Assignment NO: 2

DBMS

Spring - 2022
25-04-2022

Submitted by:

ASHFAQ AHMAD

Reg NO:　　　　19Pwcse1795

Section:　　　　B

Submitted to:

Ma'am Sumayyea Salahuddin

Question No : 01:

a) Entity :

A person, place, object event or concept in the user environment about which organization wishes to store data.

Examples

① → Person :— student

② → object :→ mobile, laptop.

b) Attribute:

A property or characteristic of an entity or relationship type That is of Interest to organization

e:g

i, Student:
- → student - ID
- → student - Name
- → phone - number

② laptop:
- → RAM
- → hard-disk
- → better timing

P e i p o

© **Simple attribute:**

Simple attribute is an atomic value which can't be divided further.

For example:

age and Sex are the two examples of Simple attribute.

d, **Composite attribute:**

An attribute Composed of many other attributes.

For example:

address and phone number are two examples.

e, **Single-Valued attribute:**

An attribute that can have Single value at a particular Instance of time (or) for a given entity.

→) Single Valued attribute is not necessarily a Simple Valued.

For examples

NIC - number and Date - of - birth of a person are two example of Single - Valued attribute.

P. T. o

(f) **Multivalued - Attribute:**

An attribute that can have multiple values for a given entity is called Multi-valued attribute.

For example:

→ a house having several phones.

→ a person having several degrees

→ so phone and degree is multivalued attribute..

(g) **Stored - attribute:**

An attribute that can't be derived from other attributes.

For example:

Student-ID and Date-of-birth are two example of stored attribute -

(h) **derived attribute:**

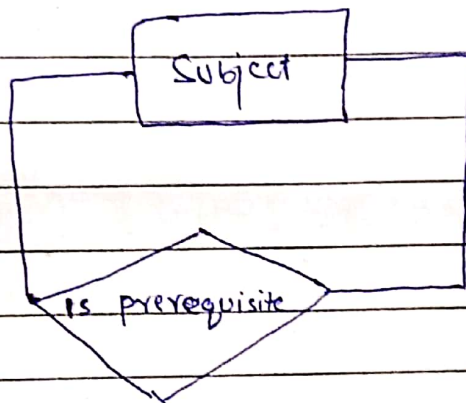An attribute that can be derived from other attributes.

For example!

→ age of a student

→ Total and average marks of a student.

Date: __/__/20

) Unary Relatimship:

A Relatimship in which both participants are the same entity.
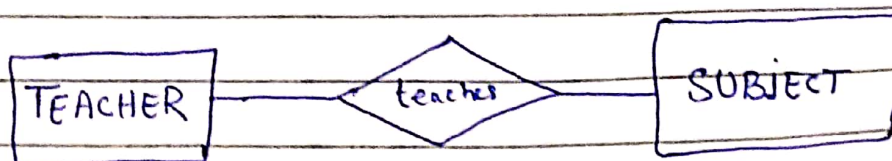
For example:
→ Subject may be prerequisite for other subjects.

) Binary Relatimship:

A binary Relatimship ~~is within~~ is when two entities participate and is the most common Relatimship degree.
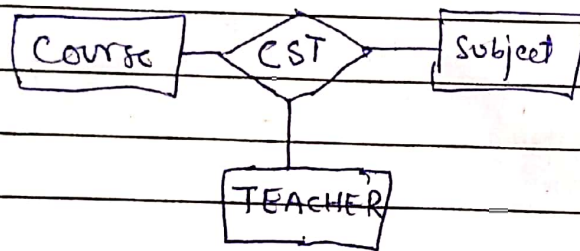
For example:

(K) Ternary Relationship:

A ternary Relationship is when three entities Participate in the relationship.

For example:

→ University might need to record which teachers taught which subjects in which course.

(L) Associative Entity:

An entity which Implement many-to-many Relationship between two or more different entities.
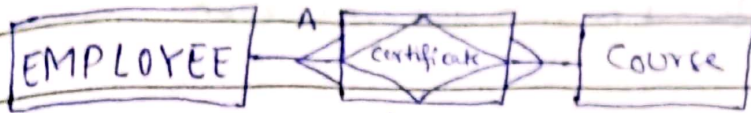
→ ~~not that~~

→ many-to-many R/s face toward the associative entity and not toward the other entities

→ it is Represented by Rectangular box with diamond Inside.

