Tutorial 2 Answer

1. Theory

Answers

Ex 1.

1.

1.	composite attribute	i. can be broken into component parts
2.	associative entity	b. relates instances of a single entity type
3.	unary relationship	c. specifies maximum and minimum number of instances
4.	weak entity	d. relationship modeled as an entity type
5.	attribute	e. association between entity types
6.	entity	f. collection of similar entities
7.	relationship type	g. number of participating entity types in relationship
8.	cardinality constraint	h. property of an entity
9.	degree	j. depends on the existence of another entity type
10.	identifier	a. uniquely identifies entity instances
11.	entity type	k. relationship of degree 3
12.	ternary	l. person, place, object, concept, event

1.i 2d. 3.b. 4j. 5h. 6l. 7e. 8c 9g. 10a. 11.f. 12.k

Ex 2. Contrast the following terms:

a. *Stored attribute; derived attribute* A stored attribute is one whose values are stored in the 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 one that cannot be broken down into smaller components, while a composite attribute can be broken down into component parts.

c. *Entity type; relationship type* An entity type is a collection of entities that share common properties or characteristics, while a relationship type is a meaningful association between (or among) entity types.

d. *Strong entity type; weak entity type* A strong entity type is an entity that exists independently of other entity types, while a weak entity type depends on some other entity type.

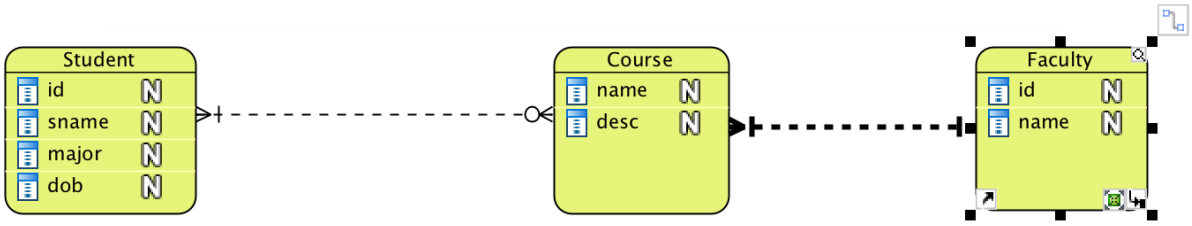
e. *Degree; cardinality* The degree (of a relationship) is the number of entity types that participate in that relationship, while cardinality is a constraint on the number of instances of one entity that can (or must) be associated with each instance of another entity.

f. *Required attribute; optional attribute* A required attribute must have a value for each entity instance, whereas an optional attribute may not have a

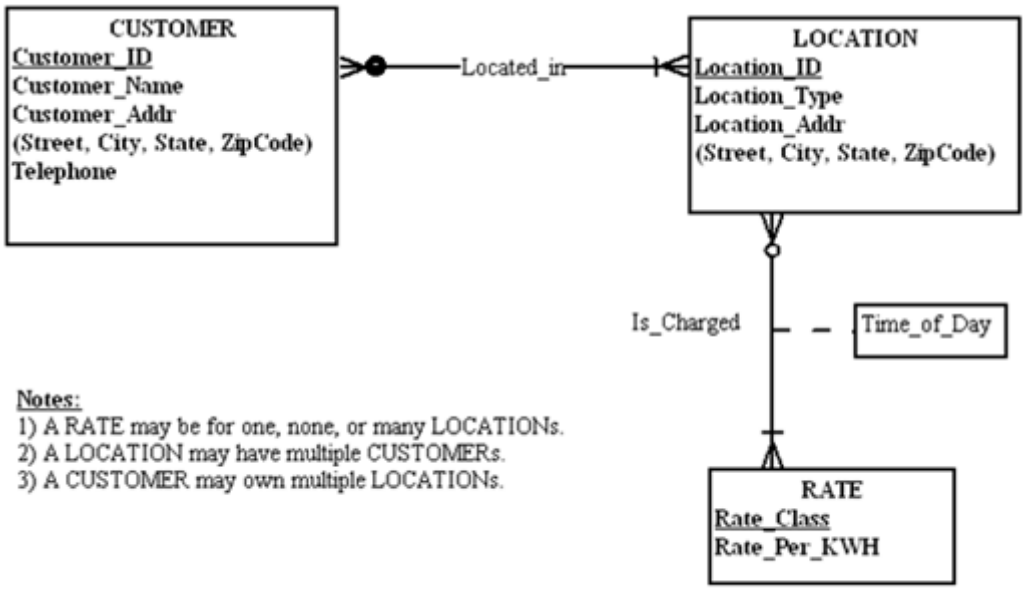
value for every entity instance.

g. *Composite attribute; multivalued attribute* A composite attribute has component parts that give meaning, whereas a multivalued attribute may take on or more values for an entity instance.

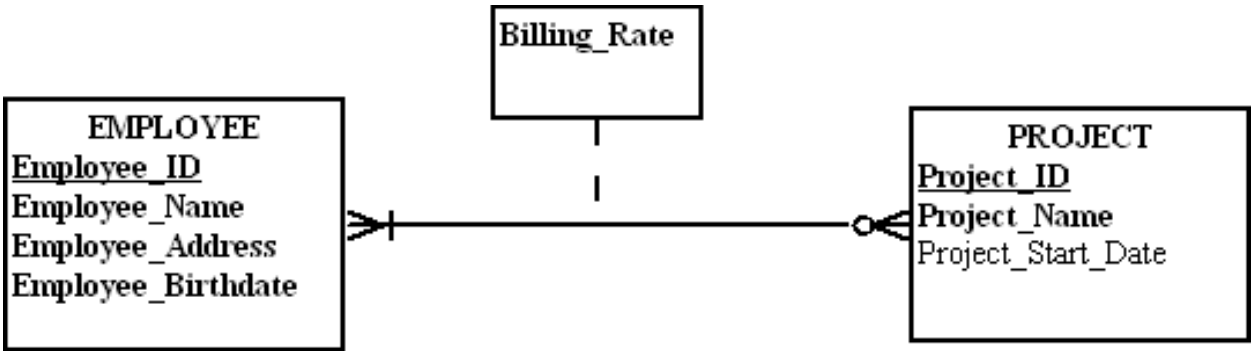
Ex 3



Ex 4



Ex 5.


Billing_Rate
EMPLOYEE
Employee_ID
Employee_Name
Employee_Address
Employee_Birthdate
PROJECT
Project_ID
Project_Name
Project_Start_Date