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MIS 343

Assignment #1

**1. Contrast the following items**

a. Stored attribute and derived attribute

A stored attribute is a component of a database which has its values stored in a database while a derived attribute is one whose values can be calculated or derived from related stored attributes

b. simple attribute; composite attribute.

A simple attribute is an attribute that cannot be broken into smaller components while a composite attribute can be broken down in components.

c. Entity type; relationship type

An entity type is a collection of entity sharing common properties while a relationship type is a meaningful association between entity types.

d. strong entity type; weak entity type

A strong entity type is an entity that exists independently of other types of entities and has its own unique identifier while a weak entity type is an entity that depends on a strong entity and doesn’t have a unique identifier.

e. degree; cardinality

The degree is the number of entity types that participate in a relationship while the cardinality is a restriction on the number of instances of one entity that can be associated with each instance of another entity

f. required attribute; optional attribute

A required attribute is an attribute that must have a value while an optional attribute can be left without value.

g. composite attribute, multivalued attribute

A composite attribute can be broken down in components while a multivalued attribute can have more than one value at a time for a given entity instance.

h. ternary relationship; three binary relationships

A ternary relationship is when three entities participate in a relation while three binary relationships are three different relationships where two entities participate.

**2. #10**

(See figure)

**3.#13**

a. Business rule for the relationship “Work for ”

A student can work for different schools

b. Business rule that makes the Located In relationship redundant

A student who belongs to a club

c. We will change the relationship to be different( #13 c figure)

**4.#17d**