P. T.O

Date: / /20

For example:
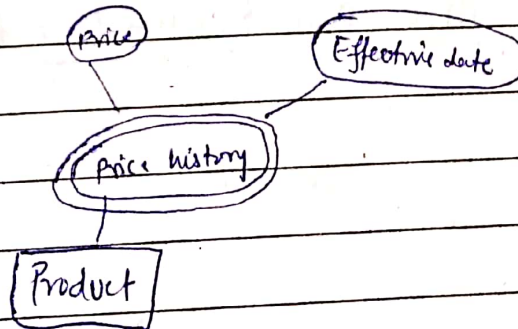
EMPLOYEE — ◇ Certificate ◇ — Course

↳ associative entity.

Time Stamping:

it is unique Identifier used for keeping record of when Information is being exchanged or created or deleted online.

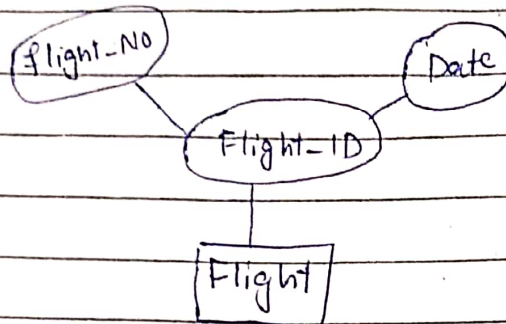∴ Recording date and time of an event.

For example:

Price

Effective date

Price history

Product

→ Effective date is time Stamping.

— Xp — YP — XO — YX —

Date: __/__/20__

Question NO: 02:

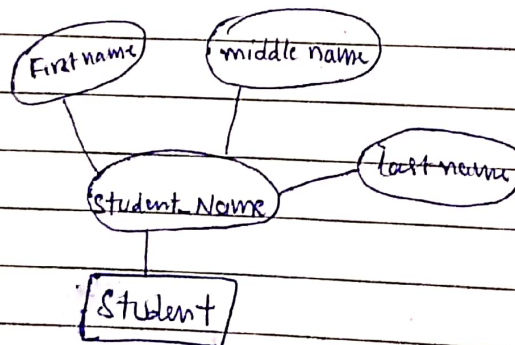## Simple Multivalued attributes

Alternative:

Flight-ID:

(flight-No, Date)

