE

Diff: 2 Page Ref: 46

Topic: Introduction

AACSB: Reflective Thinking

44) In an E-R diagram, strong entities are represented by double-walled rectangles.

Answer: FALSE

Diff: 2 Page Ref: 49-50

Topic: The E-R Model: An Overview

AACSB: Use of Information Technology

Subtopic: E-R Model Notation

45) In an E-R diagram, an associative entity is represented by a rounded rectangle.

Answer: TRUE

Diff: 2 Page Ref: 49

Topic: The E-R Model: An Overview

AACSB: Use of Information Technology

Subtopic: E-R Model Notation

46) Data modeling is about documenting rules and policies of an organization that govern data.

Answer: TRUE

Diff: 2 Page Ref: 50

Topic: The E-R Model: An Overview

AACSB: Reflective Thinking

Subtopic: Metadata

47) The purpose of data modeling is to document business rules about processes.

Answer: FALSE

Diff: 2 Page Ref: 50

Topic: Modeling the Rules of the Organization

AACSB: Reflective Thinking

48) A business rule is a statement that defines or constrains some aspect of the business.

Answer: TRUE

Diff: 1 Page Ref: 61

Topic: Modeling the Rules of the Organization

AACSB: Use of Information Technology

Subtopic: Overview of Business Rules

49) The intent of a business rule is to break down business structure.

Answer: FALSE

Diff: 1 Page Ref: 51

Topic: Modeling the Rules of the Organization

AACSB: Reflective Thinking

Subtopic: Overview of Business Rules

50) Data names should always relate to business characteristics.

Answer: TRUE

Diff: 1 Page Ref: 51

Topic: Modeling the Rules of the Organization

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Data Names and Definitions

51) Data names do not have to be unique.

Answer: FALSE

Diff: 2 Page Ref: 51

Topic: Modeling the Rules of the Organization

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Data Names and Definitions

52) A good data definition is always accompanied by diagrams, such as the entity-relationship diagram.

Answer: TRUE

Diff: 1 Page Ref: 52

Topic: Modeling the Rules of the Organization

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Data Names and Definitions

53) An entity is a person, place, object, event, or concept in the user environment about which the organization wishes to maintain data.

Answer: TRUE

Diff: 1 Page Ref: 53

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

54) A single occurrence of an entity is called an entity instance.

Answer: TRUE

Diff: 2 Page Ref: 53

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

55) The relationship between a weak entity type and its owner is an identifying relationship.

Answer: TRUE

Diff: 1 Page Ref: 55

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Strong Versus Weak Entity Types

56) An entity type on which a strong entity is dependent is called a covariant entity.

Answer: FALSE

Diff: 2 Page Ref: 55

Topic: Modeling Entities and Attributes

AACSB: Reflective Thinking, Use of Information Technology

Subtopic: Strong Versus Weak Entity Types

57) An entity type name should always be a singular noun.

Answer: TRUE

Diff: 1 Page Ref: 55-56

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Naming and Defining Entity Types

58) The name used for an entity type should never be the same in other E-R diagrams on which the entity appears.

Answer: FALSE

Diff: 2 Page Ref: 55-56

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Naming and Defining Entity Types

59) Some examples of attributes are: eye_color, weight, and student_id, student.

Answer: FALSE

Diff: 2 Page Ref: 57

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Attributes

60) A simple attribute can be broken down into smaller pieces.

Answer: FALSE

Diff: 1 Page Ref: 58

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Attributes

61) An attribute whose values can be calculated from related attribute values is called a derived attribute.

Answer: TRUE

Diff: 1 Page Ref: 59

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Attributes

62) A multivalued attribute may take on more than one value for a particular entity instance.

Answer: TRUE

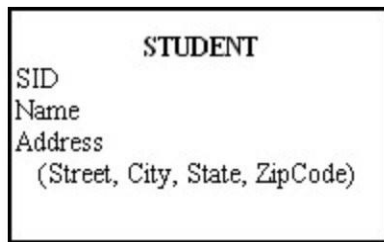
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Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Attributes

63) In the figure below, one might want to create a single-attribute surrogate identifier to substitute for the composite identifier.



Answer: FALSE

Diff: 3 Page Ref: 60

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Identifier Attribute

64) When choosing an identifier, choose one that will not change its value often.