Composite Multivalued attribute:
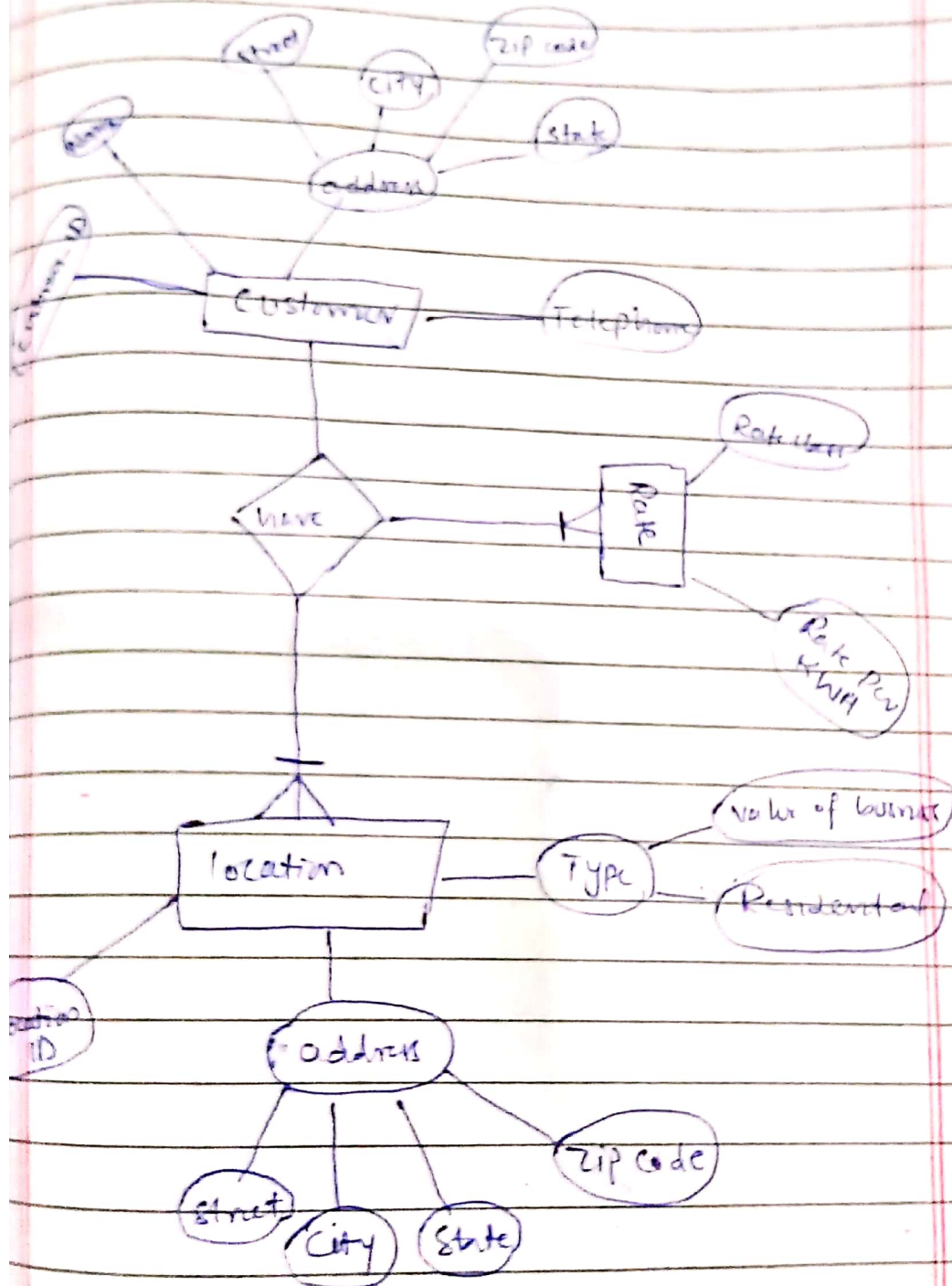

Alternative:

Student

Student-name

{First name, middle name, last name}

Question _NO: 03:

Question: 04:
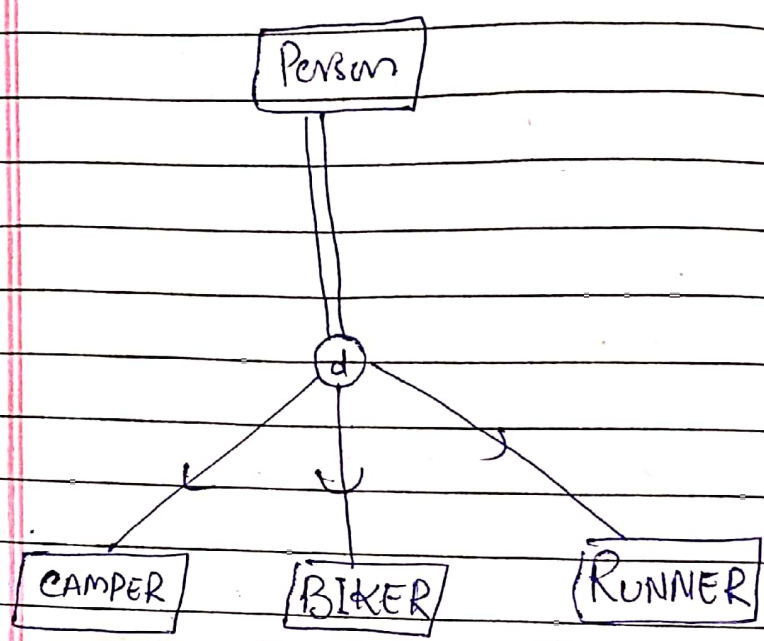
a)

```
        ┌────────┐
        │ Person │
        └────────┘
            │
            │
           (d)
          ╱ │ ╲
         ╱  │  ╲
   ┌────────┐ ┌───────┐ ┌────────┐
   │ CAMPER │ │ BIKER │ │ RUNNER │
   └────────┘ └───────┘ └────────┘
```

b)

```
        ┌────────┐
        │ Person │
        └────────┘
            │
            │
           (○)
          ╱ │ ╲
         ╱  │  ╲
   ┌────────┐ ┌───────┐ ┌────────┐
   │ CAMPER │ │ BIKER │ │ RUNNER │
   └────────┘ └───────┘ └────────┘
```

c)

```
        ┌────────┐
        │ Person │
        └────────┘
            │
           (◉)
          ╱ │ ╲
         ╱  │  ╲
   ┌────────┐         ┌────────┐
   │ CAMPER │         │ RUNNER │
   └────────┘ ┌───────┐└────────┘
             │ BIKER │
             └───────┘
```

/20

Question : 5

Person

Camper   Biker   Runner

— xp — xp — xp — xp — xp
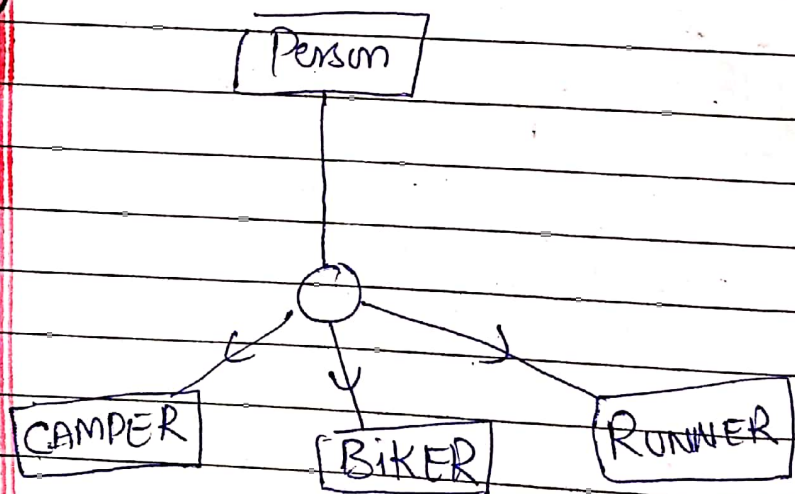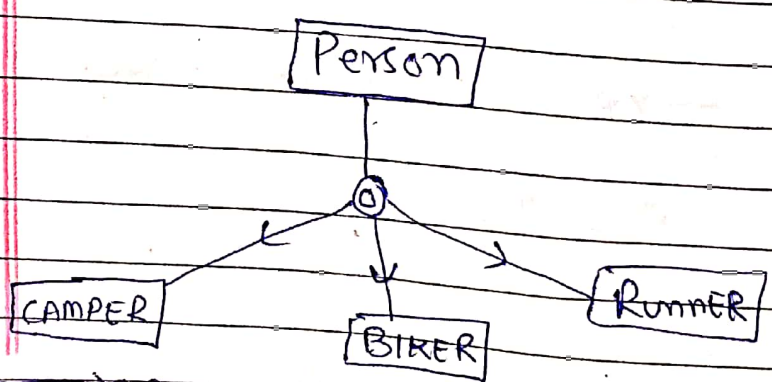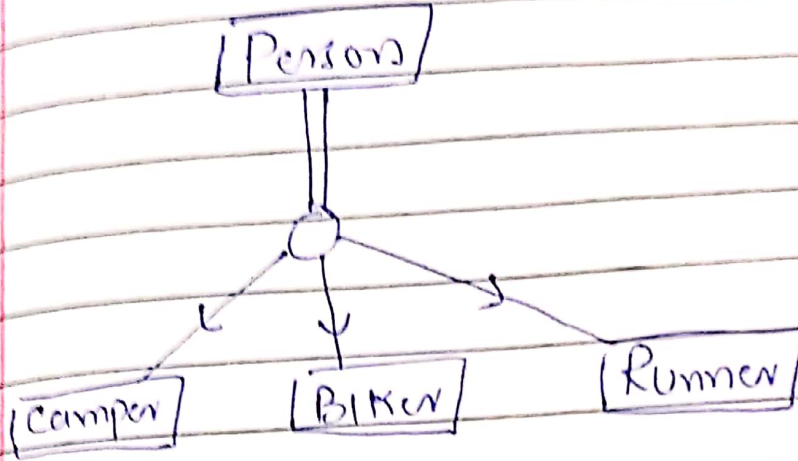
Question NO : 05 :

See Next Page Please →

Person
- Name
- SSN
- Telephone
- address
  - State
  - City
  - Zip

employee
- date hired

donors

Voluonteers
- Skills

dmates

item

the END of Assignmen-2