Answer: TRUE

Diff: 1 Page Ref: 60-61

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Identifier Attribute

65) It is desirable that no two attributes across all entity types have the same name.

Answer: TRUE

Diff: 2 Page Ref: 61-61

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Naming and Defining Attributes

66) It is not permissible to associate attributes with relationships.

Answer: FALSE

Diff: 2 Page Ref: 62

Topic: Modeling Relationships

AACSB: Use of Information Technology

Subtopic: Basic Concepts and Definitions in Relationships

67) A relationship instance is an association between entity instances where each relationship instance includes exactly one entity from each participating entity type.

Answer: FALSE

Diff: 1 Page Ref: 63

Topic: Modeling Relationships

AACSB: Reflective Thinking

Subtopic: Basic Concepts and Definitions in Relationships

68) One reason to use an associative entity is if the associative entity has one or more attributes in addition to the identifier.

Answer: TRUE

Diff: 1 Page Ref: 65

Topic: Modeling Relationships

AACSB: Use of Information Technology

Subtopic: Associative Entities

69) The degree of a relationship is the number of attributes that are associated with it.

Answer: FALSE

Diff: 1 Page Ref: 66

Topic: Modeling Relationships

AACSB: Reflective Thinking, Use of Information Technology

Subtopic: Degree of a Relationship

70) The relationship between the instances of two entity types is called a binary relationship.

Answer: TRUE

Diff: 1 Page Ref: 67

Topic: Modeling Relationships

AACSB: Use of Information Technology

Subtopic: Degree of a Relationship

71) The relationship among the instances of three entity types is called a unary relationship.

Answer: FALSE

Diff: 1 Page Ref: 67-68

Topic: Modeling Relationships

AACSB: Use of Information Technology

Subtopic: Degree of a Relationship

72) A cardinality constraint tells what kinds of properties are associated with an entity.

Answer: FALSE

Diff: 1 Page Ref: 71

Topic: Modeling Relationships

AACSB: Use of Information Technology

Subtopic: Cardinality Constraints

73) The maximum cardinality of a relationship is the maximum number of instances of entity B that may be associated with each instance of entity A.

Answer: FALSE

Diff: 1 Page Ref: 71

Topic: Modeling Relationships

AACSB: Reflective Thinking, Use of Information Technology

Subtopic: Cardinality Constraints

74) Participation in a relationship may be optional or mandatory.

Answer: TRUE

Diff: 2 Page Ref: 73

Topic: Modeling Relationships

AACSB: Reflective Thinking, Use of Information Technology

Subtopic: Cardinality Constraints

75) A ternary relationship is equivalent to three binary relationships.

Answer: FALSE

Diff: 2 Page Ref: 73-74

Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Cardinality Constraints

76) A time stamp is a time value that is associated with a data value.

Answer: TRUE

Diff: 2 Page Ref: 74

Topic: Modeling Time-Dependent Data

AACSB: Use of Information Technology

77) Relationships represent action being taken using a verb phrase.

Answer: TRUE

Diff: 2 Page Ref: 76-77

Topic: Modeling Relationships

AACSB: Use of Information Technology

Subtopic: Naming and Defining Relationships

78) In the figure below, the name of the relationship follows the guidelines for naming a relationship.



Answer: FALSE

Diff: 2 Page Ref: 76-77

Topic: Modeling Relationships

AACSB: Analytic Skills, Use of Information Technology

Subtopic: Naming and Defining Relationships

79) What are some of the guidelines for good data names of objects in general?

Answer: Data names always should:

1. Relate to the business not technical characteristics. Student would be a good name but not filest023.
2. Be meaningful so that the name tells what the object is about.
3. Be unique.
4. Be readable.
5. Be composed of words taken from an approved list.
6. Be repeatable.
7. Follow a standard syntax.

Diff: 2 Page Ref: 51

Topic: Modeling the Rules of the Organization

AACSB: Analytic Skills, Reflective Thinking

Subtopic: Data Names and Definitions

80) What is the difference between an entity type and an entity instance?

Answer: An entity type is a collection of entities that share common properties. An entity instance is a single occurrence of an entity type. So, for example, STUDENT is an entity type and John Smith is an entity instance.

Diff: 2 Page Ref: 53

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills

Subtopic: Entities

81) How is a strong entity different from a weak entity?

Answer: A strong entity type exists independently of any other entities. A weak entity type depends on another (strong) entity type. When an instance of the strong entity type no longer exists, any weak entity instances which depend upon the strong entity cease to exist.

Diff: 2 Page Ref: 55

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills

Subtopic: Strong Versus Weak Entity Types

82) What is the difference between a simple attribute and a composite attribute?

Answer: A simple attribute cannot be broken down into smaller components whereas a composite attribute can be. An example of a simple attribute is last name. An example of a composite attribute is mailing_address, which would have street, city, state and zip code as components.

Diff: 2 Page Ref: 58

Topic: Modeling Entities and Attributes

AACSB: Analytic Skills

Subtopic: Attributes

83) What is a derived attribute, and how is it different from a stored attribute?

Answer: A derived attribute is an attribute whose value can be calculated from other related attributes. A derived attribute is not stored in the physical table which is eventually created from the ERD. A stored attribute, as its name implies, is stored as a column in the physical table.

Diff: 2 Page Ref: 58

Topic: Modeling Entities and Attributes

AACSB: Use of Information Technology

Subtopic: Stored vs. Derived Attributes

84) What is an associative entity? What four conditions should exist in order to convert a relationship to an associative entity?

Answer: An associative entity is an entity type that associates the instances of one or more entity types and contains attributes that are peculiar to the relationship between those entity instances. Often, a many-to-many relationship is converted to an associative entity. The following four conditions should exist in order to do this:

1. All the relationships for the participating entities types are many relationships.
2. The resulting associative entity has independent meaning.
3. The associative entity has one or more attributes other than the identifier.
4. The associative entity participates in one or more relationships independent of the entities in the associative relationship.

Diff: 2 Page Ref: 65

Topic: Modeling Relationships

AACSB: Analytic Skills

Subtopic: Associative Entities

85) What are the three different degrees of relationship?

Answer: The three possible degrees are: unary (an instance of one entity is related to an instance of the same entity type), binary (an entity instance of one type is related to an entity instance of another type) and ternary (instance of three different types participate in a relationship).

Diff: 2 Page Ref: 66-69

Topic: Basic Concepts and Definitions in Relationships

AACSB: Analytic Skills, Reflective Thinking

Subtopic: Degree of a Relationship

86) Describe what a cardinality constraint is.

Answer: A cardinality constraint is a rule that specifies the number of instance of an entity that can be associated with each instance on another entity. An example of a cardinality constraint would be a fishing lure company that manufactures lures. Clearly this is a one-to-many relationship since the company manufactures many lures and each lure is manufactured by only one company.

Diff: 2 Page Ref: 71

Topic: Basic Concepts and Definitions in Relationships

AACSB: Analytic Skills, Reflective Thinking

Subtopic: Cardinality Constraints

87) Explain what is meant by minimum and maximum cardinality.

Answer: The minimum cardinality refers to the minimum number of instances that one entity may be associated with each instance of another entity. Conversely, the maximum cardinality refers to the maximum number of instances of one entity that may be associated with another. Generally, the minimum cardinality is either zero or one and the maximum cardinality can be one or many.

Diff: 2 Page Ref: 71-72

Topic: Basic Concepts and Definitions in Relationships

AACSB: Analytic Skills, Reflective Thinking

Subtopic: Cardinality Constraints

88) Discuss how to model time dependent data.

Answer: Time dependent data can be modeled using a time stamp. This can be used to maintain a history of the changes over time. Often times, the way that relational databases deal with time dependent data is not adequate and organizations ignore the issue or use simplified methods such as time stamps.

Diff: 2 Page Ref: 74-75

Topic: Basic Concepts and Definitions in Relationships

AACSB: Reflective Thinking, Use of Information Technology

Subtopic: Modeling Time-Dependent Data

89) Example some considerations for naming relationships.

Answer: When naming a relationship, there are a few special guidelines. A relationship name is a verb phrase, which is always in the present tense. Some examples are supplies, purchases and teaches. Vague names such as has or is related should be avoided.

Diff: 1 Page Ref: 76-77

Topic: Basic Concepts and Definitions in Relationships

AACSB: Reflective Thinking, Use of Information Technology

Subtopic: Naming and Defining Relationships